DEPARTMENT OF THE AIR FORCE

FISCAL YEAR (FY) 2009 BUDGET ESTIMATES

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

DESCRIPTIVE SUMMARIES, VOLUME III

BUDGET ACTIVITY 7

FEBRUARY 2008

Fiscal Year 2009 Program And Budget Estimates
RDT&E Descriptive Summaries, Volume III
Scientific and Technology Budget Activity 7
Feburary 2008

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 2009 President's Budget.
      1) All exhibits in this document have been assembled in accordance with DoD 7000.14R, Financial Management Regulation, Volume 2B, Chapter 5, Section 050402. Exception:
         a) Exhibit R-1, RDT&E Program, which was distributed under a separate cover due to classification.
      2) 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 2009 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 in this submission.

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

PROGRAM ELEMENT COMPARISON SUMMARY

INTRODUCTION AND EXPLANATION OF CONTENTS

Program Element	**Remarks**
BUDGET ACTIVITY 1: BASIC RESEARCH	
BUDGET ACTIVITY 2: APPLIED RESEARCH	
BUDGET ACTIVITY 3: ADVANCED TECHNOLOGY DEVELOPMENT (ATD)	
BUDGET ACTIVITY 4: ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPES (ACD&P)	
BUDGET ACTIVITY 5: SYSTEM DEVELOPMENT AND DEMONSTRATION (SDD)	
BUDGET ACTIVITY 6: RDT&E MANAGEMENT SUPPORT	
BUDGET ACTIVITY 7: OPERATIONAL SYSTEM DEVELOPMENT	

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ALPHABETICAL LISTING

DEPARTMENT OF DEFENSE

FY 2009 RDT&E PROGRAM

SUMMARY
($ IN THOUSANDS)

23 JAN 2008

APPROPRIATION	FY 2007	FY 2008	FY 2009
Research, Development, Test & Eval, AF	24,491,745	26,069,228	28,066,617
Tanker Replacement Transfer Fund, AF		150,000	
Total Research, Development, Test & Evaluation	24,491,745	26,219,228	28,066,617

DEPARTMENT OF DEFENSE

FY 2009 RDT&E PROGRAM

SUMMARY
($ IN THOUSANDS)

23 JAN 2008

Summary Recap of Budget Activities	FY 2007	FY 2008	FY 2009
Basic Research	395,300	571,095	452,300
Applied Research	1,115,280	1,169,833	1,044,495
Advanced Technology Development	1,030,162	663,931	578,263
Advanced Component Development & Prototypes	2,479,567	2,692,835	2,440,136
System Development & Demonstration	4,559,857	4,245,953	4,953,574
RDT&E Management Support	1,405,050	1,049,026	1,084,345
Operational Systems Development	13,506,529	15,826,555	17,513,504
Total Research, Development, Test & Evaluation	24,491,745	26,219,228	28,066,617

Summary Recap of FYDP Programs			
Strategic Forces	209,259	135,620	120,289
General Purpose Forces	4,013,382	3,514,541	4,358,254
Intelligence and Communications	9,277,447	11,653,705	12,794,513
Mobility Forces	680,872	1,039,049	678,316
Research and Development	10,035,375	9,573,424	9,806,908
Central Supply and Maintenance	209,939	222,286	233,783
Training Medical and Other	3,369	3,222	3,330
Administration and Associated Activities	58,315	73,365	67,314
Support of Other Nations	3,787	4,016	3,910
Total Research, Development, Test & Evaluation	24,491,745	26,219,228	28,066,617

DEPARTMENT OF THE AIR FORCE

FY 2009 RDT&E PROGRAM

SUMMARY
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DEPARTMENT OF THE AIR FORCE
FY 2009 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 23 JAN 2008

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2007	FY 2008	FY 2009	SEC
1	0601102F	Defense Research Sciences	01	271,481	288,601	309,926	U
2	0601103F	University Research Initiatives	01	111,803	119,938	125,949	U
3	0601108F	High Energy Laser Research Initiatives	01	12,016	12,556	13,425	U
4	0301555F	Classified Programs	01				
5	0301556F	Special Program	01				
6	0305172F	Combined Advanced Applications	01				
	Basic Research			395,300	421,095	452,300	
7	0602015F	Medical Development	02		4,670		U
8	0602102F	Materials	02	151,438	179,516	117,143	U
9	0602201F	Aerospace Vehicle Technologies	02	115,423	139,855	122,870	U
10	0602202F	Human Effectiveness Applied Research	02	106,435	92,068	82,091	U
11	0602203F	Aerospace Propulsion	02	220,143	217,172	218,049	U
12	0602204F	Aerospace Sensors	02	130,517	121,242	109,048	U
13	0602601F	Space Technology	02	101,316	128,397	117,519	U
14	0602602F	Conventional Munitions	02	60,150	58,632	55,963	U
15	0602605F	Directed Energy Technology	02	48,487	56,915	62,871	U
16	0602702F	Command Control and Communications	02	125,791	121,417	109,492	U
17	0602890F	High Energy Laser Research	02	55,580	49,949	49,449	U
	Applied Research			1,115,280	1,169,833	1,044,495	
18	0603112F	Advanced Materials for Weapon Systems	03	83,546	54,871	41,926	U
19	0603203F	Advanced Aerospace Sensors	03	56,634	62,332	56,916	U
20	0603211F	Aerospace Technology Dev/Demo	03	45,443	66,884	44,918	U

DEPARTMENT OF THE AIR FORCE
FY 2009 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 23 JAN 2008

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2007	FY 2008	FY 2009	SEC
21	0603216F	Aerospace Propulsion and Power Technology	03	150,123	142,543	170,856	U
22	0603231F	Crew Systems and Personnel Protection Technology	03	39,503	38,406	26,630	U
23	0603270F	Electronic Combat Technology	03	27,599	26,762	21,056	U
24	0603311F	Ballistic Missile Technology	03	9,128			U
25	0603401F	Advanced Spacecraft Technology	03	105,422	100,600	80,958	U
26	0603444F	Maui Space Surveillance System (MSSS)	03	49,502	42,160	4,838	U
27	0603601F	Conventional Weapons Technology	03	38,602	18,379	11,813	U
28	0603605F	Advanced Weapons Technology	03	74,683	74,383	44,507	U
29	0603680F	Manufacturing Technology Program	03			39,729	U
30	0603789F	C3I Advanced Development	03	47,352	32,821	30,103	U
31	0603801F	Special Programs	03	299,029			U
32	0603924F	High Energy Laser Advanced Technology Program	03	3,596	3,790	4,013	U
		Advanced Technology Development		1,030,162	663,931	578,263	
33	0603260F	Intelligence Advanced Development	04	4,757	5,892	4,988	U
34	0603287F	Physical Security Equipment	04	1,248	2,847	477	U
35	0603421F	NAVSTAR Global Positioning System III	04	291,556	482,845		U
36	0603423F	Global Positioning System III - Operational Control Segment	04			2,975	U
37	0603427F	GPS Operational Control Segment - Backwards Compatibility	04			304,360	U
38	0603430F	Advanced EHF MILSATCOM (SPACE)	04	617,294	599,353	388,041	U
39	0603432F	Polar MILSATCOM (SPACE)	04	33,983	177,535	237,749	U

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Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2007	FY 2008	FY 2009	SEC
40	0603438F	Space Control Technology	04	23,605	66,182	76,845	U
41	0603742F	Combat Identification Technology	04	23,389	25,875	29,400	U
42	0603790F	NATO Research and Development	04	4,003	4,253	4,334	U
43	0603791F	International Space Cooperative R&D	04	574	610	627	U
44	0603845F	Transformational SATCOM (TSAT)	04	700,429	804,739	842,974	U
45	0603850F	Integrated Broadcast Service	04	24,471	21,058	21,105	U
46	0603851F	Intercontinental Ballistic Missile	04	56,286	31,121	65,629	U
47	0603854F	Wideband Global SATCOM RDT&E (Space)	04	43,998	19,091	12,422	U
48	0603858F	Space Radar	04	183,201			U
49	0603859F	Pollution Prevention	04	6,829	10,968	2,877	U
50	0603860F	Joint Precision Approach and Landing Systems	04	9,524	7,451	7,479	U
51	0604015F	Next Generation Bomber	04	37,476			U
53	0604796F	Alternative Fuels	04			28,464	U
54	0604830F	Automated Air-to-Air Refueling	04			9,889	U
55	0604856F	Common Aero Vehicle (CAV)	04	31,523	3,974		U
56	0604857F	Operationally Responsive Space	04	42,131	96,516	110,032	U
57	0305178F	National Polar-Orbiting Operational Environmental Satellite System (NPOESS)	04	343,290	332,525	289,469	U
		Advanced Component Development & Prototypes		2,479,567	2,692,835	2,440,136	
58	0603840F	Global Broadcast Service (GBS)	05	23,157	29,098	18,790	U
59	0604222F	Nuclear Weapons Support	05	14,839	20,191	20,166	U
60	0604226F	B-1B	05	153,757	152,164	128,871	U

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

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Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2007	FY 2008	FY 2009	SEC
61	0604233F	Specialized Undergraduate Flight Training	05	4,112	14,927	7,462	U
62	0604240F	B-2 Advanced Technology Bomber	05	214,649	295,945	351,417	U
63	0604261F	Personnel Recovery Systems	05	103,337	104,289		U
64	0604270F	Electronic Warfare Development	05	95,949	102,601	54,995	U
65	0604287F	Physical Security Equipment	05	90	34	52	U
66	0604329F	Small Diameter Bomb (SDB)	05	122,276	144,279	125,067	U
67	0604421F	Counterspace Systems	05	44,596	63,819	74,918	U
68	0604425F	Space Situation Awareness Systems	05	166,696	196,363	210,501	U
69	0604429F	Airborne Electronic Attack	05	12,033	23,826	34,279	U
70	0604441F	Space Based Infrared System (SBIRS) High EMD	05	677,926	583,317	529,771	U
71	0604443F	Third Generation Infrared Surveillance (3GIRS)	05	67,552	75,410	149,064	U
72	0604602F	Armament/Ordnance Development	05	13,039	3,165	2,095	U
73	0604604F	Submunitions	05	8,304	1,976	1,730	U
74	0604617F	Agile Combat Support	05	9,715	12,146	5,790	U
75	0604618F	Joint Direct Attack Munition	05	20,959			U
76	0604706F	Life Support Systems	05	11,273	13,563	10,998	U
77	0604735F	Combat Training Ranges	05	16,325	17,546	28,047	U
78	0604740F	Integrated Command & Control Applications (IC2A)	05	26,507	26,593	177	U
79	0604750F	Intelligence Equipment	05	4,907	5,037	1,488	U
80	0604762F	Common Low Observables Verification System (CLOVerS)	05	4,361			U
81	0604800F	Joint Strike Fighter (JSF)	05	2,074,021	1,991,537	1,524,016	U

DEPARTMENT OF THE AIR FORCE
FY 2009 RDT&E PROGRAM

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Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2007	FY 2008	FY 2009	SEC
82	0604853F	Evolved Expendable Launch Vehicle Program (SPACE)	05	19,083		33,719	U
83	0605011F	RDT&E for Aging Aircraft	05	36,144	20,491	13,828	U
84	0605221F	Next Generation Aerial Refueling Aircraft	05			831,759	U
85	0605277F	CSAR-X RDT&E	05			305,062	U
86	0605278F	HC/MC-130 Recap RDT&E	05			11,692	U
87	0207434F	Link-16 Support and Sustainment	05	156,169	194,652	186,213	U
88	0207450F	E-10 Squadrons	05	351,924	39,032	42,215	U
89	0207451F	Single Integrated Air Picture (SIAP)	05	37,874	4,857	66,909	U
90	0207701F	Full Combat Mission Training	05	34,046	71,643	135,152	U
91	0401138F	Joint Cargo Aircraft (JCA)	05	9,781	20,869	26,777	U
92	0401318F	CV-22	05	12,756	16,583	18,562	U
93	0401845F	Airborne Senior Leader C3 (SLC3S)	05	11,700		1,992	U
		System Development & Demonstration		4,559,857	4,245,953	4,953,574	
94	0604256F	Threat Simulator Development	06	37,411	39,639	34,568	U
95	0604759F	Major T&E Investment	06	63,417	63,855	61,818	U
96	0605101F	RAND Project Air Force	06	33,611	30,802	28,676	U
97	0605502F	Small Business Innovation Research	06	359,706			U
98	0605712F	Initial Operational Test & Evaluation	06	34,554	30,011	29,537	U
99	0605807F	Test and Evaluation Support	06	713,419	720,952	787,737	U
100	0605860F	Rocket Systems Launch Program (SPACE)	06	26,503	19,023	14,895	U
101	0605864F	Space Test Program (STP)	06	48,801	47,129	48,072	U

DEPARTMENT OF THE AIR FORCE
FY 2009 RDT&E PROGRAM

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

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Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2007	FY 2008	FY 2009	SEC
102	0605976F	Facilities Restoration and Modernization - Test and Evaluation Support	06	55,473	59,750	46,234	U
103	0605978F	Facilities Sustainment - Test and Evaluation Support	06	28,073	33,849	28,898	U
105	0804731F	General Skill Training	06	295			U
106	1001004F	International Activities	06	3,787	4,016	3,910	U
	RDT&E Management Support			1,405,050	1,049,026	1,084,345	
107	0604263F	Common Vertical Lift Support Platform	07			3,868	U
108	0605024F	Anti-Tamper Technology Executive Agency	07	7,791	10,861	20,987	U
109	0605798F	Analysis Support Group	07				
110	0101113F	B-52 Squadrons	07	88,420	42,121	38,651	U
111	0101120F	Advanced Cruise Missile	07	6,767			U
112	0101122F	Air-Launched Cruise Missile (ALCM)	07	3,620	4,642	396	U
113	0101313F	Strat War Planning System - USSTRATCOM	07	24,774	20,130	17,553	U
114	0101314F	Night Fist - USSTRATCOM	07	4,963	5,263	5,299	U
115	0101815F	Advanced Strategic Programs	07				
116	0102326F	Region/Sector Operation Control Center Modernization Program	07	14,642	23,262	23,858	U
117	0102823F	Strategic Aerospace Intelligence System Activities	07			15	U
118	0203761F	Warfighter Rapid Acquisition Process (WRAP) Rapid Transition Fund	07	29,613	14,155	20,807	U
119	0205219F	MQ-9 UAV	07		63,862	43,557	U

DEPARTMENT OF THE AIR FORCE
FY 2009 RDT&E PROGRAM

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120	0207131F	A-10 Squadrons	07	42,491	1,951		U
121	0207133F	F-16 Squadrons	07	124,761	70,172	123,979	U
122	0207134F	F-15E Squadrons	07	134,253	114,519	184,213	U
123	0207136F	Manned Destructive Suppression	07	499		5,585	U
124	0207138F	F-22A Squadrons	07	459,464	607,515	700,305	U
125	0207141F	F-117A Squadrons	07	11,718			U
126	0207161F	Tactical AIM Missiles	07	8,596	7,876	5,748	U
127	0207163F	Advanced Medium Range Air-to-Air Missile (AMRAAM)	07	33,411	33,425	54,239	U
128	0207170F	Joint Helmet Mounted Cueing System (JHMCS)	07	3,220	5,304	3,192	U
129	0207247F	AF TENCAP	07	11,160	11,452	11,578	U
130	0207248F	Special Evaluation Program	07	557,253			U
131	0207253F	Compass Call	07	9,586	8,549	4,670	U
132	0207268F	Aircraft Engine Component Improvement Program	07	152,969	138,159	150,956	U
133	0207277F	CSAF Innovation Program	07	1,554			U
134	0207325F	Joint Air-to-Surface Standoff Missile (JASSM)	07	32,995	12,074	13,035	U
135	0207410F	Air & Space Operations Center (AOC)	07	74,841	100,173	118,834	U
136	0207412F	Control and Reporting Center (CRC)	07	9,202	24,791	60,590	U
137	0207417F	Airborne Warning and Control System (AWACS)	07	157,751	151,593	126,300	U
138	0207418F	Tactical Airborne Control Systems	07	2,262	3,366	1,530	U
139	0207423F	Advanced Communications Systems	07	38,215	33,372	29,782	U

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140	0207424F	Evaluation and Analysis Program	07	2,518	646,380	794,036	U
141	0207433F	Advanced Program Technology	07	302,972			U
142	0207438F	Theater Battle Management (TBM) C4I	07	35,950	9,898	19,437	U
143	0207445F	Fighter Tactical Data Link	07	88,094	38,944	62,788	U
144	0207446F	Bomber Tactical Data Link	07	87,613	36,875	11,702	U
145	0207448F	C2ISR Tactical Data Link	07	4,126	1,795	1,727	U
146	0207449F	Command and Control (C2) Constellation	07	41,725	44,582	32,151	U
147	0207581F	Joint Surveillance/Target Attack Radar System (JSTARS)	07	171,628	81,978	97,641	U
148	0207590F	Seek Eagle	07	16,299	22,823	21,645	U
149	0207591F	Advanced Program Evaluation	07	584,563			U
150	0207601F	USAF Modeling and Simulation	07	22,609	22,814	28,981	U
151	0207605F	Wargaming and Simulation Centers	07	6,270	6,421	3,870	U
152	0207697F	Distributed Training and Exercises	07	5,943	7,474	7,137	U
153	0208006F	Mission Planning Systems	07	139,217	104,575	97,560	U
154	0208021F	Information Warfare Support	07	28,028	11,965	12,220	U
155	0208161F	Special Evaluation System	07		765,525	1,077,970	U
156	0301310F	National Air Intelligence Center	07				
157	0301314F	COBRA BALL	07				
158	0301315F	Missile and Space Technical Collection	07				
159	0301324F	FOREST GREEN	07				
160	0301386F	GDIP Collection Management	07				

DEPARTMENT OF THE AIR FORCE
FY 2009 RDT&E PROGRAM

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

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Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2007	FY 2008	FY 2009	SEC
162	0302015F	E-4B National Airborne Operations Center (NAOC)	07	2,728	19,406	4,069	U
163	0303112F	Air Force Communications (AIRCOM)	07		2,009		U
164	0303131F	Minimum Essential Emergency Communications Network (MEECN)	07	64,556	88,224	70,995	U
165	0303140F	Information Systems Security Program	07	156,125	186,255	187,933	U
166	0303141F	Global Combat Support System	07	22,530	11,756	4,320	U
167	0303150F	Global Command and Control System	07	3,204	4,471	3,218	U
168	0303158F	Joint Command and Control Program (JC2)	07	5,651	5,745	3,234	U
169	0303601F	MILSATCOM Terminals	07	257,226	384,652	337,098	U
170	0304111F	Special Activities	07				
171	0304260F	Airborne SIGINT Enterprise	07	119,646	135,162	173,631	U
172	0304311F	Selected Activities	07				
173	0304348F	Advanced Geospatial Intelligence (AGI)	07				
174	0305099F	Global Air Traffic Management (GATM)	07	12,115	6,638	6,275	U
175	0305103F	Cyber Security Initiative	07			2,083	U
176	0305110F	Satellite Control Network (SPACE)	07	21,238	26,898	16,758	U
177	0305111F	Weather Service	07	41,676	40,959	47,347	U
178	0305114F	Air Traffic Control, Approach, and Landing System (ATCALS)	07	3,670	8,293	6,867	U
179	0305116F	Aerial Targets	07	4,041	7,329	34,777	U
180	0305124F	Special Applications Program	07				

DEPARTMENT OF THE AIR FORCE
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Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2007	FY 2008	FY 2009	SEC
181	0305127F	Foreign Counterintelligence Activities	07				
182	0305128F	Security and Investigative Activities	07	493	825	786	U
183	0305142F	Applied Technology and Integration	07				
184	0305146F	Defense Joint Counterintelligence Activities	07			39	U
185	0305159F	Defense Reconnaissance Support Activities (SPACE)	07				
186	0305160F	Defense Meteorological Satellite Program (SPACE)	07	936			U
187	0305164F	NAVSTAR Global Positioning System (User Equipment) (SPACE)	07	130,254	154,581	127,513	U
188	0305165F	NAVSTAR Global Positioning System (Space and Control Segments)	07	160,555	119,089	91,277	U
189	0305172F	Combined Advanced Applications	07				
190	0305173F	Space and Missile Test and Evaluation Center	07	2,526	3,070	1,985	U
191	0305174F	Space Warfare Center	07	703	1,667	3,003	U
192	0305182F	Spacelift Range System (SPACE)	07	45,633	27,095	12,376	U
193	0305193F	Intelligence Support to Information Operations (IO)	07	1,290	5,927	1,237	U
195	0305206F	Airborne Reconnaissance Systems	07	51,842	64,441	149,752	U
196	0305207F	Manned Reconnaissance Systems	07	37,015	21,387	12,819	U
197	0305208F	Distributed Common Ground/Surface Systems	07	124,007	107,048	107,834	U
198	0305219F	MQ-1 Predator A UAV	07	77,885	33,781	24,773	U
199	0305220F	Global Hawk UAV	07	224,126	274,742	284,292	U

DEPARTMENT OF THE AIR FORCE
FY 2009 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 23 JAN 2008

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2007	FY 2008	FY 2009	SEC
200	0305221F	Network-Centric Collaborative Targeting	07	18,466	8,586	8,807	U
201	0305265F	GPS III Space Segment	07			420,342	U
202	0305887F	Intelligence Support to Information Warfare	07	5,121	5,305	5,438	U
203	0305906F	NCMC - TW/AA System	07	42,152	11,720		U
204	0305913F	NUDET Detection System (SPACE)	07	59,917	38,279	41,292	U
205	0305924F	National Security Space Office	07	17,351	10,745	10,797	U
206	0305940F	Space Situation Awareness Operations	07	29,476	23,827	16,166	U
207	0307141F	Information Operations Technology Integration & Tool Development	07	14,759	15,582	15,726	U
208	0308699F	Shared Early Warning (SEW)	07	2,896	3,127	3,152	U
209	0401115F	C-130 Airlift Squadron	07	185,554	250,020	172,560	U
210	0401119F	C-5 Airlift Squadrons (IF)	07	137,565	178,990	125,063	U
211	0401130F	C-17 Aircraft (IF)	07	170,527	180,581	236,047	U
212	0401132F	C-130J Program	07	34,765	73,753	52,354	U
213	0401134F	Large Aircraft IR Countermeasures (LAIRCM)	07	35,349	19,201	32,100	U
214	0401218F	KC-135s	07	1,092	8,710	7,133	U
215	0401219F	KC-10s	07	4,696	13,703		U
216	0401221F	KC-135 Tanker Replacement	07	68,340	113,728		U
217	0401314F	Operational Support Airlift	07		4,837		U
218	0401839F	Air Mobility Tactical Data Link	07	6,785			U
219	0408011F	Special Tactics / Combat Control	07	1,962	8,074	5,728	U
220	0702207F	Depot Maintenance (Non-IF)	07	1,411	1,501	1,531	U

DEPARTMENT OF THE AIR FORCE
FY 2009 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 23 JAN 2008

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2007	FY 2008	FY 2009	SEC
221	0702806F	Acquisition and Management Support	07	26,645	22,141	34,428	U
222	0708011F	Industrial Preparedness	07	65,543	50,186		U
223	0708012F	Logistics Support Activities	07	2,132			U
224	0708610F	Logistics Information Technology (LOGIT)	07	90,557	114,599	189,679	U
225	0708611F	Support Systems Development	07	23,651	33,859	8,145	U
226	0804757F	Joint National Training Center	07	2,964	3,108	3,214	U
227	0808716F	Other Personnel Activities	07	110	114	116	U
228	0901202F	Joint Personnel Recovery Agency	07	960	5,342	5,768	U
229	0901212F	Service-Wide Support (Not Otherwise Accounted For)	07		6,454	3,016	U
230	0901218F	Civilian Compensation Program	07	13,160	8,019	8,123	U
231	0901220F	Personnel Administration	07	18,787	16,714	18,625	U
232	0901538F	Financial Management Information Systems Development	07	25,408	36,836	31,782	U
		Operational Systems Development		13,506,529	15,826,555	17,513,504	
		Total Research, Development, Test & Eval, AF		24,491,745	26,069,228	28,066,617	

PROGRAM ELEMENT COMPARISON SUMMARY

PROGRAM ELEMENT (By BUDGET ACTIVITY)		REMARKS
BUDGET ACTIVITY #1: BASIC RESEARCH (Volume 1)		
BUDGET ACTIVITY #2: APPLIED RESEARCH (Volume 1)		
BUDGET ACTIVITY #3: ADVANCED TECHNOLOGY DEVELOPMENT (Volume 1)		
0603216F	Aerospace Propulsion and Power Technology	In FY 09, funding is higher to support ground demonstrations and fabrication of test vehicles for flight demonstrations. The funding in this project has been increased due to emphasis on component development in support of adaptive cycle technologies alternative hydrocarbon jet fuel, and improved fuel efficiency.
0603680F	Manufacturing Technologies	In FY 09, the AF Manufacturing Technologies program will transfer to PE 0603680F, Manufacturing Technologies, from PE 0708011F, Industrial Preparedness, to focus on long-term manufacturing and processes.
BUDGET ACTIVITY #4: ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPE (Volume 2)		
0604796F	Alternative Fuels	In FY 09, PE 0604796F is a new PE. Previous alternative fuels work was accomplished in the "RDT&E for Aging Aircraft" PE (0605011F).
0604857F	Operationally Responsive Space	In FY 09, Project 64A020, AF-funded ORSSats is being established to identify the funding the Air Force is planning to use for Air Force projects to meet ORS requirements. Project 64A015 is renamed ORS Common Services from Tactical Satellites. This is to delineate the funding the Air Force is contributing to support the overall DoD ORS effort versus the funding the Air Force is using to pursue specific Air Force ORS projects.
BUDGET ACTIVITY #5: SYSTEM DEVELOPMENT AND DEMONSTRATION (SDD) (Volume 2)		
0207450F	E-10 Squadrons	In FY09,The Global Hawk (GH) MP-RTIP sensor development continues in the sensors project line.The E-10 program was terminated in FY08.
0207451F	Single Integrated Air Picture (SIAP)	In FY09, Project 5275, Joint SIAP System Engineering and Development efforts were transferred from Army PE 0603327A - Air and Missile Defense Systems Engineering, Project S32, Joint SIAP System Engineering, into Air Force PE 0207451F in accordance with DoD designation of the Air Force as the SIAP Acquisition Executive. These funds support the research, development and testing of the Integrated Architecture Behavior Model (IABM), conduct Joint System-of -Systems Engineering for air and cruise missile defense, and operation of the SIAP Joint Program Office (SIAP JPO) and SIAP Joint Program Executive Office (SIAP JPEO).
0604261F	Personnel Recovery Systems	In FY09, the CSAR-X and HC-130Recap projects separate into distinct PEs (0605277F and 0605278F, respectively) to provide more budget clarity. Procurement funding for CSAR-X remains in PE 0207224F and is reported in P-Docs. Procurement funding for HC/MC-130 Recap is included in Air Combat Command PE 0207224F and Air Force Special Operations Command PE 0207230F, as reported in P-Docs.

0604617F	Agile Combat Support	In FY09, $3.5M was transferred to PE 0603112F, Advanced Materials for Weapon Systems, to support technology evaluation for Airfield Damage Repair (ADR) and Rapid Parking Ramp Expansion (RPRE)
0605221F	KC-X, Next Generation Aerial Refueling Aircraft	In FY09, $239.8M in Transfer Fund. These transfer funds will be used to fund KC-X acquisition after contract award.
0605277F	CSAR-X	In FY09, CSAR-X is in this new PE to provide more budget clarity.

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

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

0401221F	KC-135 Replacement Tanker	In FY 09, $239.8M in Transfer Fund. These transfer funds will be used to fund KC-X acquisition after contract award.
0604263F	CVLSP	In FY 09, Project Number 5277, CVLSP, includes new start efforts
0708011F	Industrial Preparedness	In FY09, the program will transfer from PE 0708011F, Industrial Preparedness, to Budget Activity 3 in PE 0603680F, Manufacturing Technologies, to better align with the Office of the Secretary of Defense's ManTech PE.

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

No.	Title
0101314F	Night Fist
0101815F	Advanced Strategic Program
0207248F	Special Evaluation Program
0207424F	Evaluation and Analysis Program
0207433F	Advanced Program Technology
0207591F	Advance Program Evaluation
0208161F	Special Evaluation System
0301310F	National Air Intelligence Center
0301314F	COBRA BALL
0301315F	Missile and Space Technical Collection
0301324F	FOREST GREEN
0301386F	GDIP Collection Management
0301555F	Classified Programs
0301556F	Special Program
0304111F	Special Activities
0304311F	Selected Activities
0304348F	Advanced Geospatial Intelligence (AGI)
0305124F	Special Applications Program
0305127F	Foreign Counterintelligence Activities
0305142F	Applied Technology and Integration
0305159F	Defense Reconnaissance Support Activities (SPACE)
0305172F	Combined Advanced Applications
0603801F	Special Programs
0605798F	Analysis Support Group

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

PE NUMBER: 0604263F
PE TITLE: CVLSP

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0604263F CVLSP

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	0.000	3.868	0.000	0.000	0.000	0.000	0.000	0.000
5277 CVLSP	0.000	0.000	3.868	0.000	0.000	0.000	0.000	0.000	0.000

In FY 2009, Project Number 5277, CVLSP, includes new start efforts.

(U) A. Mission Description and Budget Item Justification

The Common Vertical Lift Support Platform (CVLSP) core missions are to provide nuclear convoy weapon escort, 24/7 adverse weather capable Inter-Continental Ballistic Missile (ICBM) emergency security response /operational support, and mass passenger transport/Operational Support Airlift (OSA) in the National Capital Region. Other assigned missions include Pacific Air Forces (PACAF) OSA, survival school support, test and range support, and combat aviation advisor training. Additionally, other support missions inherent in CVLSP capabilities include NASA and Homeland Security support missions of critical infrastructure protection, search and rescue, national security special events, contingency management, and weapons of mass destruction interdiction.

Budget Justification: RDT&E funding includes, but is not limited to, support of the System Program Office (SPO) for development of System Requirement Document, Information Support Plan (ISP), Acquisition Strategy Report, Request for Proposal (RFP), and the Test and Evaluation Master Plan (TEMP).

This is a new start request.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget			
(U)	Current PBR/President's Budget	0.000		3.868
(U)	Total Adjustments	0.000		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:
- CVLSP is a New Start effort in FY09.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0604263F CVLSP

PROJECT NUMBER AND TITLE: 5277 CVLSP

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5277 CVLSP	0.000	0.000	3.868	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

The Common Vertical Lift Support Platform (CVLSP) core missions are to provide nuclear convoy weapon escort, 24/7 adverse weather capable Inter-Continental Ballistic Missile (ICBM) emergency security response /operational support, and mass passenger transport/Operational Support Airlift (OSA) in the National Capital Region. Other assigned missions include Pacific Air Forces (PACAF) OSA, survival school support, test and range support, and combat aviation advisor training. Additionally, other support missions inherent in CVLSP capabilities include NASA and Homeland Security support missions of critical infrastructure protection, search and rescue, national security special events, contingency management, and weapons of mass destruction interdiction.

Budget Justification: RDT&E funding includes, but is not limited to, support of the System Program Office (SPO) for development of System Requirement Document, Information Support Plan (ISP), Acquisition Strategy Report, Request for Proposal (RFP), and the Test and Evaluation Master Plan (TEMP).

This is a new start request.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) SPO support in development of test and evaluation master plan, acquisition strategy, information support plan, preparation of Milestone B (MS B) documentation and development of request for proposals.			3.818
(U) Test and Evaluation Planning			0.050
(U)			
(U) Total Cost	0.000	0.000	3.868

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) TBD									

(U) D. Acquisition Strategy

Request for Proposal (RFP) to be released in FY10. Competitive source selection, Milestone B (MS B) and contract award estimated to be completed in FY10. Test articles to be delivered in FY11. MS C and low-rate initial production decision is expected in FY13. Production aircraft deliveries start in FY14 with initial operational capability (IOC) expected in FY15.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0604263F CVLSP**

PROJECT NUMBER AND TITLE: **5277 CVLSP**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
	TBD										0.000	
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Support												
	TBD							2.318			2.318	
Subtotal Support			0.000	0.000		0.000		2.318		0.000	2.318	0.000
Remarks:												
(U) Test & Evaluation												
	TBD							0.050			0.050	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.050		0.000	0.050	0.000
Remarks:												
(U) Management												
	TBD							1.500			1.500	
Subtotal Management			0.000	0.000		0.000		1.500		0.000	1.500	0.000
Remarks:												
(U) Total Cost			0.000	0.000		0.000		3.868		0.000	3.868	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0604263F CVLSP	PROJECT NUMBER AND TITLE: 5277 CVLSP

CVLSP Integrated Schedule

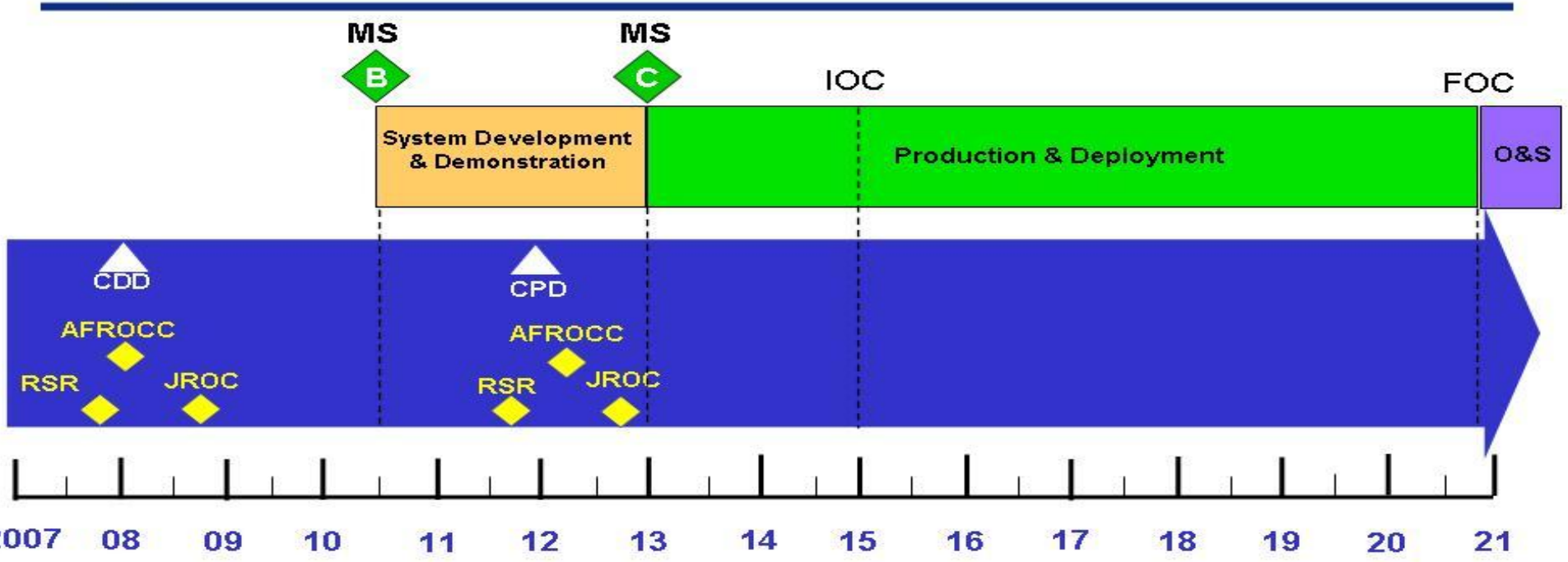

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0604263F CVLSP**	PROJECT NUMBER AND TITLE **5277 CVLSP**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Develop Acquisition Strategy			1Q
(U) Develop RFP			2Q

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

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0605024F Anti-Tamper Technology Executive Agent

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	7.791	10.861	20.987	15.486	15.605	15.823	15.989	Continuing	TBD
5066	Anti-Tamper Technology Executive Agent	7.791	10.861	20.987	15.486	15.605	15.823	15.989	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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

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

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

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0605024F Anti-Tamper Technology Executive Agent

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	7.984	10.930	11.161
(U)	Current PBR/President's Budget	7.791	10.861	20.987
(U)	Total Adjustments	-0.193		
(U)	Congressional Program Reductions	-0.030		
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings	-0.070		
	SBIR/STTR Transfer	-0.093		
(U)	Significant Program Changes:			
	None			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5066	Anti-Tamper Technology Executive Agent	7.791	10.861	20.987	15.486	15.605	15.823	15.989	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 Anti-Tamper Executive Agent (ATEA). The ATEA is responsible for implementing Anti-Tamper (AT) policy, coordinating and providing financial support for AT technology development, establishing and maintaining a data bank/library, providing proper security mechanisms, conducting effective validation and assessing AT implementations. The purpose of developing AT techniques is to protect critical technologies in U.S. weapon systems that may be sold to foreign governments or that could possibly fall into enemy hands. AT technology will permit the U.S. to preserve its critical weapons systems lead while also satisfying customer needs. Furthermore, AT will add longevity to critical technologies by deterring efforts to reverse engineer or develop weapon countermeasures against a system or system component.

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

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

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

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	AFRL/SNT Management	2.112	2.008	2.000
(U)	ATEA Other - Outsource	0.701	0.210	0.500
(U)	Anti-Tamper Verification & Validation	2.650	4.480	3.556
(U)	Anti-Tamper Assessments	1.700	2.163	3.436

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0605024F Anti-Tamper Technology Executive Agent	PROJECT NUMBER AND TITLE: 5066 Anti-Tamper Technology Executive Agent

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

		FY 2007	FY 2008	FY 2009
(U)	Anti-Tamper Technology Development	0.628	2.000	11.495
(U)				
(U)	Total Cost	7.791	10.861	20.987

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

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

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) AFRL/SNT Management												
Program Oversight				0.734		0.971		0.800		Continuing	TBD	TBD
Security/Infrastructure				0.255		0.254		0.800		Continuing	TBD	TBD
Databases and websight				0.551		0.420		0.400		Continuing	TBD	
Education and Outreach				0.570		0.364		0.400		Continuing	TBD	
Subtotal AFRL/SNT Management			0.000	2.110		2.009		2.400		Continuing	TBD	TBD
Remarks:												
(U) ATEA Other Outsource												
Conference outsource				0.056		0.040				Continuing	TBD	TBD
AFRL/AT-SPI	Allot			0.000		0.150		0.580		Continuing	TBD	TBD
AT Course				0.400		0.010		0.001		Continuing	TBD	TBD
DAU Course				0.000		0.010		0.025		Continuing	TBD	TBD
Sandia National Lab				0.245				0.030		Continuing	TBD	TBD
Subtotal ATEA Other Outsource			0.000	0.701		0.210		0.636		Continuing	TBD	TBD
Remarks:												
(U) Anti-Tamper Verification & Validation												
Army	MIPR			0.600		0.800		0.800		Continuing	TBD	
Navy	MIPR			0.600		0.800		0.800		Continuing	TBD	
Air Force	MIPR			0.600		0.800		0.800		Continuing	TBD	
Sandia	MIPR			0.506		0.594		0.600		Continuing	TBD	
AT-SPI SW AT support						0.115		0.126			0.241	
AT-SPI IRCM AT Support				0.294		0.318		0.300			0.912	
V&V Contingency				0.010		0.923					0.933	
Network Training						0.050		0.050			0.100	
Sandia V&V Training	MIPR			0.042		0.080		0.080			0.202	
											0.000	
Subtotal Anti-Tamper Verification & Validation			0.000	2.652		4.480		3.556		Continuing	TBD	0.000
Remarks:												
(U) Anti-Tamper Assessments												
Air Force AT Field Agent (412 TW/EWF)	MIPR			0.150							0.150	
AFRL/SND											0.000	
NAWC CRANE (Navy)	MIPR			0.200							0.200	
Army AT Field Agent (Aviation & Missile Cmd/Redstone)	MIPR										0.000	
DoD Executive Agent Field Agent (AFRL/AT-SPI)	Allot										0.000	
Sandia National Lab	MIPR									Continuing	TBD	
Assessment Contract Activities				1.350		1.766		3.436			6.552	
Subtotal Anti-Tamper Assessments			0.000	1.700		1.766		3.436		Continuing	TBD	0.000

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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

	Remarks:								
	Anti-Tamper Technology Development								
(U)	Enhancements								
	AFRL/AT-SPI	PRDA						0.000	
	Sandia National Lab	MIPR						0.000	
	Technology Contract Activities			0.628	0.274	10.959		11.861	
	Subtotal Anti-Tamper Technology Development Enhancements		0.000	0.628	0.274	10.959	0.000	11.861	0.000
	Remarks:								
(U)	New Activity Funds								
	New Activity Funds				2.122		Continuing	TBD	
	Subtotal New Activity Funds		0.000	0.000	2.122	0.000	Continuing	TBD	0.000
	Remarks:								
(U)	Total Cost		0.000	7.791	10.861	20.987	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0605024F Anti-Tamper Technology Executive Agent	PROJECT NUMBER AND TITLE 5066 Anti-Tamper Technology Executive Agent

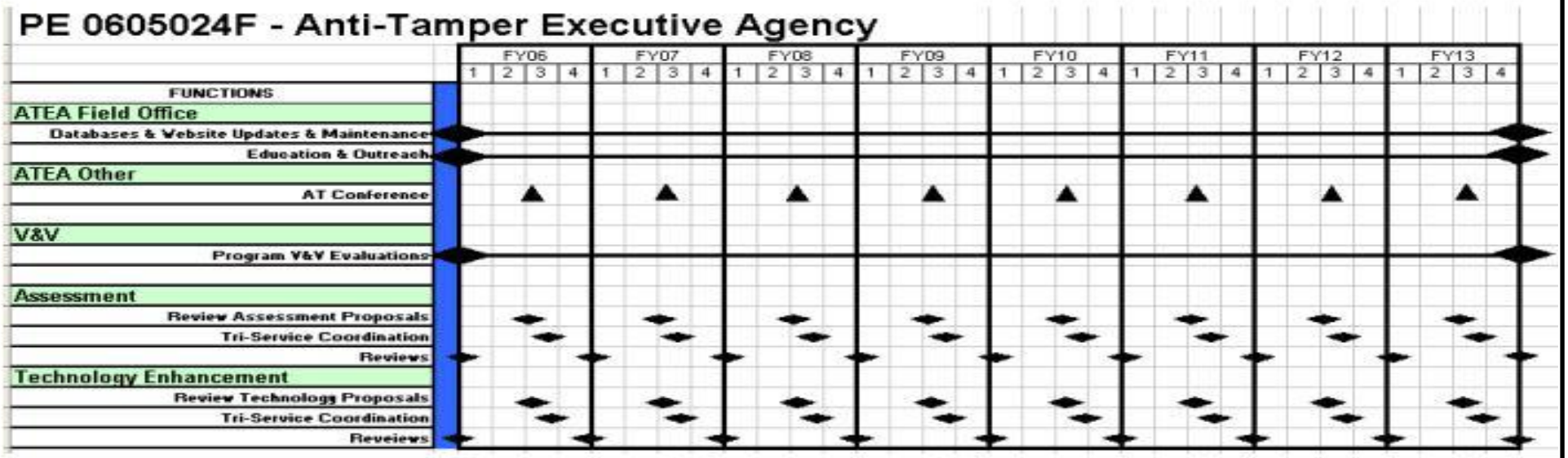

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0605024F Anti-Tamper Technology Executive Agent	PROJECT NUMBER AND TITLE: 5066 Anti-Tamper Technology Executive Agent

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

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101113F B-52 SQUADRONS

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	88.420	42.121	38.651	68.381	55.761	34.312	15.643	Continuing	TBD
5039 B-52 Modernization	88.420	42.121	38.651	68.381	55.761	34.312	15.643	Continuing	TBD

FY2007 funding total includes $ 24.500M in GWOT supplemental.

(U) A. Mission Description and Budget Item Justification

B-52 Modernization is a comprehensive program to assure B-52 viability to perform future wartime missions. B-52 modernization (initiated in FY05) integrates and adds both tactical and global data link communications for real time command and control, targeting, intelligence and upgrades antiquated air traffic management systems with those supported by three key functions using satellite technology: Communications, Navigation and Surveillance. Modernization also upgrades training devices to support aircrew and maintenance training with the latest B-52 capability. In addition, modernization improves conventional warfare capability with additional MIL-STD-1760 smart weapons and fully integrates advanced targeting pods with the offensive avionics system.

CONECT

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

Trainers & CONECT

B-52 aircrew and maintenance training devices are a mix of 1970's and '80's technology. Most have reached their design capacity and must be upgraded to remain useful training tools. Upgrades to some of the training systems must occur prior to incorporating CONECT functionality. This planned approach enables the trainers to maintain currency with the latest aircraft configuration. The CONECT program upgrades existing trainers, establishes a system integration laboratory for development of aircrew trainers, and adds CONECT Phase A and Phase B functionality to meet user-training requirements.

Weapons Improvements

B-52 Modernization also includes 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 are provided through the integration of advanced weapons both internally (MIL-STD-1760 in the bomb bay) and externally.

Advanced Targeting Pod Functionality

The B-52 Modernization program fully integrates the Advanced Targeting Pod (ATP) by linking pod control, display and target geo-location with the B-52 offensive avionics system. The B-52 ATP effort continues the ATP (Sniper or LITENING) integration effort which began in FY 07 with GWOT funding. The ATP effort develops aircraft software updates to add and incorporate advanced pod functionality into the B-52. In addition, this effort upgrades the software functions of the Alternate Mission Equipment (AME) (Multi Function Display and the Integrated Hand Controller), and enables all wired aircraft to utilize a LITENING, or Sniper pod. This effort provides hardware and software upgrades to the existing aircrew/maintenance trainers and the system integration lab.

Global Air Traffic Management (GATM)

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

Test & Evaluation

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

Additional Efforts

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101113F B-52 SQUADRONS

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	75.991	41.916	48.607
(U)	Current PBR/President's Budget	88.420	42.121	38.651
(U)	Total Adjustments	12.429	0.205	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.295	
	Congressional Increases	24.500	0.500	
	Reprogrammings	-10.000		
	SBIR/STTR Transfer	-2.071		

(U) Significant Program Changes:

($9.5M) adjustment in FY09 to support higher AF priorities. $24.5M FY07 GWOT Congressional Add to accelerate Advanced Targeting Pod integration.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5039 B-52 Modernization	88.420	42.121	38.651	68.381	55.761	34.312	15.643	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 to assure B-52 viability to perform future wartime missions. B-52 modernization (initiated in FY05) integrates and adds both tactical and global data link communications for real time command and control, targeting, intelligence and upgrades antiquated air traffic management systems with those supported by three key functions using satellite technology: Communications, Navigation and Surveillance. Modernization also upgrades training devices to support aircrew and maintenance training with the latest B-52 capability. In addition, modernization improves conventional warfare capability with additional MIL-STD-1760 smart weapons and fully integrates advanced targeting pods with the offensive avionics system.

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Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101113F B-52 SQUADRONS	PROJECT NUMBER AND TITLE 5039 B-52 Modernization

Advanced Targeting Pod Functionality

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Additional Efforts

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

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2007	FY 2008	FY 2009
(U)	Product Development	34.619	29.321	16.682
(U)	MIL-STD-1760	3.700		
(U)	Common Reconfigurable Advanced Thermal Management System	1.000	0.500	
(U)	Advanced Pod Functions	23.076	4.132	3.500
(U)	Pod Lab & Simulator Upgrades		1.068	
(U)	Simulation/Trainer Development	17.480	0.500	11.815
(U)	Government Test	1.764	3.099	2.796
(U)	Program Support/Modeling and Simulation/Studies and Analysis	4.165	1.950	2.009

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101113F B-52 SQUADRONS	PROJECT NUMBER AND TITLE 5039 B-52 Modernization

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Management Support	2.616	1.551	1.849
(U)	Total Cost	88.420	42.121	38.651

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E, PE 0207446F, Bomber TDL Core	20.700	0.000							20.700
(U)	Other APPN									TBD
(U)	APAF, PE 0101113F, B52 Squadrons, Aircraft Procurement BP11, Mods	55.893	33.066	41.699	79.917	81.024	94.924	93.047	90.444	570.014

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

(U) D. Acquisition Strategy

B-52 Modernization is a comprehensive program to assure B-52 viability to perform future wartime missions. The B-52 CONECT SDD prime contract is sole source to Boeing, Wichita, KS. Boeing will design, develop, test and procure the necessary equipment from their subcontractors; develop engineering drawings, logistic and technical data, and time compliance technical order (TCTO) for installation on the B-52. The SDD effort includes installing and testing CONECT equipment on a B-52 aircraft. The B-52 trainer will be modified to support the CONECT modification through Ogden ALC via their trainer contract with Rockwell Collins, Sterling, VA.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
CONECT SDD	CPFF	Boeing, Wichita KS		34.619	Mar-05	29.321		16.682		Continuing	TBD	
1760 Studies and Analysis	T&M	Boeing, Wichita KS		3.700	Jan-07						3.700	
Advanced Pod Functions	Various	Boeing, Wichita KS		23.077		4.132		3.500			30.709	
Common Reconfigurable Advanced Thermal Management System	MIPR	ISR (SprayCool Technology) and Wichita State University, Wichita KS		1.000		0.500					1.500	
Subtotal Product Development			0.000	62.396		33.953		20.182		Continuing	TBD	0.000
Remarks:												
(U) Support												
Simulator/Trainer	616	509 MASSG, OO-ALC, UT		17.480	Jan-07	0.500		11.815		Continuing	TBD	
CONECT Program Support, Studies & Analysis	Various			4.165		1.065		1.097		Continuing	TBD	
System Integration Lab Pod Software Upgrades	Contract	Boeing, Wichita KS				0.168					0.168	
Pod Software Trainer Upgrades	Contract	OO-ALC				0.900					0.900	
Subtotal Support			0.000	21.645		2.633		12.912		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
419 FLTS	Project Order			1.550		2.188		2.431		Continuing	TBD	
JITC	MIPR			0.213		0.384		0.365			0.962	
Subtotal Test & Evaluation			0.000	1.763		2.572		2.796		Continuing	TBD	0.000
Remarks:												
(U) Management												
651 AESS		Wright-Patterson AFB, OH		1.866		2.205		1.980		Continuing	TBD	
327 ACSG		Tinker AFB, OK		0.750		0.758		0.781		Continuing	TBD	
Subtotal Management			0.000	2.616		2.963		2.761		Continuing	TBD	0.000
Remarks:												
(U) Total Cost			0.000	88.420		42.121		38.651		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101113F B-52 SQUADRONS	PROJECT NUMBER AND TITLE: 5039 B-52 Modernization

B-52 CONECT SCHEDULE

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

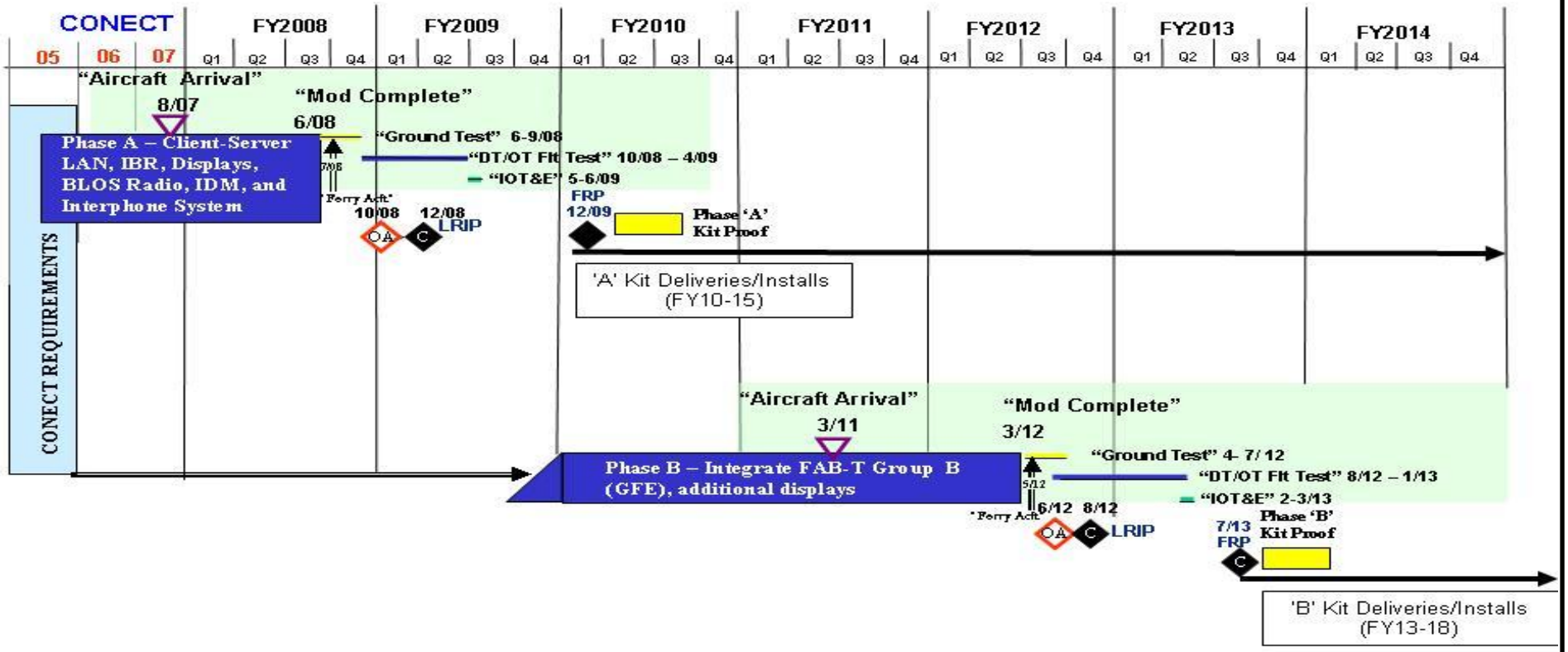

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101113F B-52 SQUADRONS**	PROJECT NUMBER AND TITLE **5039 B-52 Modernization**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) CONECT Phase A SDD	1-4Q	1-4Q	1-4Q
(U) CONECT Phase A Flight Test		4Q	1-3Q
(U) CONECT LRIP Milestone C			1Q
(U) CONECT Full Rate Production (FY10)			
(U) CONECT Phase B SDD (FY10)			

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PE NUMBER: 0101120F
PE TITLE: ADVANCED CRUISE MISSILE

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0101120F ADVANCED CRUISE MISSILE

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	6.767	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.333
4798 Life Extension Program	6.767	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.333

(U) A. Mission Description and Budget Item Justification

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

Cruise Missile Functional Ground Testing (FGT) was 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 provided critical reliability data without the cost of flight test mission and also retained the missiles in the inventory. This effort developed the software and hardware for an existing test facility for accomplishment of the ground tests.

The W-80 LEP was initiated to replace warhead components to extend its service life. The National Nuclear Security Administration (NNSA) was responsible for most of the refurbishment costs associated with the W-80 Warhead. The Air force was responsible for funding ACM/W-80 integration. Integration included 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.

Per Secretary of Defence direction the ACM system is being retired beginning in FY08.

These programs were 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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	6.957	0.000	0.000
(U)	Current PBR/President's Budget	6.767	0.000	0.000
(U)	Total Adjustments	-0.190		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.190		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4798	Life Extension Program	6.767	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.333
	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 394 ACM in the inventory. The ACM fleet design service life expires between the years 2003 and 2008.

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	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Continue ACM/W80 integration and data development support			
(U)	Conduct ACM/W80 Development Flight Testing			
(U)	ACM/W-80 interface compatability testing			
(U)	Compile and reduce ACM/W80 interface data for archiving	1.429		
(U)	Develop final report for ACM/W80 interface/tests to establish a baseline of all accomplishments and data points.	1.620		
(U)	Develop planning documentation to address program restart requirements.	0.893		
(U)	Conduct Cruise Missile Functional Ground Test (FGT) Integration Testing and Verification	0.937		
(U)	Developmental Test in FGT Facility	1.100		
(U)	Develop FGT Supportability Plan	0.788		
(U)	Total Cost	6.767	0.000	0.000

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) MPAF, Missile Modifications (WSC 20ACMA, P-21)	0.150	0.000	0.000	0.000	0.000	0.000	0.000		0.150
(U) MPAF, Replenishment Spares (BA04, PE 0101120F, P-16)	1.938	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.938
(U) MPAF, Missile Modification Initial Spares (BA04, PE 0101120F, P-16)	0.248	0.000	0.000	0.000	0.000	0.000	0.000		0.248

(U) D. Acquisition Strategy

Per Secretary of Defence decision ACM system has been retired.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Support												
None											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
FGT Support	Fund cite/MIPR	49TES, Barksdale AK		1.000	Jul-07						1.000	1.000
Subtotal Test & Evaluation			0.000	1.000		0.000		0.000		0.000	1.000	1.000
Remarks: None												
(U) Product Development												
Functional Ground Test (FGT) Development	FFP,CPFF, and T&M	Raytheon, Tucson AZ	5.797	1.925	Feb-07						7.722	7.722
W80 Life Extension Program (LEP) Integration & Support	T&M	Raytheon, Tucson AZ	4.769	3.842	Jan-07					0.000	8.611	8.611
Subtotal Product Development			10.566	5.767		0.000		0.000		0.000	16.333	16.333
Remarks:												
(U) Management												
None											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			10.566	6.767		0.000		0.000		0.000	17.333	17.333

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101120F ADVANCED CRUISE MISSILE	PROJECT NUMBER AND TITLE 4798 Life Extension Program

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(U) FGT Integration	1-2Q		
(U) FGT Development Testing	3Q		
(U) Compile and reduce ACM/W80 interface data for archiving	1-4Q		
(U) Develop final report for ACM/W80 interface/tests	1-4Q		
(U) Develop planning documentation to address program restart requirements.	1-4Q		

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

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101122F AIR LAUNCHED CRUISE MISSILE

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	3.620	4.642	0.396	0.414	0.430	0.438	0.447	Continuing	TBD
4797	Flight Testing & Navigation Enhancement	3.620	4.642	0.396	0.414	0.430	0.438	0.447	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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

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

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

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

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

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101122F AIR LAUNCHED CRUISE MISSILE

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	3.722	4.672	0.400
(U)	Current PBR/President's Budget	3.620	4.642	0.396
(U)	Total Adjustments	-0.102	-0.030	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.030	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.102		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4797	Flight Testing & Navigation Enhancement	3.620	4.642	0.396	0.414	0.430	0.438	0.447	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.

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).

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

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

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

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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)	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Continue ALCM/W80 interface change evaluations/changes and contractor ICD support for W80 LEP			
(U)	Continue ALCM integration data development			
(U)	Continue ALCM W-80 integration ground test and flight test support, Environmental Flight Test and Developlmental Flight Test	0.500		
(U)	W80 Joint Test Assembly (JTA-1) Replacement Support, revise the W80-1 Interface Control Documents (ICDs), provide integration support, and flight test qualification. Continuation of W80 efforts - not a New Start.		2.102	0.170
(U)	Develop aging and surveillance program for ALCM critical components such as those in the safe arm and fuze subsystem, navigation/guidance system, and electrical/power distribution systemto identify aging trends prior to failures in fielded components.	3.120	2.540	0.226
(U)	Total Cost	3.620	4.642	0.396

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) MPAF, Missile Modifications (BA 03, PE 0101122F, P-15)	9.669	10.111	10.216	0.000	0.000	0.000	0.000		29.996
(U) MPAF, Missile Modifications Initial Spares (BA 04 PE 0101122F, P-16)	0.185	0.191	0.194	0.000	0.000	0.000	0.000		0.570
(U) MPAF, Replenishment Spares (BA 04, PE 0101122F, P-16)	0.287	0.295	0.300	11.075	11.358	11.570	11.811	Continuing	TBD
(U) OPAF, Electronics and Telecommunications Equipment (BP83) (BA 03, PE 0101122F, P-18)	1.415	1.461	1.499	1.562	1.620	1.651	1.684	Continuing	TBD

(U) D. Acquisition Strategy

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

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

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
W80 LEP Support	Eng Asgn/T&M	Boeing, Seattle, WA.	1.040	0.500	Jan-07					1.420	2.960	
JTA-1 Replacement Support	FFP	ESpectrum, San Antonio, TX				2.102	Jan-08	0.170	Jan-09		2.272	
Subtotal Product Development			1.040	0.500		2.102		0.170		1.420	5.232	0.000
Remarks:												
(U) Support												
W80 Support/PSM			0.085							0.000	0.085	
ALCM Aging and Surveillance Program				3.120	Jan-07	2.540	Jan-08	0.226	Jan-09		5.886	
Subtotal Support			0.085	3.120		2.540		0.226		0.000	5.971	0.000
Remarks:												
(U) Test & Evaluation												
49th Test Wing (W-80 LEP)	MIPR		1.925							4.685	6.610	
None											0.000	
Subtotal Test & Evaluation			1.925	0.000		0.000		0.000		4.685	6.610	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			3.050	3.620		4.642		0.396		6.105	17.813	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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

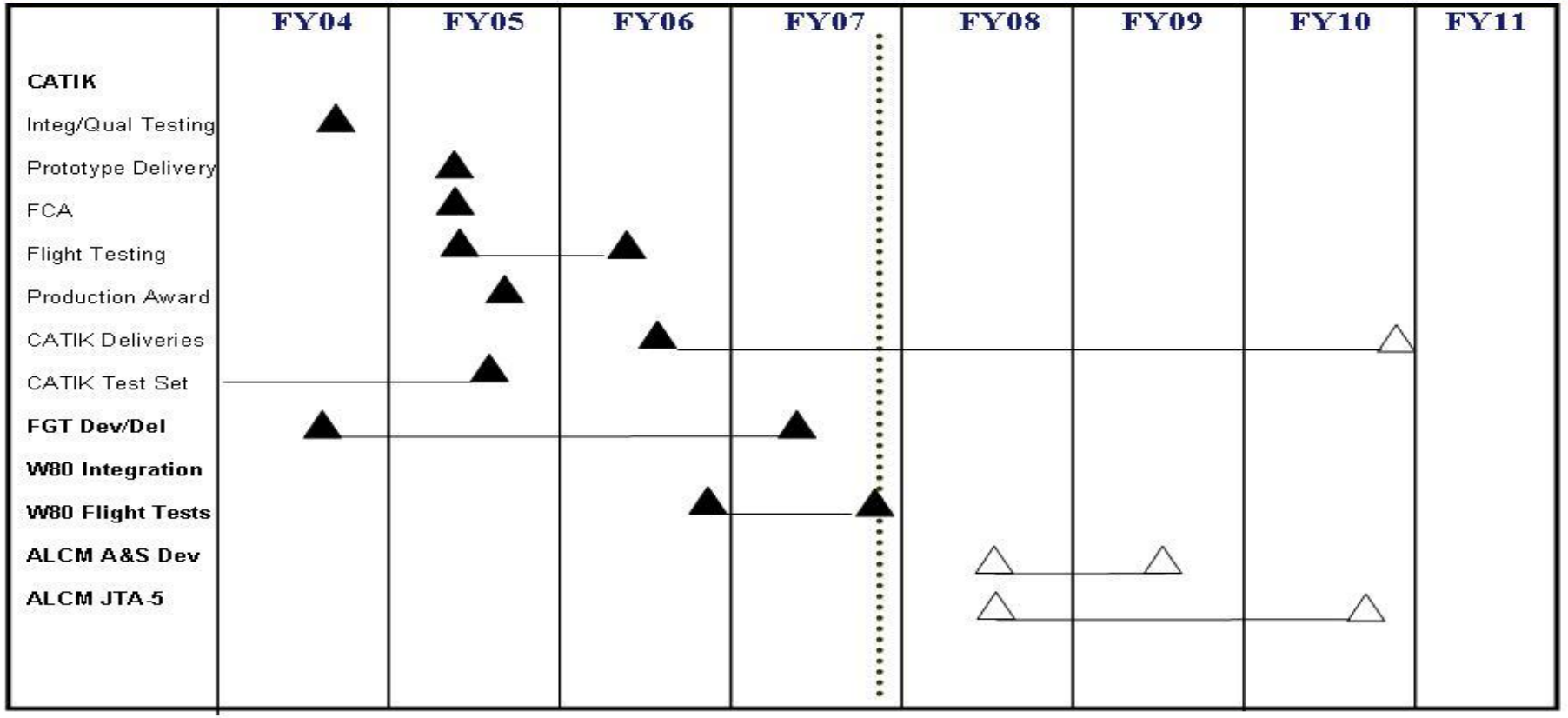

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101122F AIR LAUNCHED CRUISE MISSILE**	PROJECT NUMBER AND TITLE **4797 Flight Testing & Navigation Enhancement**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) ALCM JTA-1 Support		2Q	2Q
(U) ALCM Aging & Surveillance Program development	3Q	2Q	3Q

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

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

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	24.774	20.130	17.553	19.018	20.575	20.582	21.255	Continuing	TBD
5059	Strategic War Planning System (SWPS)	24.774	13.400	10.319	10.609	10.782	10.690	11.165	Continuing	TBD
5282	Joint Navigation Warfare Center (JNWC)	0.000	6.730	7.234	8.409	9.793	9.892	10.090	0.000	0.000

(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 completion of these missions, USSTRATCOM is modernizing the Integrated Strategic Planning and Analysis Network (ISPAN) (formerly known as SWPS) and developing information systems and techniques to counter and conduct Navigation Warfare (NAVWAR).

When the ISPAN modernization is complete the system will support the warfighter in both deliberate and adaptive planning environment while allowing the National Command Authorities to employ the full spectrum of kinetic and non-kinetic weapons. The ISPAN 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).

Navigation Warfare (NAVWAR) is a warfighting application of electronic warfare (EW) and space control (SC) employing various techniques and technologies to negate or prevent hostile use of positioning, navigation, and timing (PNT) information and protect unimpeded use of PNT information by U.S., Allied, and Coalition Forces. The Joint Navigation Warfare Center (JNWC) was established under USSTRATCOM to integrate and coordinate NAVWAR PNT capabilities across the mission areas of intelligence, surveillance, reconnaissance, information operations, electronic warfare, and space control. Since the Global Positioning System (GPS) has become one of the most critical enablers of modern, advanced technology warfare it is imperative that access to its data remain unimpeded. The JNWC will develop models, conduct simulations and tests (with allied nations as appropriate) and provided related technological information to other defense development programs to ensure continued access to this data for defense purposes.

SWPS (including ISPAN and JNWC development activities) are in budget activity 7, Operational System Development, because their systems are operational, and currently support capabilities to create, verify, and produce OPLAN 8044, meet new UCP taskings, and produce other products.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101313F STRAT WAR PLANNING SYS - USSTRATCOM

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	28.577	20.340	18.999
(U)	Current PBR/President's Budget	24.774	20.130	17.553
(U)	Total Adjustments	-3.803	-0.210	
(U)	Congressional Program Reductions		-0.081	
	Congressional Rescissions		-0.129	
	Congressional Increases			
	Reprogrammings	-3.000		
	SBIR/STTR Transfer	-0.803		
(U)	Significant Program Changes:			
	FY07 reduction for higher AF priorities			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5059	Strategic War Planning System (SWPS)	24.774	13.400	10.319	10.609	10.782	10.690	11.165	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).

In FY05, the ISPAN Modernization effort established a redesigned software architecture through requirements definition, and early design and developmental test activities. The ISPAN modernization program includes initiation of Course of Action (COA) Development, workflow and decision support development, Combatant Commander (COCOM) Collaboration (Global Operations Center Collaborative Environment (GOC CE), User Defined Operational Picture (UDOP)), conventional mission planning integration, and Mission Planning Analysis System (MPAS) maintenance and modernization. This includes software coding, integration of multiple internal and external planning applications, significant developmental test activities, and early operational test activities. 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.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Program			
(U) Theater Planning Support continues the modernization of software applications for Air Vehicle Planning System (APS), Missile Graphics Planning System (MGPS) and Targeting in support of the Theater Planning Support Document for Combatant Commanders.	1.716		
(U) 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 is to establish a service oriented N-Tier architecture for the ISPAN applications to use.	21.702	13.400	10.319

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007	FY 2008	FY 2009
(U)	Global C2 Development Center will provide timely analysis of technologies and processes and identify innovative approaches to facilitate effective and timely integration of Net Centric capabilities. This effort was an FY06 and FY07 congressional add.	1.356		
(U)	Total Cost	24.774	13.400	10.319

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF WSC 833140 Strategic Command and Control (Program Element 0101313F)	9.977	9.861	13.144	13.444	13.650	13.918	14.193	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 2008**

BUDGET ACTIVITY: **07 Operational System Development**

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

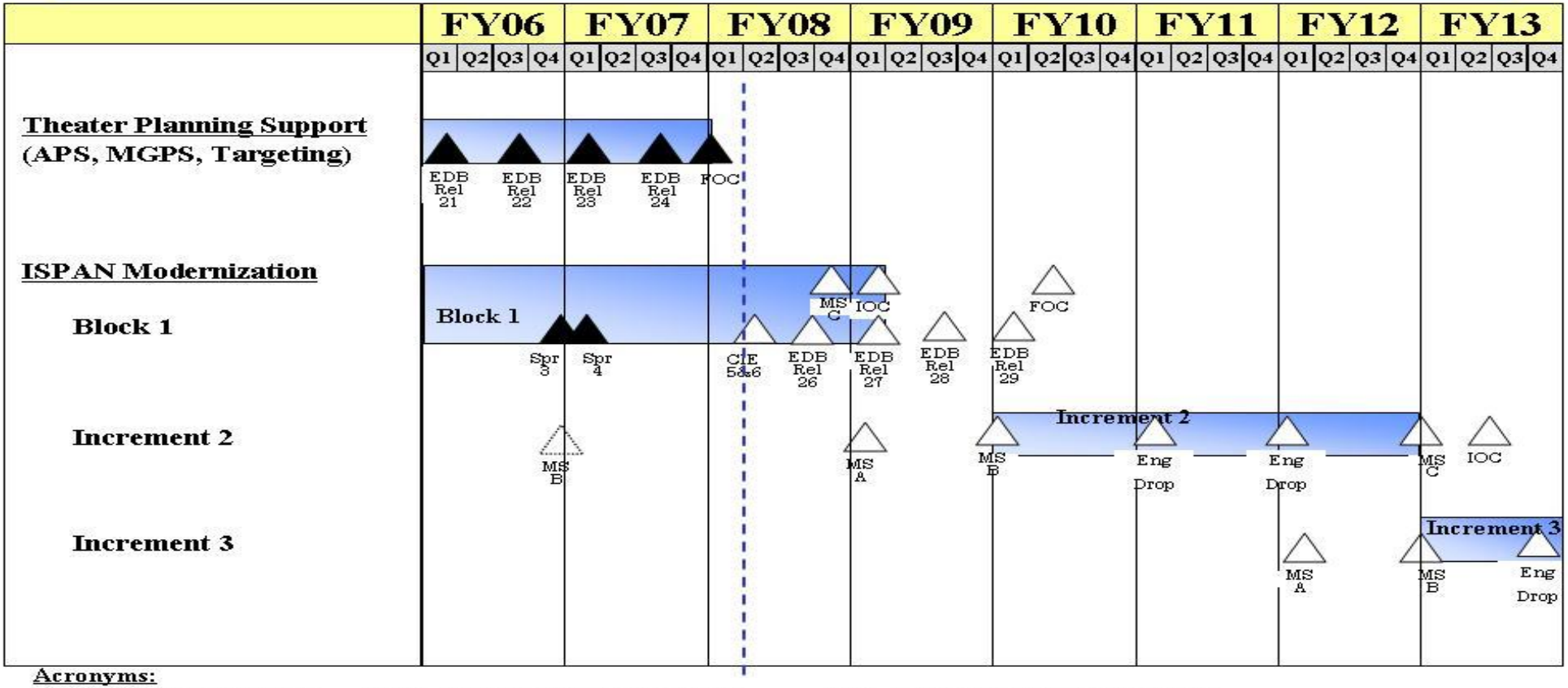
PROJECT NUMBER AND TITLE: **5059 Strategic War Planning System (SWPS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Air Vehicle Planning System (APS)	TM	BAE, San Diego, CA	4.890								4.890	TBD
Missile Graphics Planning System (MGPS)	CPAF	Northrop Grumman, Bellevue, NE	1.286								1.286	1.286
Missile Graphics Planning System (MGPS)	CPAF	Northrop Grumman, Bellevue, NE	3.153	2.050	Oct-06	2.018	Oct-07	1.595	Oct-08	Continuing	TBD	TBD
Targeting	CPAF	SAIC, San Diego, Ca	0.800								0.800	0.800
Targeting	CPAF	SAIC, San Diego, Ca	1.589	0.613	Oct-06	0.500	Oct-07		Oct-08		2.702	TBD
ISPAN Modernization	CPAF	Lockheed Martin Integrated Systems, Bellevue, NE	32.397	18.116	Oct-06	6.651	Oct-07	5.224	Oct-08	Continuing	TBD	TBD
Miscellaneous Contracts	CPAF	Pending	6.963	3.995	Oct-06	4.231	Oct-07	3.500	Oct-08	Continuing	TBD	TBD
											0.000	
Subtotal Product Development			51.078	24.774		13.400		10.319		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) (U) Test & Evaluation												
											0.000	
Subtotal (U) Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			51.078	24.774		13.400		10.319		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101313F STRAT WAR PLANNING SYS - USSTRATCOM	PROJECT NUMBER AND TITLE: 5059 Strategic War Planning System (SWPS)

U.S. AIR FORCE

ISPAN Schedule



Acronyms:

EDB - Enterprise Database
MS B - Milestone B
FOC - Full Operational Capability
MS C - Milestone C
IOC – Initial Operational Capability
MS A – Milestone A

As of: 26 Dec 07

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
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 2007	FY 2008	FY 2009
(U) Theater Planning Support (APS, MGPS, Targeting)	1-4Q		
(U) Theater Planning Support FOC	4Q		
(U) ISPAN Modernization MS C		4Q	
(U) ISPAN Modernization IOC			1Q
(U) ISPAN Modernization Block 2 MS A			1Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101313F STRAT WAR PLANNING SYS - USSTRATCOM	PROJECT NUMBER AND TITLE: 5282 Joint Navigation Warfare Center (JNWC)	

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5282	Joint Navigation Warfare Center (JNWC)	0.000	6.730	7.234	8.409	9.793	9.892	10.090	0.000	0.000
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Navigation Warfare (NAVWAR) is a warfighting application of electronic warfare (EW) and space control (SC) employing various techniques and technologies to negate or prevent hostile use of positioning, navigation, and timing (PNT) information and protect unimpeded use of PNT information by U.S., Allied, and Coalition Forces while not unduly disrupting peaceful use outside an area of operation. The Joint Navigation Warfare Center (JNWC) was established to integrate and coordinate NAVWAR PNT capabilities across the mission areas of intelligence, surveillance, reconnaissance, information operations, electronic warfare, and space control. In recent years, the Global Positioning System (GPS) has become one of the most critical enablers of modern, advanced technology warfare. In an era where everything from advanced weapons systems to basic goods and services are tracked or guided by navigation systems such as GPS, Navigation Warfare is an interest and concern, especially if those systems are interrupted or lost. The primary mission of NAVWAR is to provide joint warfighter support through three broad mission areas:

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

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

c. Navigation Warfare Information Analysis (Modeling, Simulation, Tools, and Methods) - develops and maintains methods, standards, models and simulations used in NAVWAR analysis and operates the Navigation Warfare Information Analysis Center (IAC). NAVWAR evaluates new models for accuracy and applicability to specific situations and rapidly evolving threat environments. It will also develop and maintain standard test methodologies created solely by the U.S. as well as test methods developed in collaboration with coalition partners. These standard methodologies ensure data sharing is efficient and effective, and ensures accurate feedback

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101313F STRAT WAR PLANNING SYS - USSTRATCOM**	PROJECT NUMBER AND TITLE **5282 Joint Navigation Warfare Center (JNWC)**

to the operational communities. The JNWC, as part of this effort, manages the GPS EA frequency clearance process and conducts independent analysis and verification of EA frequency clearance requests. It also maintains and upgrades the GPS-RPM as required and conducts modeling and simulation exercises on GPS interference to include test and exercise threat laydowns for DoD organizations unable to perform their own modeling. The NAVWAR IAC serves as a source of NAVWAR information and technical expertise for DoD researchers, engineers, program managers, warfighters, testers, and others. It will collect, analyze, synthesize, and disseminate scientific and technical information in clearly defined specialized subject areas. It promotes standardization by: 1) providing in-depth analyses; 2) creating products that respond to technical inquiries; 3) preparing state-of-the-art reports, handbooks, and databases; 4) conducting technology assessments; and 5) supporting the exchange of information within the NAVWAR community.

JNWC is in budget activity 7, Operational System Development, because it improves the accessibility and survivability of information for and from systems that are in operational use by providing reach-back analysis as well as threat, adversary, and intelligence assessments.

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

		FY 2007	FY 2008	FY 2009
(U)	NAVWAR Warfighter Operational Support - COCOM reachback analysis, threat assessments, adversary assessments, intel assessments	0.000	1.330	1.734
(U)	NAVWAR Test, Training, Exercises, & Experiments - Field Tests, NATO Exercises, Trials & Demonstrations, U.S. Exercises	0.000	2.800	2.800
(U)	NAVWAR Modeling, Simulation, Tools, & Methods - Integrated Analysis Center (IAC), Global Positioning System Reliability Prediction Model (GPS-RPM) Upgrades, GPS EA frequency clearance evaluations, modeling and simulation methodologies, standards and analysis	0.000	2.600	2.700
(U)	Total Cost	0.000	6.730	7.234

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	None	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	TBD

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

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

PROJECT NUMBER AND TITLE: **5282 Joint Navigation Warfare Center (JNWC)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
											0.000	
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Support												
NAVWAR Warfighter Operational Support	TM	Overlook Systems Technology, Inc, Vienna, VA				1.330	Oct-07	1.734	Oct-08	Continuing	TBD	TBD
NAVWAR Modeling, Simulation, Tools & Methods and Integrated Analysis Center	TM	Overlook Systems Technology, Inc, Vienna, VA				2.600	Oct-07	2.700	Oct-08	Continuing	TBD	TBD
Subtotal Support			0.000	0.000		3.930		4.434		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
JNWC Field Tests	PO	Multiple Government Agencies		0.000		2.800	Oct-07	2.800	Oct-07	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		2.800		2.800		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	0.000		6.730		7.234		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101313F STRAT WAR PLANNING SYS - USSTRATCOM	PROJECT NUMBER AND TITLE: 5282 Joint Navigation Warfare Center (JNWC)

NavWar Schedule

As of 11 Jan 08

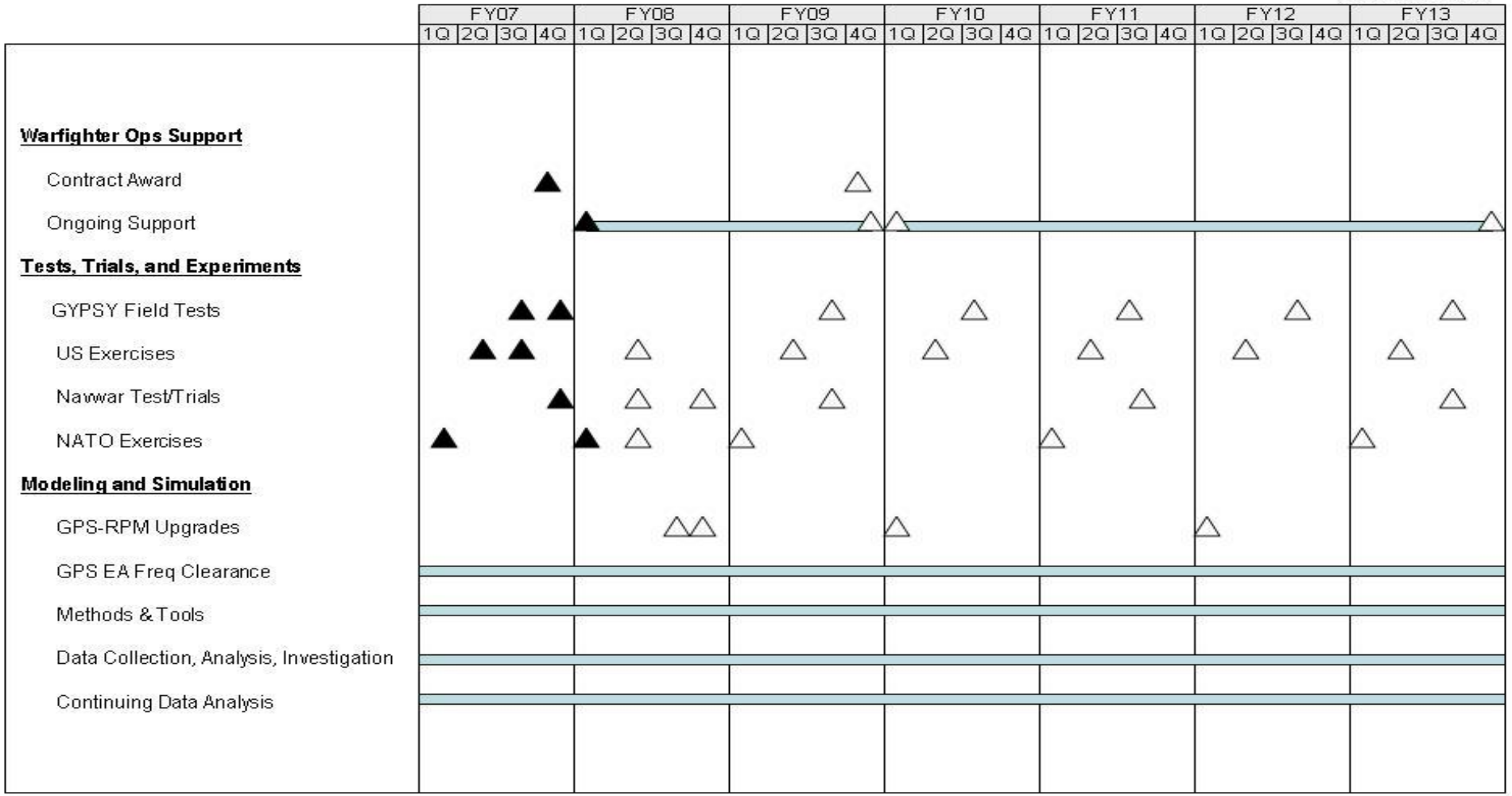


Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101313F STRAT WAR PLANNING SYS - USSTRATCOM	PROJECT NUMBER AND TITLE: 5282 Joint Navigation Warfare Center (JNWC)

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) NAVWAR Operational Support Contract Award	4Q		4Q
(U) NAVWAR Test, Training, Exercises & Experiments - GYPSY Field Test	4Q		3Q
(U) NAVWAR Test, Training, Exercises & Experiments - US Exercises	3Q		3Q
(U) NAVWAR Test, Training, Exercises & Experiments - Test/Trials		2-4Q	2-4Q
(U) NAVWAR Test, Training, Exercises & Experiments - NATO Trials/Exercises		1Q	
(U) GPS Frequency Clearance	1-4Q	1-4Q	1-4Q

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	14.642	23.262	23.858	26.171	25.492	18.212	18.581	Continuing	TBD
4592	Region/Sector Operations Modernization Center (R/SAOC)	14.642	23.262	23.858	26.171	25.492	18.212	18.581	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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, is an FY07-fielded next-generation battle management command and control system with enhanced capability to integrate data from existing and future civil and military defense surveillance systems into a comprehensive recognized air picture and National Capital Region/Integrated Air Defense System (NCR/IADS). This multi-input single integrated air control picture enhances 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 integrate data from radar sensors, data links, and the 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 had 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 was costly to sustain and provided no opportunity for application enhancement. The BCS-F system replaced this antiquated system and achieved Initial Operational Capability in October 2006. With each successive increment, BCS-F provides a more effective Homeland Defense capability.

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 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	14.744	23.495	29.358
(U)	Current PBR/President's Budget	14.642	23.262	23.858
(U)	Total Adjustments	-0.102	-0.233	
(U)	Congressional Program Reductions		-0.085	
	Congressional Rescissions		-0.148	
	Congressional Increases			
	Reprogrammings	-0.102		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

- Funding increases from FY07 to FY08 and out because of parallel common software development activities.
- Funding ($5.50M) reduced in FY09 for higher priorities.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4592	Region/Sector Operations Modernization Center (R/SAOC)	14.642	23.262	23.858	26.171	25.492	18.212	18.581	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-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, is an FY07-fielded next-generation battle management command and control system with enhanced capability to integrate data from existing and future civil and military defense surveillance systems into a comprehensive recognized air picture and National Capital Region/Integrated Air Defense System (NCR/IADS). This multi-input single integrated air control picture enhances 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 integrate data from radar sensors, data links, and the 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 had 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 was costly to sustain and provided no opportunity for application enhancement. The BCS-F system replaced this antiquated system and achieved Initial Operational Capability in October 2006. With each successive increment, BCS-F provides a more effective Homeland Defense capability.

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 2007	FY 2008	FY 2009
(U)	Accomplishments/Planned Program			
(U)	Continue Acquisition Activities associated with System Development of the BCS-F, to include but not limited to Software Development, System Integration, Purchase of Government Furnished Equipment, Production Representative Hardware, NCR/IADS, Test and Certification Support.	11.416	20.020	20.422
(U)	Continue Program Management/Systems Engineering	1.686	1.698	1.704
(U)	Continue Program Support (i.e. travel, supplies, equipment, misc)	1.540	1.544	1.732
(U)	Total Cost	14.642	23.262	23.858

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other APPN									
(U) OPAF PE 0102326F (Other Procurement Air Force, WSC 833040, Theater Air Control System Improvement)	25.841	11.156	12.318	11.328	13.294	20.232	20.633	Continuing	TBD

(U) D. Acquisition Strategy

The BCS-Fixed program is utilizing an incremental 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 2008**

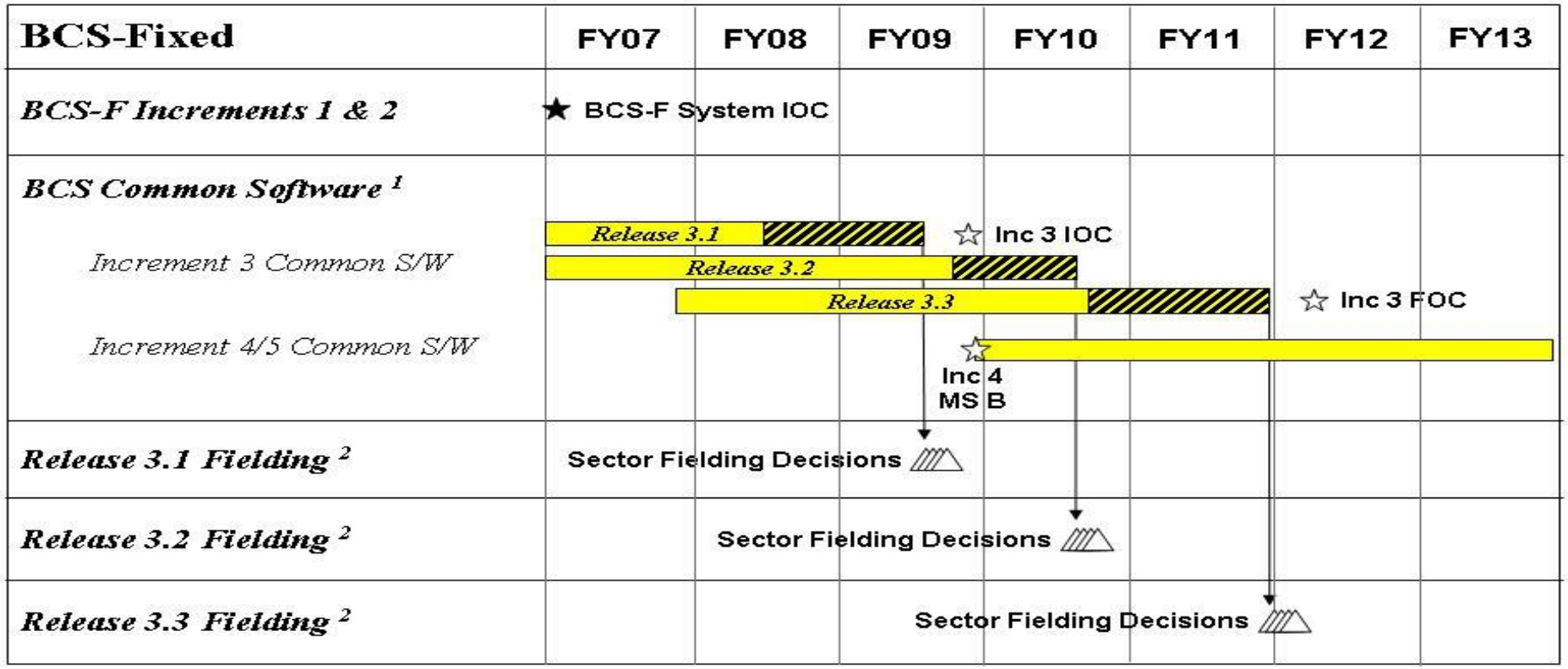
BUDGET ACTIVITY: **07 Operational System Development**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
THALES RAYTHEON	CPAF	Fullerton, CA		9.032	Oct-06	17.221	Oct-07	17.351	Oct-08	Continuing	TBD	TBD
Various	Various	Various		1.602	Jan-07	0.602	Jan-08	0.771	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	10.634		17.823		18.122		Continuing	TBD	TBD
Remarks:												
(U) Support												
Program Management Tech Spt	T&M	A&AS Various		1.283	Jan-07	0.927	Jan-08	0.955	Jan-09	Continuing	TBD	TBD
Information Assurance				0.000		0.250	Feb-08	0.250	Dec-08	Continuing	TBD	TBD
System Engineering	FFP	Mitre, Bedford, MA		1.686	Oct-06	1.698	Oct-07	1.704	Oct-08	Continuing	TBD	TBD
Program Office Support	Various	Various		0.258	Nov-06	0.617	Nov-07	0.777	Nov-08	Continuing	TBD	TBD
Subtotal Support			0.000	3.227		3.492		3.686		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
46th Test Wing/Other Test Act	Various	Various		0.781	Nov-06	1.947	Nov-07	2.050	Nov-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.781		1.947		2.050		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	14.642		23.262		23.858		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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)



1 Software Increments 1 & 2 were delivered to BCS-F prior to FY07
2 BCS-F incremental upgrades come from the BCS Common Software development

Major Event or Milestone ☆
Planned Task(s) △
Development Activity
Integration/Test Activity

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

As of Jan 2008

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(U) BCS-F System-Level IOC (Increments 1 & 2)	1Q		
(U) BCS-F Increment 3 Release 3.1 Fielding Decision			3Q
(U) BCS-F Increment 3 IOC			4Q
(U) BCS-F Common Software Increment 4 MS B			4Q

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

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

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

(U) A. Mission Description and Budget Item Justification

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

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

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

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0102823F STRAT AEROSPACE INTEL SYS ACTIVITIES	PROJECT NUMBER AND TITLE: 5011 Space Situational Awareness Initiatives	

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

(U) A. Mission Description and Budget Item Justification

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

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

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

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

(U) D. Acquisition Strategy

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

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

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0102823F STRAT AEROSPACE INTEL SYS ACTIVITIES**	PROJECT NUMBER AND TITLE **5011 Space Situational Awareness Initiatives**

sources.

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

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

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0102823F STRAT AEROSPACE INTEL SYS ACTIVITIES	PROJECT NUMBER AND TITLE 5011 Space Situational Awareness Initiatives

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0102823F STRAT AEROSPACE INTEL SYS ACTIVITIES**	PROJECT NUMBER AND TITLE **5011 Space Situational Awareness Initiatives**

(U) Schedule Profile

	FY 2007	FY 2008	FY 2009
(U) TBD			

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0203761F Warfighter Rapid Acquisition Program

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	29.613	14.155	20.807	20.227	20.667	21.159	21.620	Continuing	TBD
4936	Warfighter Rapid Acquisition Program	29.613	14.155	20.807	20.227	20.667	21.159	21.620	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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	30.469	14.245	26.430
(U)	Current PBR/President's Budget	29.613	14.155	20.807
(U)	Total Adjustments	-0.856		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.856		
(U)	Significant Program Changes:			

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0203761F Warfighter Rapid Acquisition Program**

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

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4936	Warfighter Rapid Acquisition Program	29.613	14.155	20.807	20.227	20.667	21.159	21.620	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 2007	FY 2008	FY 2009
(U) Planned WRAP project selection and project initiation	29.613	14.155	20.807
(U) Total Cost	29.613	14.155	20.807

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not Applicable									

(U) D. Acquisition Strategy

WRAP enables Air Force innovation including experimentation and spiral development processes to decrease fielding timelines and allows development, fielding, or upgrading of systems until the sponsoring MAJCOM/Agency can incorporate them into their subsequent submission. The Air Force, through appropriate program 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 2008
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 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
											0.000	TBD
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000	0.000	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		29.613	Jan-07	14.155	Jan-08	20.807	Jan-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	29.613		14.155		20.807		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	29.613		14.155		20.807		Continuing	TBD	TBD
Remarks:												

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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

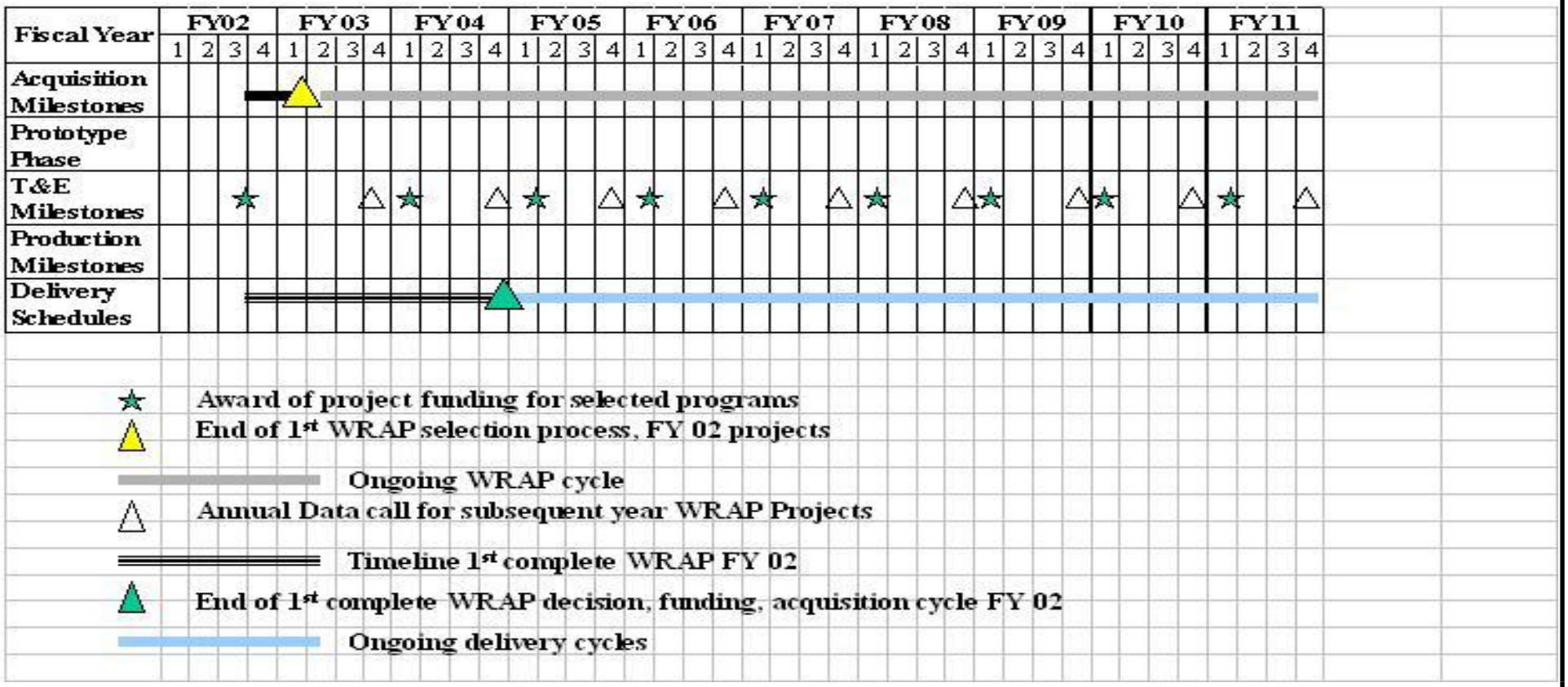

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0203761F Warfighter Rapid Acquisition Program**	PROJECT NUMBER AND TITLE **4936 Warfighter Rapid Acquisition Program**

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) FY 07 WRAP Project Initiation	1Q		
(U) FY 07 WRAP Project Approval/Project funding (Anticipated)	2Q		
(U) FY 08 WRAP Project Initiation (Planned)		1Q	
(U) FY08 WRAP Project Approval/Project funding (Planned)		2Q	
(U) FY 09 WRAP Project Initiation (Planned)			1Q

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

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

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	63.862	43.557	37.717	37.227	19.737	20.140	Continuing	TBD
5246 MQ-9 Development and Fielding	0.000	63.862	43.557	37.717	37.227	19.737	20.140	Continuing	TBD

This program moved from PE 0305219F (MQ-1 Predator) in FY08.

(U) A. Mission Description and Budget Item Justification

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

The MQ-9 Reaper aircraft is a single-engine, turbo-prop remotely piloted aircraft designed to operate over-the-horizon at medium-to-high altitude for long endurance sorties. The aircraft is being designed primarily to prosecute critical emerging Time Sensitive Targets (TSTs) as a radar, Electro-optical/Infra-red(EO/IR), and laser designator-based attack asset with on-board hard-kill capability (hunter-killer) and also perform Intelligence, Surveillance, Reconnaissance and Target Acquisition (ISR TA) as a secondary role. In the hunter-killer role, the aircraft will employ fused multi-spectral sensors to automatically find, fix, and track ground targets (Automatic Target Cueing (ATC), Target Location Accuracy (TLA), Metric Sensor and other capabilities) and assess post-strike results. The MQ-9 will also explore and, if appropriate, develop and integrate Signals Intelligence (SIGINT) sensors capabilities. The MQ-9 is in continuing development and will field capability through incremental upgrades. The baseline development includes FY04 & FY05 Quick Reaction/ Interim Combat Capabilities (ICC) and a System Development & Demonstration (SDD) phase. The SDD effort began in FY05 and includes developing and testing the MQ-9's baseline capability and preliminary technical orders. Capabilities in development include increasing the aircraft's gross take-off weight; enhancing aircraft systems to include integrated redundant avionics, ice detection capability, navigation system upgrades, electrical system upgrades, sensor/stores management computer, MIL-STD-1760 advanced weapons data bus, advanced sensor and weapons payloads, and improved human-machine interface; integrating standard precision weapons (AGM-114 Hellfire missile and GBU-12/38/49 guided bombs); hardware and software upgrades to the ground control station for MQ-9 operations; completing airworthiness certification; weapons system certification and accreditation; and producing applicable training devices that emulate aircraft capabilities. Subsequent investments will continue to evolve the MQ-9's capabilities to meet new requirements (which may include SIGINT, communications, and other sensor and weapons), and address reliability and maintainability and safety issues.

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0205219F MQ-9 Development and Fielding

or fixed facility GCS. The GCS will continue to evolve and upgrade its capabilities to keep pace with MQ-9 system capabilities and the missions they perform.

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

This program is in 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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.000	61.069	49.866
(U)	Current PBR/President's Budget	0.000	63.862	43.557
(U)	Total Adjustments	0.000	2.793	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.407	
	Congressional Increases		3.200	
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

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

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0205219F MQ-9 Development and Fielding	PROJECT NUMBER AND TITLE: 5246 MQ-9 Development and Fielding	

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5246	MQ-9 Development and Fielding	0.000	63.862	43.557	37.717	37.227	19.737	20.140	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

This program moved from PE 0305219F (MQ-1 Predator) in FY08.

(U) A. Mission Description and Budget Item Justification

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

The MQ-9 Reaper aircraft is a single-engine, turbo-prop remotely piloted aircraft designed to operate over-the-horizon at medium-to-high altitude for long endurance sorties. The aircraft is being designed primarily to prosecute critical emerging Time Sensitive Targets (TSTs) as a radar, Electro-optical/Infra-red(EO/IR), and laser designator-based attack asset with on-board hard-kill capability (hunter-killer) and also perform Intelligence, Surveillance, Reconnaissance and Target Acquisition (ISR TA) as a secondary role. In the hunter-killer role, the aircraft will employ fused multi-spectral sensors to automatically find, fix, and track ground targets (Automatic Target Cueing (ATC), Target Location Accuracy (TLA), Metric Sensor and other capabilities) and assess post-strike results. The MQ-9 will also explore and, if appropriate, develop and integrate Signals Intelligence (SIGINT) sensors capabilities. The MQ-9 is in continuing development and will field capability through incremental upgrades. The baseline development includes FY04 & FY05 Quick Reaction/ Interim Combat Capabilities (ICC) and a System Development & Demonstration (SDD) phase. The SDD effort began in FY05 and includes developing and testing the MQ-9's baseline capability and preliminary technical orders. Capabilities in development include increasing the aircraft's gross take-off weight; enhancing aircraft systems to include integrated redundant avionics, ice detection capability, navigation system upgrades, electrical system upgrades, sensor/stores management computer, MIL-STD-1760 advanced weapons data bus, advanced sensor and weapons payloads, and improved human-machine interface; integrating standard precision weapons (AGM-114 Hellfire missile and GBU-12/38/49 guided bombs); hardware and software upgrades to the ground control station for MQ-9 operations; completing airworthiness certification; weapons system certification and accreditation; and producing applicable training devices that emulate aircraft capabilities. Subsequent investments will continue to evolve the MQ-9's capabilities to meet new requirements (which may include SIGINT, communications, and other sensor and weapons), and address reliability and maintainability and safety issues.

The Ground Control Station (GCS) functions as the aircraft cockpit and can control the aircraft either within line-of-sight (LOS) or beyond LOS (BLOS) via a combination of satellite relay and terrestrial communications. The GCS is either mobile to support forward operating locations or fixed at a facility to support Remote Split Operations (RSO). The GCS has the capability to perform mission planning; provide a means for manual and/or autonomous control, and a GCS configuration to allow control of multiple aircraft and payloads; allow personnel to launch, recover, and monitor aircraft, payloads, and system communications status; secure data links to receive payload sensor data and command links; monitor threats to the aircraft; display common operation picture; and provide support functions. Additionally, a Launch and Recovery GCS (LRGCS) allows for servicing, systems checks, maintaining, launching, and recovering aircraft under LOS control for hand-off to a mobile or fixed facility GCS. The GCS will continue to evolve and upgrade its capabilities to keep pace with MQ-9 system capabilities and the missions they perform.

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0205219F MQ-9 Development and Fielding	PROJECT NUMBER AND TITLE 5246 MQ-9 Development and Fielding

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

This program is in 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 2007	FY 2008	FY 2009
(U)	MQ-9 System Development and Demonstration (SDD). Includes aircraft/GCS/Communication system improvements, development and integration of follow-on sensors, weapon and payload integration, test and training capability, technical data.		29.456	27.675
(U)	EO/IR Development		0.625	0.655
(U)	MQ-9 TLA Development		23.000	4.000
(U)	Other Government Costs, including Developmental and Operational Test support, SATCOM, Urgent Services		5.181	3.827
(U)	Operator Simulator		3.200	3.200
(U)	SAR Upgrade		2.400	4.200
(U)	Total Cost	0.000	63.862	43.557

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Other APPN									
(U)	Aircraft Procurement, AF (PE 0205219F)		58.075	161.439	193.378	190.039	144.785	147.156	Continuing	TBD
(U)	Aircraft Modification, AF (PE 0205219F)		20.439	24.590	30.203	31.536	31.024	31.532	Continuing	TBD

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
MQ-9 System Development and Demonstration	SS/CPIF/CPFF	GA-ASI, Rancho Bernardo CA				29.456	Jan-08	27.675	Jan-09	Continuing	TBD	TBD
EO/IR Development	CPFF	Raytheon, McKinney TX				0.625	Feb-08	0.655	Feb-09	Continuing	TBD	TBD
Operator Simulator Development	CPFF	677 AESG, Wright-Patterson AFB OH				3.200	Feb-08	3.200	Feb-09	Continuing	TBD	TBD
SAR Upgrade	CPFF	GA-RSG, San Diego, CA				2.400	Mar-08	4.200	Feb-09	0.000	6.600	6.600
MQ-9 TLA	Various	Raytheon, McKinney TX				23.000	Jan-08	4.000	Apr-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		58.681		39.730		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Program Support	Various	Various				5.181	Feb-08	3.827	Feb-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		5.181		3.827		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	0.000		63.862		43.557		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0205219F MQ-9 Development and Fielding	PROJECT NUMBER AND TITLE: 5246 MQ-9 Development and Fielding

UNCLASSIFIED

MQ-9 Reaper Program Schedule

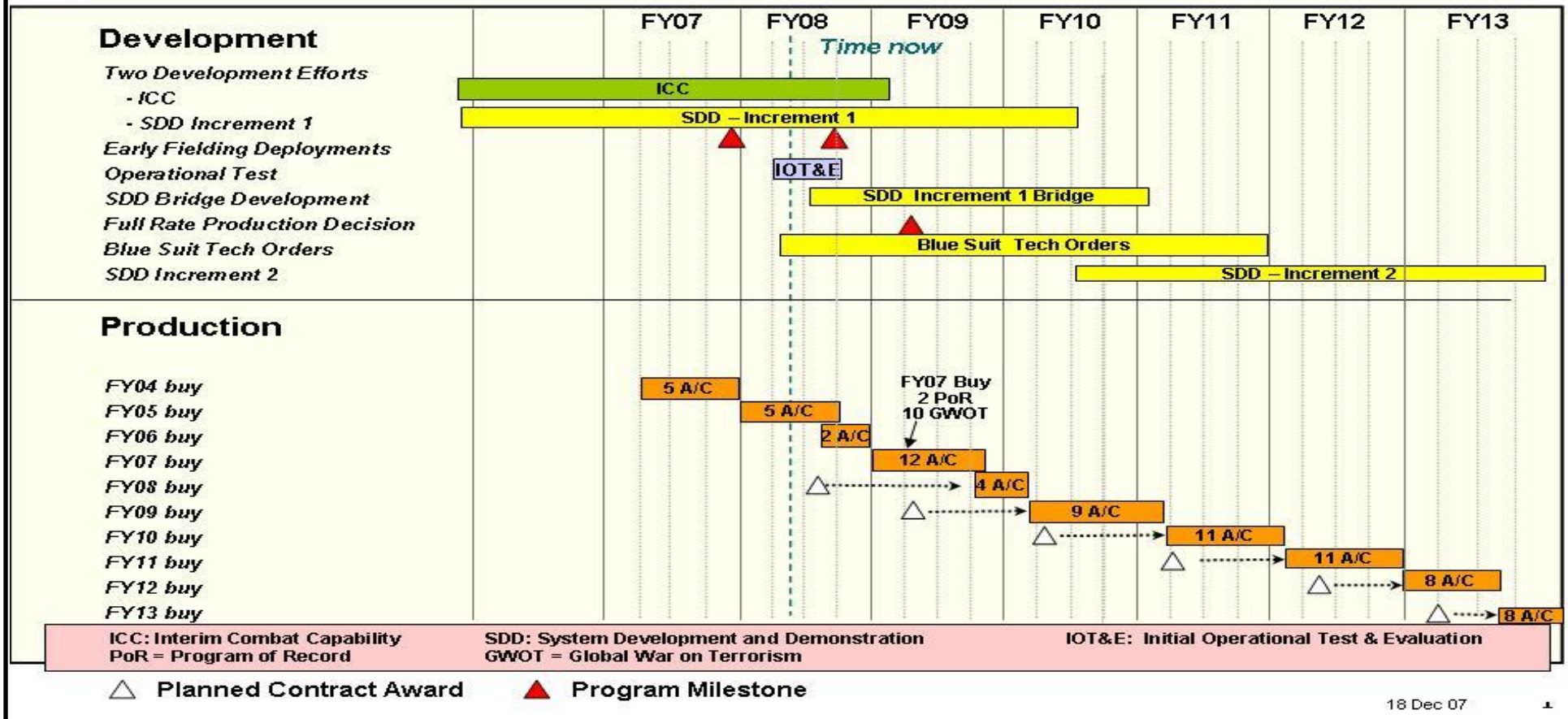

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0205219F MQ-9 Development and Fielding**	PROJECT NUMBER AND TITLE **5246 MQ-9 Development and Fielding**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) MQ-9 ICC Complete			1Q
(U) IOT&E		2-4Q	
(U) MQ-9 Milestone C (FRP)			2Q
(U) SDD Inc 1 Bridge (e.g. TLA, PPDL, Differential GPS)		3Q	
(U) Blue Suit Tech Order Development Start		2Q	

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207131F A-10 SQUADRONS

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	42.491	1.951	0.000	3.018	0.000	0.000	0.000	Continuing	TBD
4809 A-10 Squadrons	42.491	1.951	0.000	3.018	0.000	0.000	0.000	Continuing	TBD

FY2007 funding total includes $10M in GWOT supplemental. (Urban CAS Low Collateral Damage)

FY2008 funding totals do not include $280M FY2008 GWOT requirements still pending Congressional consideration. (Propulsion Upgrade Program and Urban CAS Low Collateral Damage)

(U) A. Mission Description and Budget Item Justification

The concept of operations for the A-10 requires an agile and survivable weapon system that provides close-air support, combat search and rescue, and special operations support. The high operations tempo maintained by the Expeditionary Air Force requires that each combat platform exhibit the flexibility to effectively perform in a variety of operational roles. To implement these strategies, Combat Air Forces (CAF) must be able to conduct air operations around-the-clock under various weather conditions against numerous enemy threats employing a full spectrum of air defense systems to include countermeasures.

The A-10 is an essential component of successful air operations, and represents a significant percentage of the CAF force structure with 356 aircraft in service. Candidate developmental requirements from the user are formally reviewed yearly for incorporation in the yearly Operational Flight Program release cycle, including both hardware and software fixes to fix deficiencies. The weapon system's attributes include excellent low speed maneuverability, high weapons payload, long loiter time, very high tolerance to battle damage, and the lowest cost per flying hour of any CAF fighter. As demonstrated during the Persian Gulf War, it is the Air Force's most effective Close Air Support (CAS) and anti-armor platform.

Planned developmental and modernization actions will correct the current shortcomings of the A-10 weapon system and add new capabilities to ensure continued viability throughout its projected service life. These developmental modernization programs will provide the A-10 with new combat capabilities to employ a variety of smart weapons plus improved situational awareness, increased service life to the wing and fuselage/empennage, and enhanced target identification and designation capability. The A-10 retains current capability and is adding capability projects such as Precision Engagement (PE) Program (MN-9805), including a 4-channel data recorder; Wing Replacement Program (MN-9804) and it's associated Three-Dimensional (3-D) Modeling, Design, and Engineering Assessment; Secure/Beyond Line-of-Sight (SLOS/BLOS) Radio Communications (MN-9803); and Mode S / Mode 5 (MN-7856).

The Situational Awareness Datalink (SADL) and the Improved Data Modem (IDM) efforts are being installed in conjunction with the Precision Enagement modification to the maximum extent possible. Funding is provided under Program Element Code (PEC) 0207445F (Fighter Tactical Data Link) and PEC 0207423F (Advanced Communication Systems). Since the SADL modification will be run concurrent with the PE modification, the development timeline and subsequent kit procurement mirror PE's program schedule.

This program is in Budget Activity 07 - Operational System Development because it supports a fielded weapon system

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207131F A-10 SQUADRONS

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	31.850	1.963	0.000
(U)	Current PBR/President's Budget	42.491	1.951	0.000
(U)	Total Adjustments	10.641	-0.012	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.012	
	Congressional Increases	10.000		
	Reprogrammings	1.500		
	SBIR/STTR Transfer	-0.859		

(U) Significant Program Changes:

Received $10M GWOT for development efforts for Urban Close Air Support (CAS)

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4809 A-10 Squadrons	42.491	1.951	0.000	3.018	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 concept of operations for the A-10 requires an agile and survivable weapon system that provides close-air support, combat search and rescue, and special operations support. The high operations tempo maintained by the Expeditionary Air Force requires that each combat platform exhibit the flexibility to effectively perform in a variety of operational roles. To implement these strategies, Combat Air Forces (CAF) must be able to conduct air operations around-the-clock under various weather conditions against numerous enemy threats employing a full spectrum of air defense systems to include countermeasures.

The A-10 is an essential component of successful air operations, and represents a significant percentage of the CAF force structure with 356 aircraft in service. Candidate developmental requirements from the user are formally reviewed yearly for incorporation in the yearly Operational Flight Program release cycle, including both hardware and software fixes to fix deficiencies. The weapon system's attributes include excellent low speed maneuverability, high weapons payload, long loiter time, very high tolerance to battle damage, and the lowest cost per flying hour of any CAF fighter. As demonstrated during the Persian Gulf War, it is the Air Force's most effective Close Air Support (CAS) and anti-armor platform.

Planned developmental and modernization actions will correct the current shortcomings of the A-10 weapon system and add new capabilities to ensure continued viability throughout its projected service life. These developmental modernization programs will provide the A-10 with new combat capabilities to employ a variety of smart weapons plus improved situational awareness, increased service life to the wing and fuselage/empennage, and enhanced target identification and designation capability. The A-10 retains current capability and is adding capability projects such as Precision Engagement (PE) Program (MN-9805), including a 4-channel data recorder; Wing Replacement Program (MN-9804) and it's associated Three-Dimensional (3-D) Modeling, Design, and Engineering Assessment; Secure/Beyond Line-of-Sight (SLOS/BLOS) Radio Communications (MN-9803); and Mode S / Mode 5 (MN-7856).

The Situational Awareness Datalink (SADL) and the Improved Data Modem (IDM) efforts are being installed in conjunction with the Precision Enagement modification to the maximum extent possible. Funding is provided under Program Element Code (PEC) 0207445F (Fighter Tactical Data Link) and PEC 0207423F (Advanced Communication Systems). Since the SADL modification will be run concurrent with the PE modification, the development timeline and subsequent kit procurement mirror PE's program schedule.

This program is in Budget Activity 07 - Operational System Development because it supports a fielded weapon system

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Precision Engagement (PE) development/integration efforts.	25.353	1.951	
(U) Three Dimensional (3-D) Modeling, Design, and Engineering Assessment.	1.500		
(U) Wing Replacement Program development efforts.	5.638		
(U) Urban Close Air Support (CAS) Low Collateral Damage integration efforts.	10.000		
(U) Total Cost	42.491	1.951	0.000

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207131F A-10 SQUADRONS	PROJECT NUMBER AND TITLE: 4809 A-10 Squadrons

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	A-10 Squadrons (PE 0207131F)-APAF	276.187	145.306	138.273	294.194	271.394	265.751	266.451		
(U)	Fighter Tactical Data Link (PE 0207445F)-RDT&E	24.990	2.093							TBD
(U)	Fighter Tactical Data Link (PE 0207445F)-APAF	0.000	22.657	5.804	9.112	0.700	0.698			TBD

(U) D. Acquisition Strategy

- Development efforts will be conducted under the A-10 Prime Contract, which was awarded to Lockheed Martin Systems Integration (LMSI) in Dec 1997 through a full-and-open competition. An IDIQ contract is in place with LMSI to support OFP Development. Time and Materials (T&M), and Cost Plus Incentive Fee (CPIF), and Cost Plus Fixed Fee (CPFF) contracts will be awarded for specific modernization requirements under this effort.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Precision Engagement Development	T&M/CPIF	Lockheed Martin Systems Integration--Owego NY		23.983	Jan-07	1.888	Feb-08			Continuing	TBD	
Three-Dimensional (3D) Modeling, Design, and Engineering Assessment	CPFF	Aerospace Engineering Spectrum (AES)--Ogden UT		1.680	Sep-07						1.680	
A-10 Wing Replacement Program	FFP	Boeing -- St Louis MO		4.800	Jun-07						4.800	
Three-Dimension (3D) Modeling, Systems Engineering	T&M	Innovative Systems Architecture (ISA) -- Layton UT		0.658	Feb-07						0.658	
Urban CAS	T&M	Lockheed Martin Systems Integration -- Owego NY		10.000						Continuing	TBD	
Subtotal Product Development			0.000	41.121		1.888		0.000		Continuing	TBD	0.000
Remarks:												
(U) Support												
USAF (Multiple) PE				1.370	Oct-06	0.063	Jan-08			Continuing	TBD	
Subtotal Support			0.000	1.370		0.063		0.000		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
USAF (40th FTS) PE											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks: Test and Evaluation costs are included in the "Support" line												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks: Management costs are included in the "Support" line												
(U) Total Cost			0.000	42.491		1.951		0.000		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207131F A-10 SQUADRONS	PROJECT NUMBER AND TITLE: 4809 A-10 Squadrons

PE OFP Suite Master Schedule

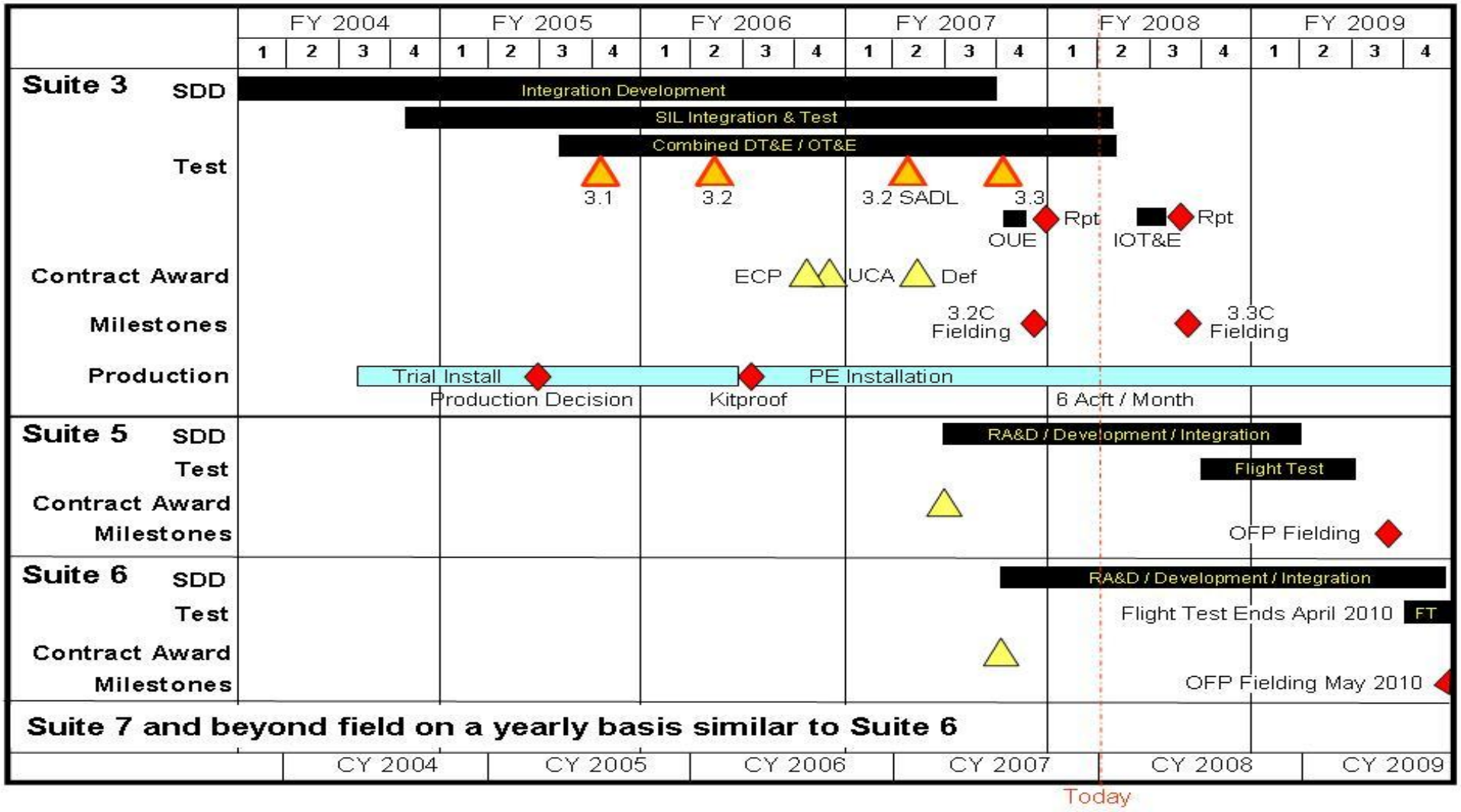

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207131F A-10 SQUADRONS**	PROJECT NUMBER AND TITLE **4809 A-10 Squadrons**

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

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207133F F-16 SQUADRONS

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	124.761	70.172	123.979	119.900	107.538	109.629	111.874	Continuing	TBD
2671 F-16 Squadrons	124.761	70.172	123.979	119.900	107.538	109.629	111.874	Continuing	TBD

FY08 totals do not include $7.7M GWOT requirements still pending Congressional consideration

(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 29-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)/Destruction of enemy air defenses (DEAD). Also during these years the aircraft has evolved in its capabilities to exploit the advances made in computer, avionics systems, engine, and structures technologies. The F-16 has been selected by more than 20 air forces around the world and foreign military sales production continues in the 21st century. The 312th Aeronautical Systems Group (312 AESG, the F-16 Development Management Office) develops, integrates, and qualifies systems to enhance the overall performance of the F-16 mission.

Enhancements which are being or will be developed during the FYDP include:
a. Advanced Weapons Integration will include Joint Air-to-Surface Stand-off Missile (JASSM), Joint Direct Attack Munition (JDAM, Laser JDAM), Joint Stand-off Weapon (JSOW), Wind Corrected Munition Dispenser (WCMD), Small Diameter Bomb (SDB), AMRAAM, AIM-9X, and updates to existing weapons into the F-16. This activity includes tasks such as performing risk reduction activities on advanced weapon integration, developing/integrating of advanced racks, pylons, adapters, and the Universal Armament Interface, as well as includes nuclear surety, safety and compatibility tasks.
b. The AN/APG-68(V)10 radar program is in the process of being terminated.
c. The Mode S program develops the on-aircraft kit required to integrate and certify a Mode S capable Identification Friend or Foe (IFF) Transponder on Blk 40/42 aircraft to meet Global Air Traffic requirements in Europe.
d. The Mode 5 program provides secure, encrypted IFF capability to meet OSD mandates. This program will add Mode 5 capability to the Blk 40/42 IFF Transponder installed in the Mode S program through software-only activities. The program modifies the Blk 50/52 Air-to-Air Interrogator (AAI) system through integration of a Mode 5 capable Combined Interrogator/Transponder (CIT) and associated software updates.
e. The F-16 development efforts are complemented by comprehensive operational flight program (OFP) upgrades including Hardware and Group A development associated with OFP software candidates. Integration efforts includes ALR-56M SW upgrades to the ALR-56M Radar Warning Receiver software, manned fighter reconnaissance capabilities and Joint Helmet Mounted Cueing System (JHMCS) which allows the pilot to designate and shoot targets at high angles without maneuvering the aircraft. Advanced weapons integration moves under the OFP updates line starting in FY08 and includes Joint Air-to-Surface Stand-off Missile (JASSM) and Joint Direct Attack Munition (JDAM, Laser JDAM), Joint Stand-off Weapon (JSOW), Wind Corrected Munition Dispenser (WCMD), Small Diameter Bomb (SDB), AMRAAM, AIM-9X and updates to existing weapons into the F-16. Integration with the high angle off-bore sight AIM-9X missile provides the F-16 with enhanced first-look/first-shoot/first-kill advantage in the "dogfight" arena. Weapons integration also includes tasks such as performing risk reduction activities on advanced weapon integration, development and integration of advanced racks, pylons, adapters, and the Universal Armament Interface, as well as nuclear surety, safety and compatibility tasks. Link 16 provides the F-16s with a secure, jam resistant, high-capacity data communications link with other combat aircraft, airborne

control aircraft, and ground control centers. Embedded GPS/INS systems will provide improved targeting capability to take full advantage of GPS-aided precision weapons to conduct evolving missions. Mission Planning system integration and ground collision avoidance capability development and integration efforts are included in M-tapes funding. Starting with M6/M6+ OFP, LM Aero will start transition activities for OFP workload and maintenance of M-series OFP tapes to OO-ALC and assumes a "leader/follower" transition where LM Aero will produce M6/M6+ OFP as OO-ALC builds up capability (personnel, special test equipment, OFP development tools & processes, and training). OO-ALC will then assume system lead responsibility for the next M-series OFP program (M7+). During transition, both Lockheed and Ogden may have some concurrent software development capabilities both in terms of special test equipment and personnel since OFP tape developments overlap. This funding is broken out through FY09 for clarity to separate these transition efforts from OFP Development.

f. The EMD Hardware/Advanced Capability Improvements. EMD HW provides funding to test, qualify, and field aircraft subsystems replaced or modified due to requirements changes, Pre-Planned Product Improvements (P3I) and Diminishing Manufacturing Source (DMS). The approach to contracting varies by individual project. These solutions include but are not limited to mux architecture, MMC upgrade, Embedded GPS/INS, digital video recorder, Advanced Data Transfer Cartridge/Unit (ADTC/DTU), display upgrades, radio and communication studies, Electronic Warfare (EW), CAS Data Link and other development activities. Advanced Capability Improvements includes software integration, sensor upgrades, lab and/or on-aircraft evaluation of potential subsystem changes/capability improvements on the F-16 system as well as establishment of associated requirement specification changes. Provides updates and tech order changes to existing pod systems and integration of new pods (e.g., SNIPER, LANTIRN, HTS, LITENING, THUNDER POD, TARS, etc.) The MMC upgrade and Embedded GPS/INS are broken out for clarity.

g. The ALR-56M line provides for upgrades to the ALR-56M Radar Warning Receiver software. Starting in FY09, this will be covered under OFP update line.

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

i. The F16 Secure Line of Sight (SLOS) communication mod is in response to CENTCOM Urgent Operational Need for secure line-of-sight/single channel ground and airborne radio system (SINCGARS) communication capabilities which can be upgraded to secure beyond line of sight (BLOS) capability in the future. BLOS received an OMNIBUS reprogramming from the cancelling AN/APG-68(V)10 radar program in FY07. This investment initiates development of SATCOM BLOS capability to communicate with many rotary wing and ground maneuver units in the theater of operations.

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207133F F-16 SQUADRONS

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	151.997	90.620	113.843
(U)	Current PBR/President's Budget	124.761	70.172	123.979
(U)	Total Adjustments	-27.236		
(U)	Congressional Program Reductions		-20.000	
	Congressional Rescissions		-0.448	
	Congressional Increases			
	Reprogrammings	-23.008		
	SBIR/STTR Transfer	-4.228		

(U) Significant Program Changes:

FY07: $23.008M reduction due to Omnubus Reprogramming and other BTRs for higher AF priorities

FY08: $20M Congressional Program Reduction (due to program execution)

FY09 increase for added complexity of Universal Armament Interface (UAI) and Small Diameter Bomb (SDB)

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2671 F-16 Squadrons	124.761	70.172	123.979	119.900	107.538	109.629	111.874	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 29-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)/Destruction of enemy air defenses (DEAD). Also during these years the aircraft has evolved in its capabilities to exploit the advances made in computer, avionics systems, engine, and structures technologies. The F-16 has been selected by more than 20 air forces around the world and foreign military sales production continues in the 21st century. The 312th Aeronautical Systems Group (312 AESG, the F-16 Development Management Office) develops, integrates, and qualifies systems to enhance the overall performance of the F-16 mission.

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

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

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

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

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

e. The F-16 development efforts are complemented by comprehensive operational flight program (OFP) upgrades including Hardware and Group A development associated with OFP software candidates. Integration efforts includes ALR-56M SW upgrades to the ALR-56M Radar Warning Receiver software, manned fighter reconnaissance capabilities and Joint Helmet Mounted Cueing System (JHMCS) which allows the pilot to designate and shoot targets at high angles without maneuvering the aircraft. Advanced weapons integration moves under the OFP updates line starting in FY08 and includes Joint Air-to-Surface Stand-off Missile (JASSM) and Joint Direct Attack Munition (JDAM, Laser JDAM), Joint Stand-off Weapon (JSOW), Wind Corrected Munition Dispenser (WCMD), Small Diameter Bomb (SDB), AMRAAM, AIM-9X and updates to existing weapons into the F-16. Integration with the high angle off-bore sight AIM-9X missile provides the F-16 with enhanced first-look/first-shoot/first-kill advantage in the "dogfight" arena. Weapons integration also includes tasks such as performing risk reduction activities on advanced weapon integration, development and integration of advanced racks, pylons, adapters, and the Universal Armament Interface, as well as nuclear surety, safety and compatibility tasks. Link 16 provides the F-16s with a secure, jam resistant, high-capacity data communications link with other combat aircraft, airborne control aircraft, and ground control centers. Embedded GPS/INS systems will provide improved targeting capability to take full advantage of GPS-aided precision weapons to conduct evolving missions. Mission Planning system integration and ground collision avoidance capability development and integration efforts are

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207133F F-16 SQUADRONS	PROJECT NUMBER AND TITLE 2671 F-16 Squadrons

included in M-tapes funding. Starting with M6/M6+ OFP, LM Aero will start transition activities for OFP workload and maintenance of M-series OFP tapes to OO-ALC and assumes a "leader/follower" transition where LM Aero will produce M6/M6+ OFP as OO-ALC builds up capability (personnel, special test equipment, OFP development tools & processes, and training). OO-ALC will then assume system lead responsibility for the next M-series OFP program (M7+). During transition, both Lockheed and Ogden may have some concurrent software development capabilities both in terms of special test equipment and personnel since OFP tape developments overlap. This funding is broken out through FY09 for clarity to separate these transition efforts from OFP Development.

f. The EMD Hardware/Advanced Capability Improvements. EMD HW provides funding to test, qualify, and field aircraft subsystems replaced or modified due to requirements changes, Pre-Planned Product Improvements (P3I) and Diminishing Manufacturing Source (DMS). The approach to contracting varies by individual project. These solutions include but are not limited to mux architecture, MMC upgrade, Embedded GPS/INS, digital video recorder, Advanced Data Transfer Cartridge/Unit (ADTC/DTU), display upgrades, radio and communication studies, Electronic Warfare (EW), CAS Data Link and other development activities. Advanced Capability Improvements includes software integration, sensor upgrades, lab and/or on-aircraft evaluation of potential subsystem changes/capability improvements on the F-16 system as well as establishment of associated requirement specification changes. Provides updates and tech order changes to existing pod systems and integration of new pods (e.g., SNIPER, LANTIRN, HTS, LITENING, THUNDER POD, TARS, etc.) The MMC upgrade and Embedded GPS/INS are broken out for clarity.

g. The ALR-56M line provides for upgrades to the ALR-56M Radar Warning Receiver software. Starting in FY09, this will be covered under OFP update line.

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

i. The F16 Secure Line of Sight (SLOS) communication mod is in response to CENTCOM Urgent Operational Need for secure line-of-sight/single channel ground and airborne radio system (SINCGARS) communication capabilities which can be upgraded to secure beyond line of sight (BLOS) capability in the future. BLOS received an OMNIBUS reprogramming from the cancelling AN/APG-68(V)10 radar program in FY07. This investment initiates development of SATCOM BLOS capability to communicate with many rotary wing and ground maneuver units in the theater of operations.

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

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Continue OFP Updates	60.683	46.176	77.422
(U)	ALR-56M	0.462	0.100	
(U)	Continue Flight Tests DT&E	28.327	19.368	30.149
(U)	Weapons Integration	0.230		
(U)	Mode S IFF for CAF Aircraft	6.796		
(U)	Mode 5 IFF for CAF Aircraft		0.500	6.000
(U)	MMC Upgrade Development	6.732	1.544	
(U)	EMD HW/Advanced Capabilites Improvements	0.750	0.100	0.500
(U)	Embedded GPS/INS Development	4.099	0.076	
(U)	OFP Transition	9.496	2.308	9.908
(U)	Blk 30 JHMCS	1.550		

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207133F F-16 SQUADRONS	PROJECT NUMBER AND TITLE: 2671 F-16 Squadrons

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Secure Line of Sight (SLOS) Radio	3.118		
(U)	Beyond Line of Sight (BLOS) Radio - OMNIBUS Reprogramming	2.518		
(U)	Total Cost	124.761	70.172	123.979

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Aircraft Procurement (3010), Line Item 41, F-16 Mods	367.868	332.904	273.694	243.419	200.876	71.620	40.865		TBD
(U)	Aircraft Procurement (3010), Line Item 97, Post Production Support	12.196	19.323	13.623	20.311	20.610	21.016	21.426		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 transition activities to OO-ALC started in FY06 as part of the "follower/leader" effort with full up development starting with M7+. The EMD Hardware Development line provides funding to test, qualify, and field aircraft subsystems replaced or modified due to requirement changes, Pre-Planned Product Improvements (P3I), radio and communications upgrades as well as Diminishing Manufacturing Source (DMS). The approach to contracting varies by individual project. Lockheed Martin Aeronautics Company (LM Aero) is the prime contractor on all systems except the 110 Engines (General Electric), and the 229 Engines (Pratt & Whitney). Contract types are T&M, CPIF, CPFF and FFP.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
OFP Updates	CPIF, T&M	LM Aero		60.683	Nov-06	46.176	Nov-07	77.422	Nov-08	Continuing	TBD	
OFP Transition	T&M, Organic	LM Aero, OO-ALC		9.496	Feb-07	2.308	Oct-07	9.908	Dec-08	Continuing	TBD	
ALR-56M	Organic	WRALC/LN		0.462	Dec-06	0.100					0.562	
Weapons Integration	T&M/FFP	LM Aero		0.230	Jan-07	0.000					0.230	
Mode S IFF for CAF Aircraft (Blk 40/42)	CPIF	LM Aero		6.796	Jan-07	0.000	Nov-07				6.796	
Mode 5 IFF for CAF Aircraft (Blk 50/52)	CPIF	LM Aero			Jan-07	0.500	Jun-08	6.000	Jan-09	Continuing	TBD	
MMC 7000A Upgrade Development	CPIF	LM Aero		6.732	Nov-06	1.544	Dec-07				8.276	
EMD HW/Advanced Capabilities Improvements	T&M, FFP	LM Aero/AFRL/VA		0.750	Aug-07	0.100	Mar-08	0.500	Mar-09	Continuing	TBD	
Embedded GPS/INS Development	FFP	Northrop Grumman		4.099	Dec-06	0.076	Dec-07				4.175	
Secure Line of Sight (SLOS)	FFP/CPIF	LM Aero		3.118	Jan-08						3.118	
Blk 30 JHMCS	FFP/CPIF	LM Aero		1.550	Dec-07						1.550	
Blk 30 BLOS - Congressional Plus up	FFP/CPIF	LM Aero		2.518							2.518	
Reprogrammings											0.000	
Subtotal Product Development			0.000	96.434		50.804		93.830		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, Organic	LM Aero/ Edwards AFB		28.327	Dec-06	19.368	Jan-08	30.149	Nov-08	Continuing	TBD	
Subtotal Test & Evaluation			0.000	28.327		19.368		30.149		Continuing	TBD	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Rescission												
(U) Total Cost			0.000	124.761		70.172		123.979		Continuing	TBD	0.000
Remarks:												

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207133F F-16 SQUADRONS	PROJECT NUMBER AND TITLE: 2671 F-16 Squadrons

F-16 Program Schedule - USAF

U.S. AIR FORCE

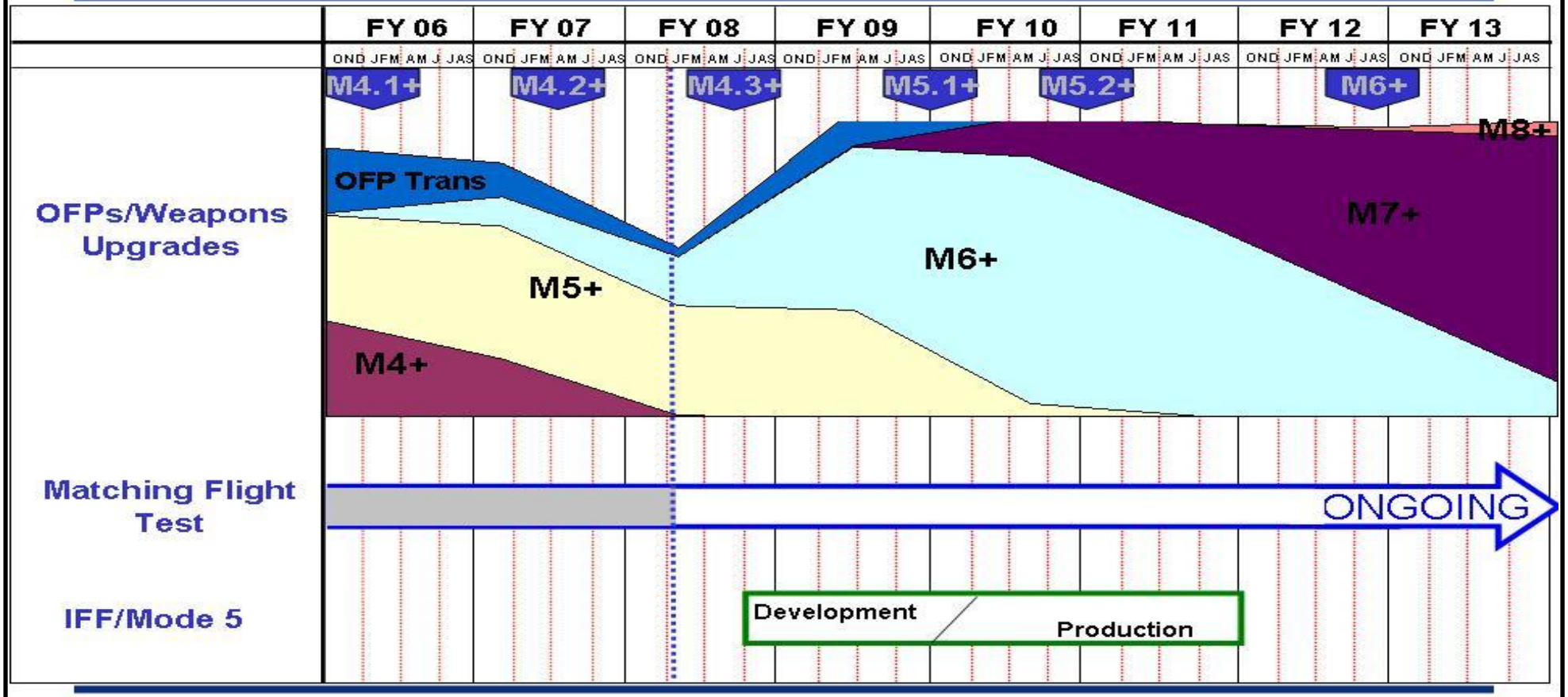

Exhibit R-4a, RDT&E Schedule Detail

DATE: February 2008

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 2007	FY 2008	FY 2009
(U) Flight Test Continuous	1-4Q	1-4Q	1-4Q
(U) OFP Development, continuous	1-4Q	1-4Q	1-4Q
(U) OFP Transition activities	1-4Q	1-4Q	1-4Q
(U) ALR-56M, continous	1-4Q	1-4Q	1-4Q
(U) Weapons Integration (moves to OFP development FY08)	1-4Q		
(U) Mode S IFF for CAF Aircraft	1-4Q	1-4Q	
(U) Mode 5 IFF for CAF Aircraft		3-4Q	1-4Q
(U) EMD Hardware (contiuous)	4Q	1-4Q	1-4Q
(U) Embedded GPS/INS Development	1-4Q	1-4Q	
(U) Secure Line of Sight (SLOS)	2-4Q	1-4Q	1-4Q
(U) MMC 7000A Development	1-4Q	1-4Q	
(U) Blk 30 JHMCS	4Q	1-4Q	1-4Q
(U) Blk 30 BLOS - Congressional Plus up	4Q	1-4Q	

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207134F F-15E SQUADRONS

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	134.253	114.519	184.213	278.588	179.470	119.622	122.072	Continuing	TBD
0131 Initial Operational Test and Evaluation	134.253	114.519	184.213	278.588	179.470	119.622	122.072	Continuing	TBD

FY2008 funding totals do not include $97.5M FY2008 GWOT requirements still pending Congressional consideration.

(U) A. Mission Description and Budget Item Justification

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

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

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

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

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207134F F-15E SQUADRONS

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	137.541	101.251	186.386
(U)	Current PBR/President's Budget	134.253	114.519	184.213
(U)	Total Adjustments	-3.288	13.268	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.732	
	Congressional Increases		14.000	
	Reprogrammings	0.500		
	SBIR/STTR Transfer	-3.788		

(U) Significant Program Changes:

Funding (FY 08):

FY 08 Congressional increase from FY 08 PB to FY 09 PB in support of AESA Demonstration - $6.0M

FY 08 Congressional increase from FY 08 PB to FY 09 PB in support of RWR Upgrade - $5.6M

FY 08 Congressional increase from FY 08 PB to FY 09 PB in support of F-15 classified projects - $2.4M

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

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

PROJECT NUMBER AND TITLE: 0131 Initial Operational Test and Evaluation

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
0131	Initial Operational Test and Evaluation	134.253	114.519	184.213	278.588	179.470	119.622	122.072	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 provide air superiority with an undefeated and unmatched aerial combat record. The F-15E retains this air superiority capability and adds systems, such as advanced imaging and targeting systems, to meet the requirement for all-weather, deep penetration, and night/under-the-weather, air-to-surface attack. Configured with conformal fuel tanks (CFTs), the F-15E deploys worldwide with minimal tanker support and arrives combat-ready. A mainstay in the War on Terror both domestically and abroad, upgrades to the F-15 (avionics, armament, airframe, and engines) are critical to maintaining combat viability (lethality, survivability, and supportability).

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

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

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

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

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Operational Flight Program (OFP) development efforts.	77.204	60.429	79.120
(U)	Flight testing of improvements initiated in prior years.	17.701	10.537	19.668
(U)	Development of Tactical Electronic Warfare System (TEWS) Intermediate Support System (TISS) Technology Insertion Program (TTIP)	1.943	2.604	2.390
(U)	Mode 5 Development Efforts	12.123	11.669	4.268
(U)	F-15C/D APG-63(V)3 Radar Block Upgrade	13.455	8.400	
(U)	F-15E Radar Modernization Program (RMP)	4.353	9.470	76.467
(U)	F-15 ACU (NCI / ICCP) development efforts	6.050		
(U)	F-15 RWR Upgrade		5.600	

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207134F F-15E SQUADRONS	PROJECT NUMBER AND TITLE: 0131 Initial Operational Test and Evaluation

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

	FY 2007	FY 2008	FY 2009
(U) Mission Support, Other Government Cost	1.424	5.810	2.300
(U) Total Cost	134.253	114.519	184.213

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other APPN:									
(U) Aircraft Procurement (3010F), F-15E (PE 0207134F) [BP 10]									
(U) Total BP 10									
(U) Aircraft Procurement (3010F), F-15A-E (PEs 0207130F and 0207134F) [BP 11]	243.644	58.735	12.326	128.475	278.961	306.326	147.185	Continuing	TBD
(U) Aircraft Procurement (3010F) F-15E (PE 0809731F) Training Support to Units [BP11]	1.301							Continuing	TBD
(U) Aircraft Procurement (3010F) F-15E (PE 0207445F) Fighter Tactical Data Link [BP11]	32.055								32.055
(U) Total BP 11	277.000	58.735	12.326	128.475	278.961	306.326	147.185		
(U) Aircraft Replacement (3010F) F-15E (PEs 0207130F and 0207134F) Support Equipment [BP 12]	15.331	11.473	13.201	12.999	5.088	5.188	5.290	Continuing	TBD
(U) Total BP 12	15.331	11.473	13.201	12.999	5.088	5.188	5.290		
(U) Aircraft Procurement (3010F), F-15A-E (PE 0207134F) [BP 13]	10.698	5.577	20.189	16.028	22.214	2.674	2.726	Continuing	TBD
(U) Total BP 13	10.698	5.577	20.189	16.028	22.214	2.674	2.726		

(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 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
OFP Suite 4/5/6/7/8 Development and Test	CPAF	Boeing, St Louis		77.204	Dec-06	60.429	Dec-07	79.120	Dec-08	Continuing	TBD	
TISS TTIP	CPFF	Boeing, St. Louis		1.943	Dec-06	2.604	Jan-08	2.390	Dec-08	3.200	10.137	
F-15C/D APG-63(V)3 Radar Block Upgrade	CPFF	Boeing, St Louis		13.455	Sep-07	8.400	Mar-08			0.000	21.855	
F-15E RMP	CPFF	Boeing. St Louis		4.353	Jan-07	9.470	Jul-08	76.467	Oct-08	297.850	388.140	
Mode 5	CPAF	Boeing, St. Louis		12.123	Dec-06	11.669	Dec-07	4.268	Dec-08	0.000	28.060	
F-15 RWR Upgrade	CPFF	Boeing St. Louis				5.600	Oct-08				5.600	
F-15 ACU (NCI / ICCP) Development Efforts	CPFF	Boeing St. Louis		6.050	Feb-08					0.000	6.050	
Subtotal Product Development			0.000	115.128		98.172		162.245		Continuing	TBD	0.000
Remarks:												
(U) Support												
(Msn Spt) Misc.		Wright-Patterson AFB, OH		1.424		5.810		2.300		Continuing	TBD	
Subtotal Support			0.000	1.424		5.810		2.300		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
Boeing (Contractor Test Team)	CPFF	Boeing, St Louis		12.984	Dec-06	8.837	Dec-07	13.538	Dec-08	Continuing	TBD	
Edwards	PO	Edwards AFB, CA		0.030	Apr-07	0.000		0.030	Apr-09	Continuing	TBD	
Eglin (Flt Test)	PO	Eglin AFB, FL		4.687	Jun-07	1.700	Jun-08	6.100	Jun-09	Continuing	TBD	
Subtotal Test & Evaluation			0.000	17.701		10.537		19.668		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	134.253		114.519		184.213		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207134F F-15E SQUADRONS	PROJECT NUMBER AND TITLE: 0131 Initial Operational Test and Evaluation

F-15E Modifications

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

Program	Prior	FY2007	FY2008				FY2009	FY2010	FY2011	FY2012	FY2013	Quantity
PACS-46												
	188	31	3	2								224
Exp 1760												
	120	46	8	8	7	4	5					198
ADCP												
	24	66	20	20	24	18	52					224
OFP Suite 5 / 6 / 7												
		S5					S6		S7			NA
DVR												
Blue Suite S5 - ModS5 / S6				40	40	41		40/24	41/40	40/39		224
VHF Antenna												
	46	160	9	9								224
VHF 1553												
							135	89				224
IFF / AAI												
	24	63	21	23	25	24	44					224
Mode 5 IFF Retrofit												
									80	80	64	224
F-15E RMP (AESA Radar)												
									5-DT/OT			224
NVIS Phase II												
				50	75	75	24					224
TISS TIP												
		29	3						20	14		34
JHMCS - Front Seat												
			2	2	2	2	145					153
BLOS/SLOS SATCOM												
		Development			Production			Installation		Unfunded		

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207134F F-15E SQUADRONS	PROJECT NUMBER AND TITLE: 0131 Initial Operational Test and Evaluation

F-15A-D Modifications

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

Program	Prior	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	Quantity
Fighter Data Link		31	8 9						32+16T
JHMCS	160	39	3 2 3	6					181+32
EGI	136	33	8 12 18 14	11					178+54
Radar Imp Pgm (V)3				13	8	2	11	12	41+14
VHF Antenna	74	178	27 30 30 20						179+54T+126
VHF 1553				14	120	98			232
IFF / AAI	3	110	29 21 28 38	88					178+20T+119
Mode 5 IFF Retrofit					60	144	99		177+126
NVIS Phase II			88 89						177
OFP Suite 5 / 6 / 7		S5		S6			S7		NA
Avionics Control Unit					65	100	66		177+54T
DVR					36	80	80	35	177+54T
ESTS	62								62
VHSIC+				65	134	32			177+54T
		Development		Production	Installation		Unfunded		AD+Training+ANG

Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2008**

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 2007	FY 2008	FY 2009
(U) OFP Suite 5MSIP Flight Test - Complete	1Q		
(U) OFP Suite 5E Fielding	1Q		
(U) OFP Suite 5MSIP Fielding	2Q		
(U) OFP Suite 6 Phase II - Complete			4Q
(U) OFP Suite 6 Phase II Flight Test - Start		1Q	
(U) OFP Suite 6 Phase II Flight Test - Complete			3Q
(U) Mode 5 - Complete			4Q
(U) ACU (NCI / ICCP) - Start	3Q		
(U) ACU (NCI / ICCP) - Complete			4Q
(U) F-15 E SDD (EMD radar orders) - Start			1Q
(U) F-15 RMP SDD - Start		4Q	
(U) F-15 C/D (V)3 Radar Block Upgrade Flight Test - Complete	1Q		
(U) TISS System Compatibility Test - Complete	1Q		
(U) RWR - Lab Test - Complete	3Q		
(U) OFP Suite 7 Phase 1 / Phase II - Start		2Q	2Q

PE NUMBER: 0207136F
PE TITLE: Manned Destructive Suppression

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207136F Manned Destructive Suppression

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.499	0.000	5.585	0.000	0.000	0.000	0.000	0.000	162.368
4595 F-16 HARM Targeting System	0.499	0.000	5.585	0.000	0.000	0.000	0.000	0.000	162.368

(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. With the introduction of HTS Revision 7 (HTS R7), the AN/ASQ-213 Pod has a precision geolocation capability to target Precision Guided Munitions (PGMs) to destroy fixed and mobile enemy air defense elements, and enables 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. HTS R7 completed System Development and Demonstration (SDD) in FY07 following operational testing certification and fielding on the first F-16 Block 50/52 squadron in May 07. These improvements represent the Air Force's near-term solution for reactive time critical targeting for DEAD until this mission can be transferred to F-35 or a yet to be defined system. HTS R7 precision targeting coordinates will be available to all Joint Forces via Link-16. This RDT&E effort continues preplanned product improvements (P3I) and applies technologies similar to those demonstrated in the Advanced Tactical Targeting Technologies (AT3) program and HTS R7 development. HTS Revision 7 (HTS R7) software upgrade (SWUP) will address known deficiencies and capability upgrades to system performance. An on-going HTS R7 follow-on study is conducting investigations, studies, risk reduction and pre-planning activities for P3I and also is addressing near-term deficiencies deferred from HTS R7 development. Although RDT&E funding is not programmed in FY08, prior year funding is sufficient to provide pre-R7 SWUP planning and bridge needed technical expertise to begin HTS R7 SWUP in FY09.

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

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.513	0.000	0.000
(U)	Current PBR/President's Budget	0.499	0.000	5.585
(U)	Total Adjustments	-0.014		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.014		
(U)	Significant Program Changes:			

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207136F Manned Destructive Suppression

FY 2009 funding was added to provide continued capability upgrades for HTS needed to address evolving threats, address performance shortfalls, additional operational requirements and aircraft operational flight programs changes or issues.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207136F Manned Destructive Suppression

PROJECT NUMBER AND TITLE: 4595 F-16 HARM Targeting System

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4595 F-16 HARM Targeting System	0.499	0.000	5.585	0.000	0.000	0.000	0.000	0.000	162.368
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. With the introduction of HTS Revision 7 (HTS R7), the AN/ASQ-213 Pod has a precision geolocation capability to target Precision Guided Munitions (PGMs) to destroy fixed and mobile enemy air defense elements, and enables 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. HTS R7 completed System Development and Demonstration (SDD) in FY07 following operational testing certification and fielding on the first F-16 Block 50/52 squadron in May 07. These improvements represent the Air Force's near-term solution for reactive time critical targeting for DEAD until this mission can be transferred to F-35 or a yet to be defined system. HTS R7 precision targeting coordinates will be available to all Joint Forces via Link-16. This RDT&E effort continues preplanned product improvements (P3I) and applies technologies similar to those demonstrated in the Advanced Tactical Targeting Technologies (AT3) program and HTS R7 development. HTS Revision 7 (HTS R7) software upgrade (SWUP) will address known deficiencies and capability upgrades to system performance. An on-going HTS R7 follow-on study is conducting investigations, studies, risk reduction and pre-planning activities for P3I and also is addressing near-term deficiencies deferred from HTS R7 development. Although RDT&E funding is not programmed in FY08, prior year funding is sufficient to provide pre-R7 SWUP planning and bridge needed technical expertise to begin HTS R7 SWUP in FY09.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) R7 Follow-On Study Contract	0.100		
(U) P3I R7 SWUP Contract			4.711
(U) Air Force Mission Support System (AFMSS) Update Effort			0.438
(U) Continue Mission Support	0.399	0.000	0.436
(U) Total Cost	0.499	0.000	5.585

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development		PE NUMBER AND TITLE: 0207136F Manned Destructive Suppression	PROJECT NUMBER AND TITLE: 4595 F-16 HARM Targeting System

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

(U)	HTS Aircraft Procurement (BP11) APAF PE 0207136F	7.042	0.000	0.000		7.042
(U)	HTS Aircraft Procurement (BP19) APAF PE 0207136F	8.631	10.061	10.116		28.808
(U)	HTS Aircraft Procurement (BP19) APAF PE 0207136F GWOT Supplemental - The $25M FY2008 GWOT requirement is still pending Congressional consideration.	0.000	25.000	0.000		25.000

(U) D. Acquisition Strategy

The HTS R7 included accomplishment of risk reduction studies and selection of appropriate contracting strategies for P3I and upgrade of HTS inventory.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

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

PROJECT NUMBER AND TITLE: **4595 F-16 HARM Targeting System**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Raytheon Systems Co.	SS/Various		93.075					4.711			97.786	
Raytheon Systems Co.	SS/CPAF		31.331	0.100							31.431	
AFMSS	SS/CPIF		2.674					0.438			3.112	
Lockheed/Ft Worth	SS/FFP		2.400								2.400	
Subtotal Product Development			129.480	0.100		0.000		5.149		0.000	134.729	0.000
Remarks: HTS R7 SDD Contract awarded FY01 (on-going through FY07). FY09 R8 SDD Contract continues upgrade effort.												
(U) Support												
Mission Support	Various		9.438	0.399				0.436			10.273	
Subtotal Support			9.438	0.399		0.000		0.436		0.000	10.273	0.000
Remarks:												
(U) Test & Evaluation												
Eglin	PO		2.175								2.175	
Edwards	PO		14.269								14.269	
Light Defender			0.922								0.922	
Subtotal Test & Evaluation			17.366	0.000		0.000		0.000		0.000	17.366	0.000
Remarks: Light Defender was a foreign system that was evaluated for possible SEAD role in 1995-96; but was not procured.												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			156.284	0.499		0.000		5.585		0.000	162.368	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207136F Manned Destructive Suppression	PROJECT NUMBER AND TITLE: 4595 F-16 HARM Targeting System

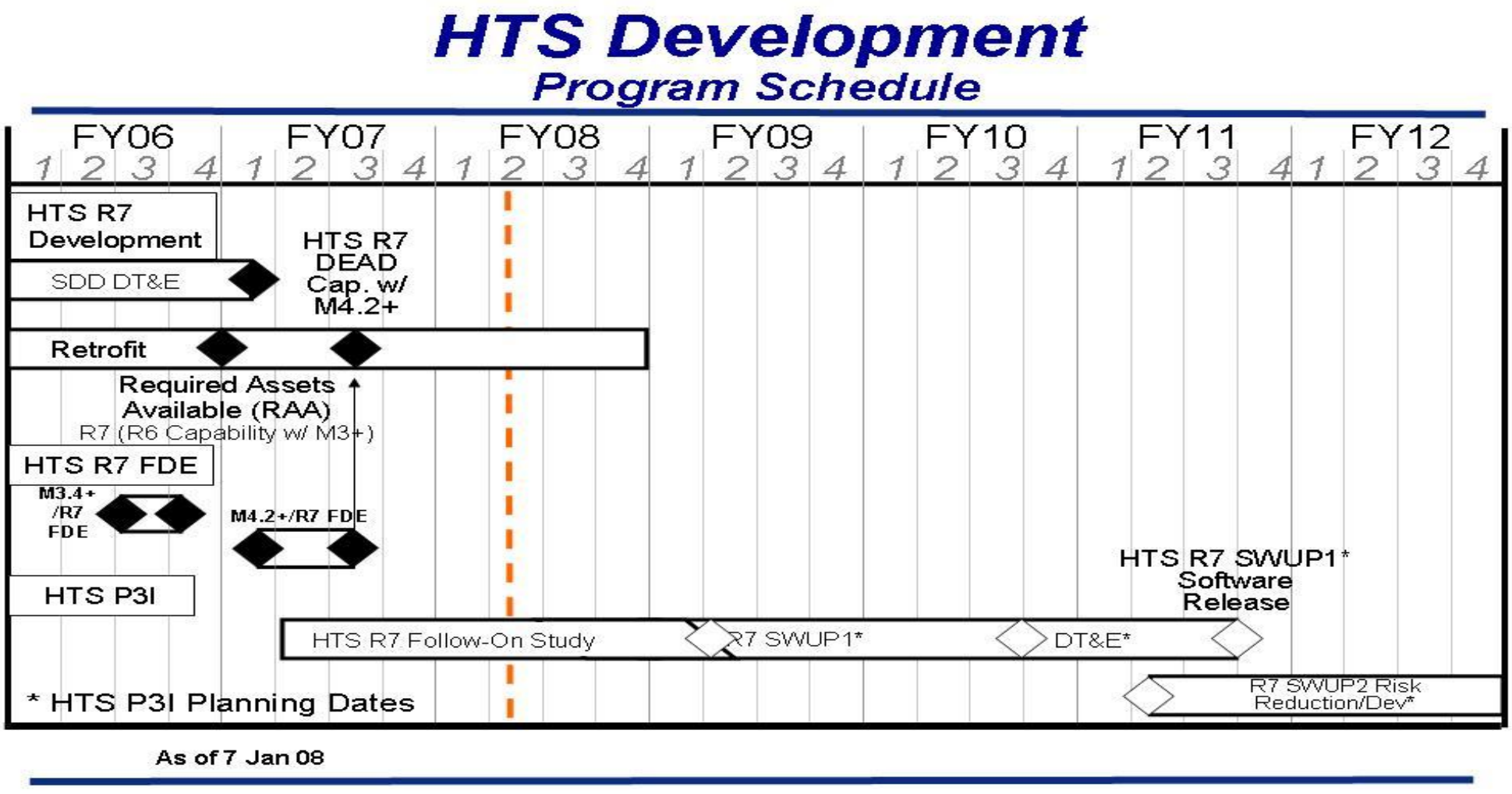

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207136F Manned Destructive Suppression**	PROJECT NUMBER AND TITLE **4595 F-16 HARM Targeting System**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Retrofit Kit Installation (117 Kits) -- Contract Awarded	1Q		
(U) P3I Study - R7 Follow-on Study -- Contract Award	2Q		
(U) R7 Precision Targeting Capability (w/F-16 OFP M4+)	3Q		
(U) R7 Follow-on Study Complete (SWUP Risk Reduction)			1Q
(U) R7 SWUP Contract Award			2Q

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207138F F-22 SQUADRONS

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	459.464	607.515	700.305	505.637	413.332	516.085	491.218	Continuing	TBD
4785 F-22	459.464	607.515	700.305	505.637	413.332	516.085	491.218	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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

The development program enhances the air vehicle, engine, and training system to improve/enhance 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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	472.475	743.593	666.848
(U)	Current PBR/President's Budget	459.464	607.515	700.305
(U)	Total Adjustments	-13.011	-136.078	
(U)	Congressional Program Reductions		-132.200	
	Congressional Rescissions		-3.878	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-13.011		

(U) Significant Program Changes:

FY08 $136.1M decrease due to FY08 Congressional mark and rescissions.

FY09 $33.5M increase to support the Virtual Address eXtension (VAX).

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4785 F-22	459.464	607.515	700.305	505.637	413.332	516.085	491.218	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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

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

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continue requirements definition and increment development activities for planned hardware and software capability upgrades. (NSP) --Continue Increment 2 to develop Global Strike Conops basic capabilities. --Continue Increment 3 to develop Global Strike Conops enhanced capabilities.	284.198	414.195	443.278
(U) Continue System Engineering/Program Management Support	16.260	17.304	17.572
(U) Continue Air Vehicle Instrumentation support (Training and Test Instrumentation)	9.364	1.800	3.600
(U) Continue flight test and flight test support *	100.365	110.944	158.305
(U) Continue mission support of the Program Office; travel, computer costs, misc contracts, etc.	10.751	10.945	11.142
(U) Continue F-22A Reliability and Maintainability Maturation Program (RAMMP)	28.250	24.000	24.000
(U) Initiate Aircraft Structural Integrity Program (ASIP)		3.500	8.000
(U) Replacement Test Aircraft (RTA) and Instrumentation	10.276	24.827	34.408
(U) Total Cost	459.464	607.515	700.305

* FY09 increase is a result of non-recurring flight test costs to replace and refurbish F-22 flight test engines

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E (PE 64239F)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	24,295.158
(U)	PRTV II (6)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,580.580
(U)	F-22A Squadrons Procurement (3010) (PE 0207138F)*	158.400	368.524	457.762	412.593	526.456	424.403	433.083	Continuing	TBD
(U)	F-22A Squadrons Procurement (3080) (PE 027138F)	2.727	4.256	0.000	1.227	1.486	2.217	1.545	Continuing	TBD
(U)	Military Construction (PE 0604239F)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	65.000
(U)	Military Construction (PE 0207219F)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	96.018
(U)	Military Construction (PE 0207138F)	61.861	70.180	197.750	50.006	0.000	0.000	0.000	0.000	465.788
(U)	Aircraft Procurement (PE 0207219F) Advanced Tactical Fighter, P-1 Line Item #003**	3461.852	3590.308	3089.811	44.235	43.935	1.925	1.921	Continuing	TBD
(U)	Munitions Procurement (PE 0207219F)	16.508	12.574	12.867	16.212	12.931	13.190	13.454	Continuing	TBD
(U)	Tactical Data Link RDT&E (PE 27445F)	63.104	36.851	62.788	90.709				Continuing	TBD

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

** NOTE: Includes BP10, 11, and 19 (Other Useful Loads)

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Increment development activities	Cost Plus	Lockheed Martin	750.844	284.198	Dec-06	414.195	Dec-07	443.278	Dec-08	Continuing	TBD	
Air Vehicle Instrumentation support (Training and Test Instrumentation)	Cost Plus	Lockheed Martin	17.429	9.364	Oct-06	1.800	Oct-07	3.600	Nov-08	Continuing	TBD	
System Engineering / Program Management	Cost Plus	Lockheed Martin	102.159	16.260	Dec-06	17.304	Dec-07	17.572	Dec-08	Continuing	TBD	
F-22A Reliability and Maintainability Maturation Program (RAMMP)	Cost Plus	Lockheed Martin	13.391	28.250	Dec-06	24.000	Dec-07	24.000	Dec-08	Continuing	TBD	
Aircraft Structural Integrity Program (ASIP)	Cost Plus	Lockheed Martin	0.000	0.000		3.500	Dec-07	8.000	Dec-08	Continuing	TBD	
Subtotal Product Development			883.823	338.072		460.799		496.450		Continuing	TBD	0.000
Remarks:												
(U) Support												
Support Contracts	Various		23.361	10.751		10.945		11.142		Continuing	TBD	
Subtotal Support			23.361	10.751		10.945		11.142		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
AFFTC and Contractor Flight Test Support	Various	Lockheed Martin, Pratt & Whitney, and Edwards AFB	67.618	100.365	Oct-06	110.944	Nov-07	158.305	Nov-08	Continuing	TBD	
Replacement Test Aircraft (RTA) and Instrumentation	Cost Plus / Fixed Price	Lockheed Martin	56.571	10.276	Nov-06	24.827	Dec-07	34.408	Dec-08	Continuing	TBD	
Subtotal Test & Evaluation			124.189	110.641		135.771		192.713		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			1,031.373	459.464		607.515		700.305		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE: February 2008

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

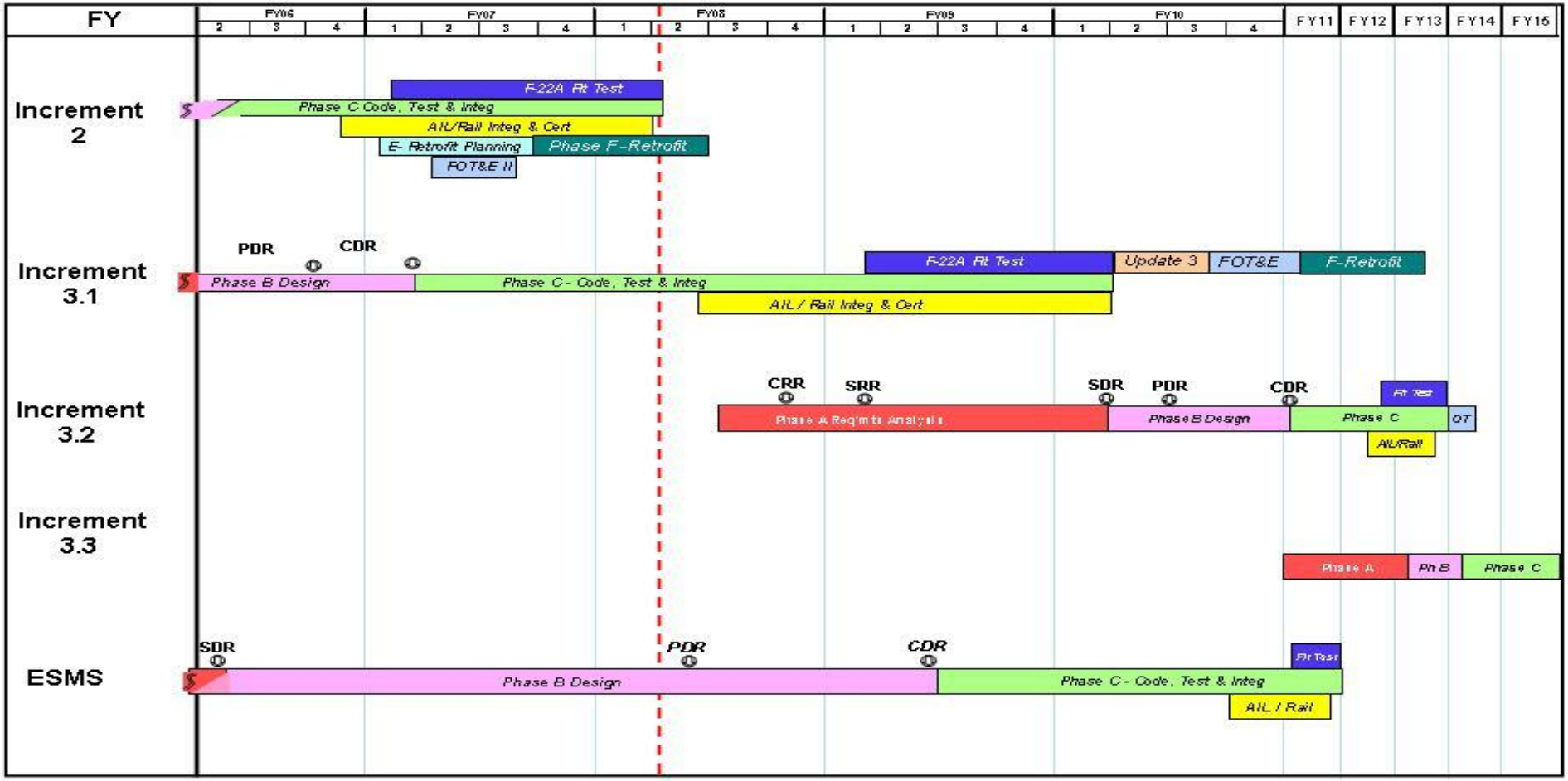

Exhibit R-4a, RDT&E Schedule Detail

DATE: February 2008

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

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

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

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	11.718	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
3956 F-117A Stealth Fighter	11.718	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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

The Air Force retired 10 F-117A aircraft in FY07 at Tonopah Test Range (TTR), in Nevada. An additional 12 aircraft retired to TTR during the first quarter of FY08. The remaining 20 aircraft will be retired at TTR by the end of April 2008. All aircraft are being placed in AMARG defined Type 1000-like storage in response to Congressional direction to maintain the aircraft in a 'recallable to service' status.

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

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	14.040		
(U)	Current PBR/President's Budget	11.718		
(U)	Total Adjustments	-2.322		
(U)	Congressional Program Reductions			
	Congressional Rescissions	0.000		
	Congressional Increases			
	Reprogrammings	-1.943		
	SBIR/STTR Transfer	-0.379		
(U)	Significant Program Changes:			
	FY07 - change for higher Air Force priorities			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3956 F-117A Stealth Fighter	11.718	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 F-117A is the world's first operational low-observable (LO) combat aircraft. Its combination of stealth and precision weapons delivery capability allows the USAF to hold even the most highly defended targets at risk. The program completed production in July 1990 with the delivery of the final F-117A. The single operational F-117A unit is the 49th Fighter Wing stationed at Holloman AFB, NM.

The Air Force retired 10 F-117A aircraft in FY07 at Tonopah Test Range (TTR), in Nevada. An additional 12 aircraft retired to TTR during the first quarter of FY08. The remaining 20 aircraft will be retired at TTR by the end of April 2008. All aircraft are being placed in AMARG defined Type 1000-like storage in response to Congressional direction to maintain the aircraft in a 'recallable to service' status.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) SDD for Smart Weapons Integration			
(U) SDD for Weapon System Trainer (WST) Image Generation System			
(U) Mission Planning System (MPS) Upgrade	2.460		
(U) Dual Radio SDD			
(U) SATCOM Antenna SDD			
(U) Retirement activity	9.258		
(U) Total Cost	11.718	0.000	0.000

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Aircraft Procurement (BA-5), Appn 3010/BP1100, AF F117A Squadrons, PE 0207141F	0.008							0.000	0.008

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207141F F-117A SQUADRON	PROJECT NUMBER AND TITLE 3956 F-117A Stealth Fighter

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Smart Weapon Integration SDD	CPAF	Lockheed Martin, Palmdale CA									0.000	
Weapon System Trainer Image Generation Sys Upgrd SDD	CPFF	Lockheed Martin, Palmdale CA									0.000	
Mission Planning System, Operating System Upgrade SDD	CPFF	Lockheed Martin, Palmdale CA		2.460							2.460	
Dual Radio SDD	CPFF	Lockheed Martin, Palmdale CA									0.000	
SATCOM Antenna SDD	CPFF	Lockheed Martin, Palmdale CA									0.000	
Retirement activity				9.258							9.258	
Subtotal Product Development			0.000	11.718		0.000		0.000		0.000	11.718	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	11.718		0.000		0.000		0.000	11.718	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207141F F-117A SQUADRON	PROJECT NUMBER AND TITLE 3956 F-117A Stealth Fighter

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

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

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(U) Smart Weapons Integration Completion			
(U) WST Image Generation IOC	2Q		
(U) MPS OS Upgrade Functional Qualification Testing (FQT)	3Q		

PE NUMBER: 0207161F
PE TITLE: Tactical AIM Missiles

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207161F Tactical AIM Missiles

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	8.596	7.876	5.748	6.017	6.205	6.331	6.465	Continuing	TBD
4132 AIM-9 Product Improvement	8.596	7.876	5.748	6.017	6.205	6.331	6.465	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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

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

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

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	8.817	7.927	5.816
(U)	Current PBR/President's Budget	8.596	7.876	5.748
(U)	Total Adjustments	-0.221	-0.051	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.051	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.221		
(U)	Significant Program Changes:			
	None.			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4132 AIM-9 Product Improvement	8.596	7.876	5.748	6.017	6.205	6.331	6.465	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 hardware/software updates are being done to meet evolving threats and warfighter requirements.

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

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Raytheon Missile Systems (RMS) P3I Contract	5.160	1.284	1.222
(U) Software/OFP Upgrade	1.030	1.611	1.162
(U) DT&E/OT&E for P3I updates and FOT&E efforts	1.956	4.518	2.893
(U) In-house/CSS Support	0.450	0.463	0.471
(U) Total Cost	8.596	7.876	5.748

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) DOD PE (0603715D)									25.000
(U) Tactical AIM Missile Modification (BP21)									30.817
(U) Tactical AIM Missile Procurement	49.725	58.522	83.167	80.004	62.915	64.098	65.431	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 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207161F Tactical AIM Missiles	PROJECT NUMBER AND TITLE 4132 AIM-9 Product Improvement

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Hughes	C/CPIF									0.000	0.000	
Raytheon	C/CPIF									0.000	0.000	
Raytheon	C/CPIF									Continuing	TBD	
Raytheon Software/OFP Upgrades				1.030	Dec-06	1.611	Jan-08	1.162	Dec-08	Continuing	TBD	
Raytheon P3I Contract				5.160	Dec-06	1.284	Jan-08	1.222	Dec-08	Continuing	TBD	
Boeing	C/CPIF										0.000	
Engineering Services	Various									Continuing	TBD	
Program Management*	PO									Continuing	TBD	
Subtotal Product Development			0.000	6.190		2.895		2.384		Continuing	TBD	0.000
Remarks: Note*: Based on a Memorandum of Agreement, RDT&E program costs includes Navy PMA working capital funded personnel funded at 50%/50% ratio per Service.												
(U) Support												
Various Contracts	FFP									Continuing	TBD	
In House Support	N/A			0.450	Nov-06	0.463	Jan-08	0.471	Dec-08	Continuing	TBD	
Subtotal Support			0.000	0.450		0.463		0.471		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
Field Activities	PO			1.956	Nov-06	4.518	Jan-08	2.893	Dec-08	Continuing	TBD	
Subtotal Test & Evaluation			0.000	1.956		4.518		2.893		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	8.596		7.876		5.748		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207161F Tactical AIM Missiles	PROJECT NUMBER AND TITLE: 4132 AIM-9 Product Improvement

AIM-9X Program Schedule

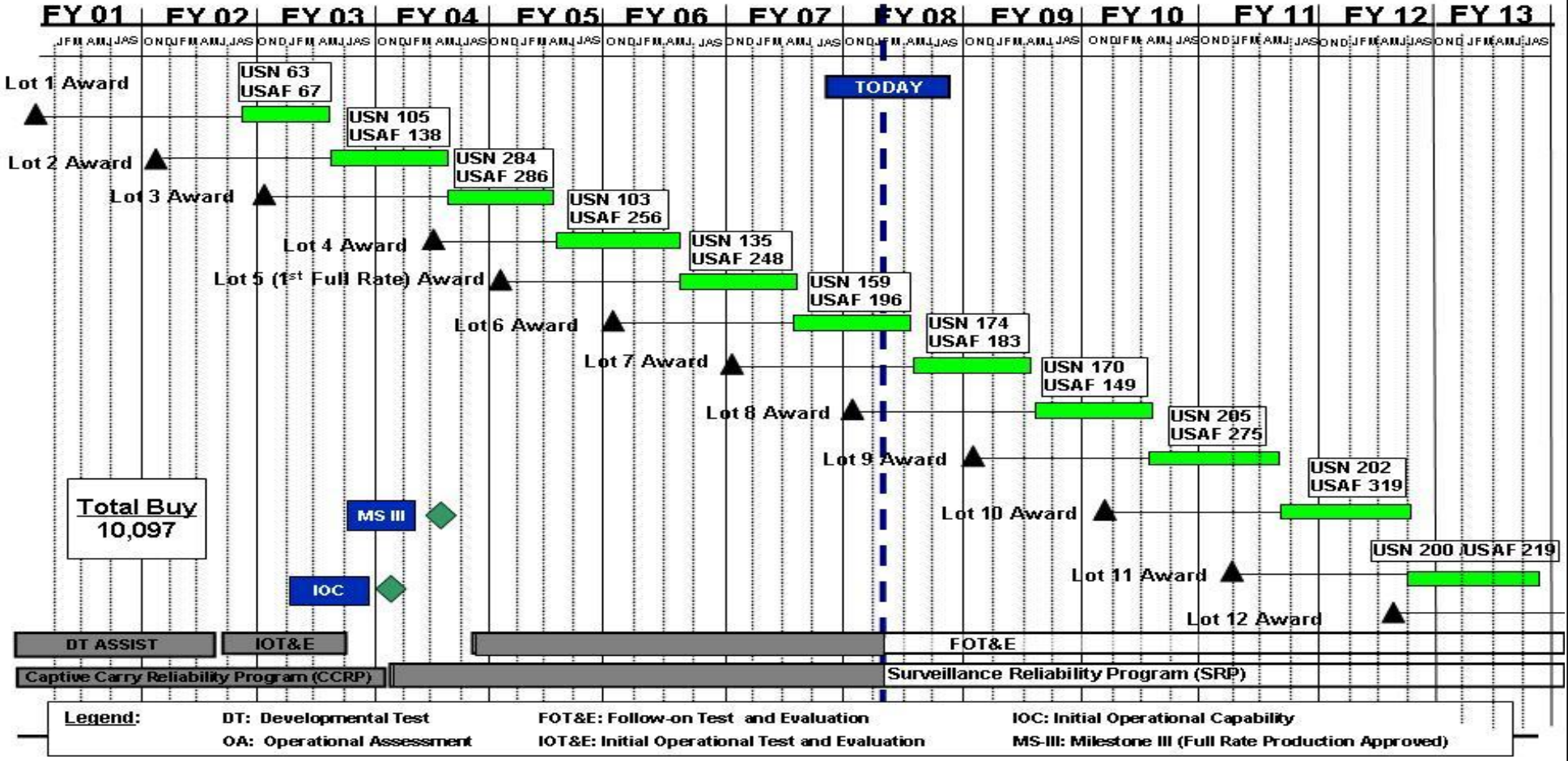

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207161F Tactical AIM Missiles	PROJECT NUMBER AND TITLE 4132 AIM-9 Product Improvement

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

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

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

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207163F Advanced Medium Range Air-to-Air Missile

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	33.411	33.425	54.239	39.955	40.311	22.785	12.762	Continuing	TBD
3777 AMRAAM	33.411	33.425	54.239	39.955	40.311	22.785	12.762	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Air Force and Navy continue to develop improvements to the Advanced Medium Range Air-to-Air Missile (AMRAAM) to counter existing and emerging 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 2010 and beyond threats, (3) incorporate high payoff technology developments, and (4) investigate new variants and/or alternate missions which may use AMRAAM attributes.

Improvements delivered under the original three-phase P3I program include enhanced EP capabilities and improved weapon effectiveness through improved fuzing, guidance, and increased kinematics. The current improvement program, referred to as AMRAAM Phase 4 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.

To keep the existing inventory as effective as possible the AF and Navy also develop, test and incorporate improvements that are implemented via software upgrades, reprogrammed into fielded weapons.

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

Funding begins in FY09 for concept studies in support of Joint Dual Role Air Dominance Missile (JDRADM).

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207163F Advanced Medium Range Air-to-Air Missile

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	43.253	36.838	45.879
(U)	Current PBR/President's Budget	33.411	33.425	54.239
(U)	Total Adjustments	-9.842	-3.413	
(U)	Congressional Program Reductions		-3.200	
	Congressional Rescissions		-0.213	
	Congressional Increases			
	Reprogrammings	-8.651		
	SBIR/STTR Transfer	-1.191		

(U) Significant Program Changes:

FY09 funding increase is for AIM-120D SDD completion and multiple aircraft integration/testing.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207163F Advanced Medium Range Air-to-Air Missile	PROJECT NUMBER AND TITLE: 3777 AMRAAM	

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3777 AMRAAM	33.411	33.425	54.239	39.955	40.311	22.785	12.762	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 continue to develop improvements to the Advanced Medium Range Air-to-Air Missile (AMRAAM) to counter existing and emerging 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 2010 and beyond threats, (3) incorporate high payoff technology developments, and (4) investigate new variants and/or alternate missions which may use AMRAAM attributes.

Improvements delivered under the original three-phase P3I program include enhanced EP capabilities and improved weapon effectiveness through improved fuzing, guidance, and increased kinematics. The current improvement program, referred to as AMRAAM Phase 4 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.

To keep the existing inventory as effective as possible the AF and Navy also develop, test and incorporate improvements that are implemented via software upgrades, reprogrammed into fielded weapons.

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

Funding begins in FY09 for concept studies in support of Joint Dual Role Air Dominance Missile (JDRADM).

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continue effort to complete qualification of the Phase 4 missile design	14.700	11.700	12.500
(U) Continue to provide software upgrades/system improvement program (SIP)	1.000	2.000	6.000
(U) Continue mission support: Provide program management to execute Phase 4 program	1.770	1.629	1.611
(U) Continue test and evaluation: Provide support to DT and OT	2.256	6.561	13.147
(U) Aircraft Integration - Integrate Phase 4 on multiple aircraft platforms	9.055	11.535	13.981
(U) Develop AMRAAM field reprogrammer	4.630	0.000	0.000
(U) Joint Dual Role Air Dominance Missile (JDRADM)	0.000	0.000	7.000
(U) Total Cost	33.411	33.425	54.239

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207163F Advanced Medium Range Air-to-Air Missile	PROJECT NUMBER AND TITLE: 3777 AMRAAM

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Missile Procurement, Budget Activity #2, PE 0207163F, P-1 Line Item, AMRAAM	114.247	193.261	294.746	283.312	301.712	307.410	313.846	0.000	1,808.534
(U) Replenishment Spares, BP25 and Missile Replacement Equipment	0.201	0.204	0.211	0.215	0.220	0.224	0.229	0.000	1,504.000
(U) Initial Spares, BP26	1.232	0.075	0.077	0.078	0.081	0.083	0.085	0.000	62.711
(U) AMRAAM Field Reprogrammer, BP 22	0.000	5.745	5.739	5.346	0.000	0.000	0.000	0.000	16.830

(U) D. Acquisition Strategy

The AIM-120D SDD contract, awarded in Dec 03, is intended to meet the requirement to evolve the AMRAAM for improved performance. Initial limited production of the AIM-120D missile began in FY06. The AIM-120D Missile Performance Specification (MPS) and Interface Control Document (ICD) define the requirement to integrate the Phase 4 AMRAAM onto the F-15, F-16, and F-22A.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Misc. Contracts	SS/FFP									0.000	0.000	15.987
F08635-90-C-0201 Hughes	SS/FFP	Hughes								0.000	0.000	5.200
F08626-91-C-0034 Hughes	SS/CPIF	Hughes								0.000	0.000	93.506
F08626-93-C-0044 (Phase 2) Hughes	SS/CPAF	Hughes								0.000	0.000	117.558
Phase 3 Risk Reduction	SS/CPAF	Raytheon, Tucson, AZ								0.000	0.000	24.484
Phase 3 Improved Fuzing Capability	SS/CPAF	Raytheon, Tucson, AZ								0.000	0.000	3.937
Phase 3 Improved Seeker and Advanced EP. Raytheon F08626-98-C-0027	SS/CPAF	Raytheon, Tucson, AZ								0.000	0.000	207.755
Software Upgrade/System Improvement Program (SIP)	SS/CPFF	Raytheon, Tucson, AZ		1.000	Sep-07	2.000	Jun-08	6.000	Mar-09	63.000	72.000	72.000
Phase 4 Contract FA8675-04-C-0001	SS/CPFF	Raytheon, Tucson, AZ		14.700	Dec-06	11.700	Jan-08	12.500	Nov-08	0.000	38.900	118.016
Phase 4 Follow-On Contract	SS/CPFF	Raytheon, Tucson, AZ								53.600	53.600	77.311
Aircraft Integration	MIPR	Wright-Patters on AFB, OH		9.055	Dec-06	11.535	Dec-07	13.981	Mar-09	65.429	100.000	116.830
AMRAAM Field Reprogrammer		Raytheon, Tucson, AZ		4.630	Jan-07					0.000	4.630	14.000
Joint Dual Role Air Dominance Missile (JDRADM)						0.000		7.000		6.400	13.400	16.200
Subtotal Product Development			0.000	29.385		25.235		39.481		188.429	282.530	882.784
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			1.021		0.950		0.892		4.232	7.095	26.136
JSPO Operations	PR/IMPAC			0.749		0.679		0.719		3.078	5.225	25.840
Subtotal Support			0.000	1.770		1.629		1.611		7.310	12.320	55.334
Remarks:												
(U) Test & Evaluation												
Government Test	REO/MIPR			2.256		6.561		13.147		0.000	21.964	47.229
TM/ECM Pods	REO/MIPR									0.000	0.000	2.818
Subtotal Test & Evaluation			0.000	2.256		6.561		13.147		0.000	21.964	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 2008
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	33.411	33.425	54.239	195.739	316.814	988.165	

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207163F Advanced Medium Range Air-to-Air Missile	PROJECT NUMBER AND TITLE: 3777 AMRAAM

AMRAAM Schedule

As of: 21 Dec 07

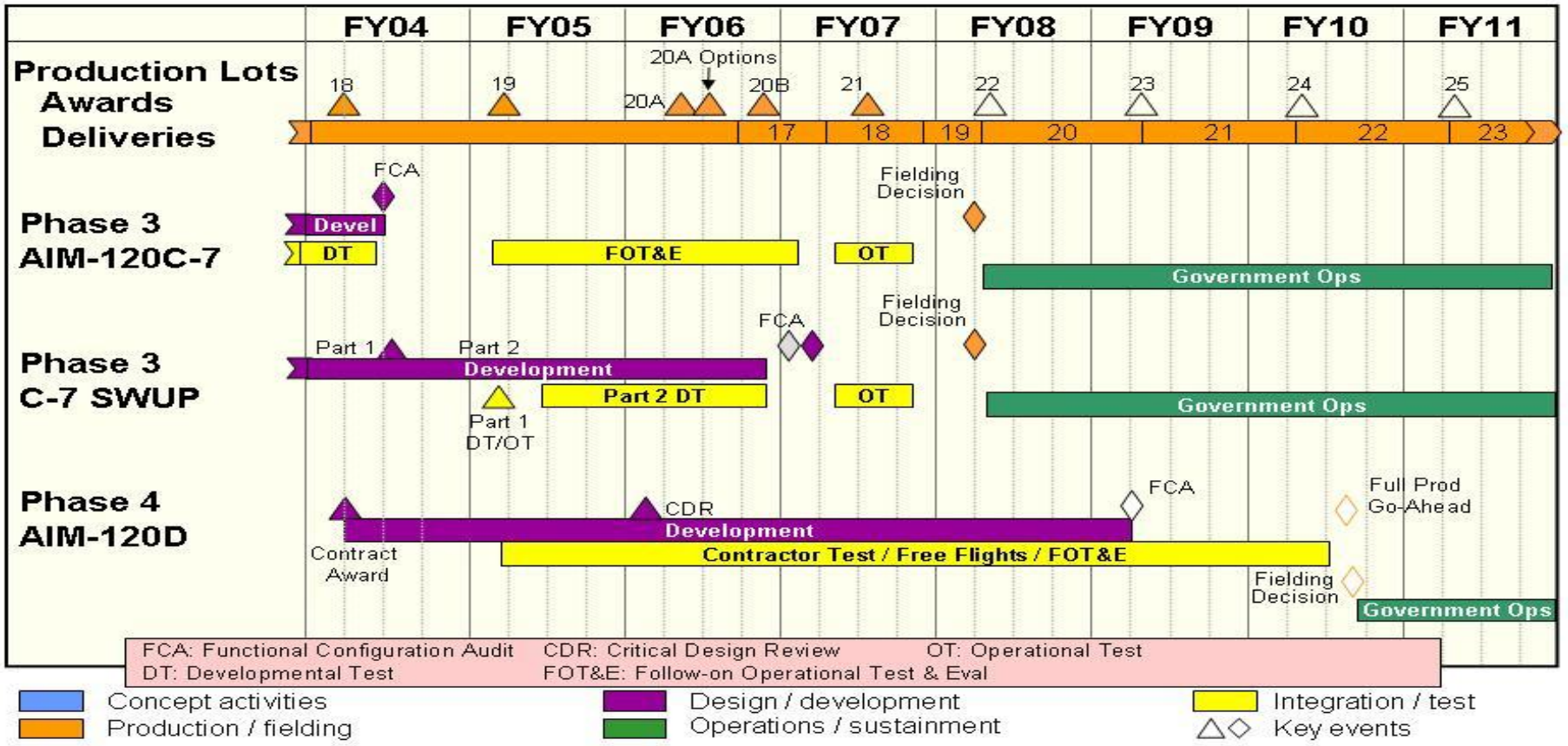

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207163F Advanced Medium Range Air-to-Air Missile	PROJECT NUMBER AND TITLE: 3777 AMRAAM

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) First Captive Carriage F-15 C/D	3Q		
(U) First Live Launch (from F/A-18 E/F)		1Q	
(U) Functional Configuration Audit (FCA)			1Q

PE NUMBER: 0207170F
PE TITLE: JHMCS

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207170F JHMCS

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	3.220	5.304	3.192	2.572	2.557	2.603	2.654	0.000	0.000
5226 Joint Helmet Mounted Cueing System	3.220	5.304	3.192	2.572	2.557	2.603	2.654	0.000	0.000

(U) A. Mission Description and Budget Item Justification

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

Milestone III was approved in Jan 04, and the program is in full rate production (FRP). Continuing activities include, but are not limited to, deficiency resolution; improvements to tooling and test equipment; Electronic Unit obsolescence redesign; a systems engineering approach for implementing alternate displays; improvements to integrate night vision cueing display (NVCD); software updates; integration; improvements to Reliability and Maintainability (R&M); system upgrade studies/analysis; other obsolescence upgrades; improved magnetic mapping processes to reduce maintenance manhours and life cycle costs; and efforts to support the transition to Performance Based Logistics Partnership (PBL/P) and depot activation.

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

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	2.278	5.338	5.456
(U)	Current PBR/President's Budget	3.220	5.304	3.192
(U)	Total Adjustments	0.942	-0.034	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.034	
	Congressional Increases			
	Reprogrammings	1.000		
	SBIR/STTR Transfer	-0.058		

(U) Significant Program Changes:

FY09 funding decrease fixes a database error and correctly aligns program funding to requirements.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5226	Joint Helmet Mounted Cueing System	3.220	5.304	3.192	2.572	2.557	2.603	2.654	0.000	0.000
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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

Milestone III was approved in Jan 04, and the program is in full rate production (FRP). Continuing activities include, but are not limited to, deficiency resolution; improvements to tooling and test equipment; Electronic Unit obsolescence redesign; a systems engineering approach for implementing alternate displays; improvements to integrate night vision cueing display (NVCD); software updates; integration; improvements to Reliability and Maintainability (R&M); system upgrade studies/analysis; other obsolescence upgrades; improved magnetic mapping processes to reduce maintenance manhours and life cycle costs; and efforts to support the transition to Performance Based Logistics Partnership (PBL/P) and depot activation.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continue deficiency resolution, reliability improvements, P3I activities, obsolescense upgrades, analysis/studies, alternate displays implementation, support for PBL/Depot line, and software updates. Continue incorporating night vision capabilities into JHMCS by testing and integrating the NVCD system.	2.910	4.804	2.692
(U) Program Management and Support	0.310	0.500	0.500
(U) Total Cost	3.220	5.304	3.192

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) RDT&E, BA 5, PE 0604201F, Integrated Avionics Planning and Development	0.000	0.000	0.000	0.000	0.000			0.000	45.200
(U) RDT&E, BA 5, PE 0604012F, JHMCS	0.000	0.000	0.000	0.000	0.000			0.000	17.900

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

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207170F JHMCS**	PROJECT NUMBER AND TITLE **5226 Joint Helmet Mounted Cueing System**

(U) D. Acquisition Strategy

JHMCS is an ACAT III joint USAF/USN program (USAF - executive service). The development contract structure was a Cost Plus Award Fee (CPAF) through Boeing - St. Louis for development and integration into the F-15, F-16, and F/A-18 aircraft. All other aircraft integration will be handled by the respective platform prime contractors. Follow-on contracts are a mixture of CPAF and FFP. Currently, we are working on a transition from Interim Contractor Support (ICS) to a WRALC Mission Support Division (MSD) funded support posture. Additionally, we are working on organic depot partnership and are exploring PBL opportunities.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Continue deficiencies resolution, reliability improvements, P3I activities, obsolescense upgrades, analysis/studies, alternate displays implementation, various T&E activities,and software updates. Continue incorporating night vision capabilties into JHMCS by testing and integrating the NVCD system.	SS, CPAF	Boeing Co. St Louis, MO		2.910		4.804	Jan-08	2.692	Jan-09		10.406	
Subtotal Product Development			0.000	2.910		4.804		2.692		0.000	10.406	0.000
Remarks:												
(U) Management												
Program Management and Administration	C, T&M	Various		0.310		0.500		0.500		0.000	1.310	
Subtotal Management			0.000	0.310		0.500		0.500		0.000	1.310	0.000
Remarks:												
(U) Total Cost			0.000	3.220		5.304		3.192		0.000	11.716	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE: February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0207170F JHMCS	5226 Joint Helmet Mounted Cueing System

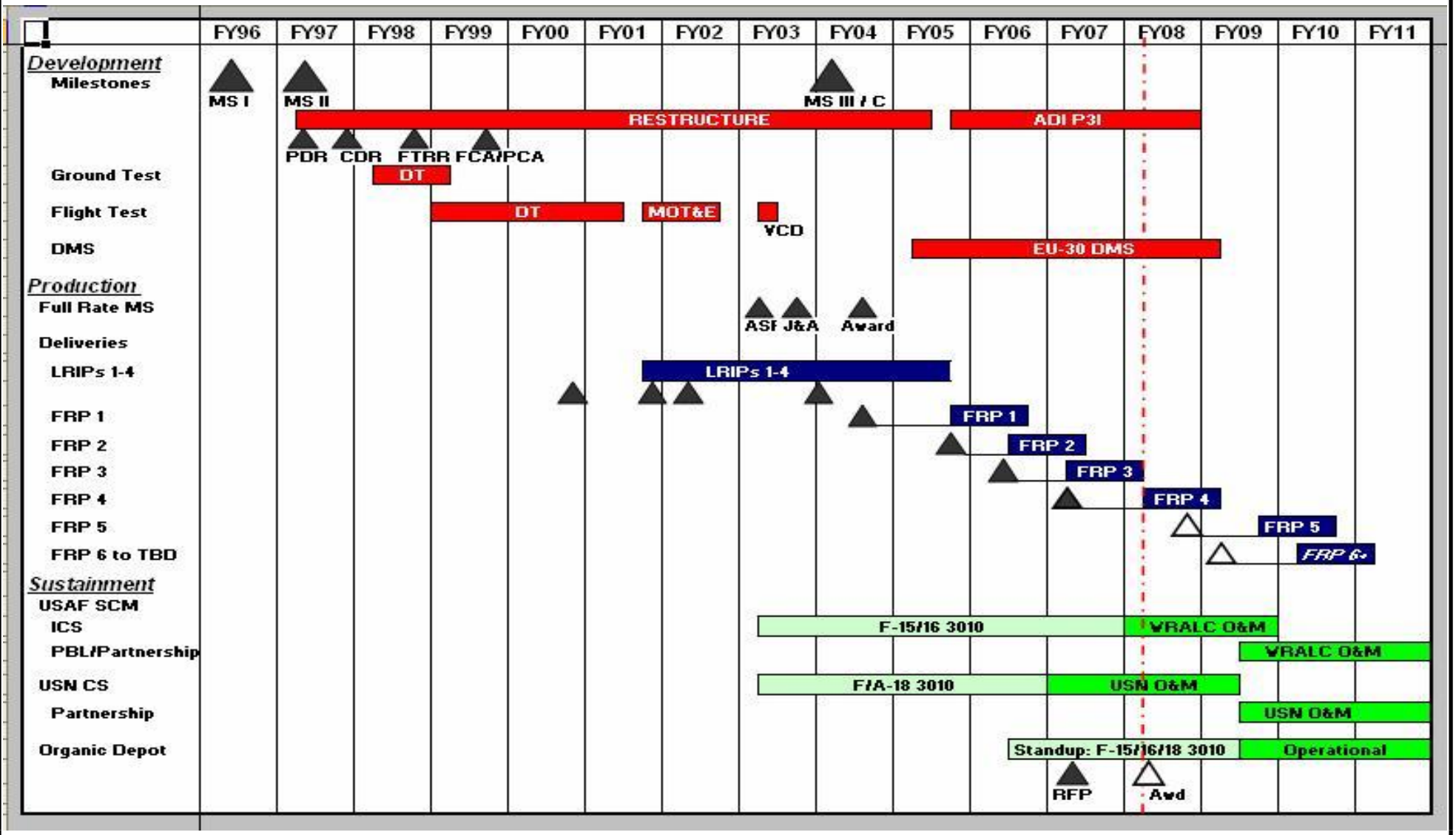

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207170F JHMCS	PROJECT NUMBER AND TITLE: 5226 Joint Helmet Mounted Cueing System

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) FRP-5 Contract Award		3Q	
(U) Alternate Displays Implementation Contract Incremental Funding		2Q	
(U) Alternate Displays Implementation Contract Complete			1Q
(U) NVCD Testing		1Q	

PE NUMBER: 0207247F
PE TITLE: Air Force TENCAP

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207247F Air Force TENCAP

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	11.160	11.452	11.578	11.842	12.015	12.249	12.495	Continuing	TBD
0001 Air Force TENCAP	11.160	11.452	11.578	11.842	12.015	12.249	12.495	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Air Force TENCAP is executed by the Space Innovation and Development Center at Schriever Air Force Base, Colorado. Established by Congress in 1977 as one of a family of service Tactical Exploitation of National Capabilities (TENCAP) programs, increases warfighter awareness of space and National capabilities, and promotes integration of these systems into military and intelligence, surveillance and reconnaissance (ISR) operations through:

-- Exploiting existing Space, National and Global ISR, and Non-Traditional ISR (NTISR) for tactical applications by rapidly prototyping projects and demonstrating resulting capabilities. Capabilities will be transitioned to warfighters and/or national intelligence agencies for operational use, and/or appropriate acquisition organizations for further development.

-- Influencing the design and operation of future Space, National and Global ISR, and Non-Traditional ISR systems for tactical users.

-- Providing education and training to warfighters and National Intelligence agencies.

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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	11.160	11.526	11.750
(U)	Current PBR/President's Budget	11.160	11.452	11.578
(U)	Total Adjustments	0.000		
(U)	Congressional Program Reductions			
	Congressional Rescissions		0.074	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			
	None			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
0001 Air Force TENCAP	11.160	11.452	11.578	11.842	12.015	12.249	12.495	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Air Force TENCAP is executed by the Space Innovation and Development Center at Schriever Air Force Base, Colorado. Established by Congress in 1977 as one of a family of service Tactical Exploitation of National Capabilities (TENCAP) programs, increases warfighter awareness of space and National capabilities, and promotes integration of these systems into military and intelligence, surveillance and reconnaissance (ISR) operations through:

-- Exploiting existing Space, National and Global ISR, and Non-Traditional ISR (NTISR) for tactical applications by rapidly prototyping projects and demonstrating resulting capabilities. Capabilities will be transitioned to warfighters and/or national intelligence agencies for operational use, and/or appropriate acquisition organizations for further development.

-- Influencing the design and operation of future Space, National and Global ISR, and Non-Traditional ISR systems for tactical users.

-- Providing education and training to warfighters and National Intelligence agencies.

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 2007	FY 2008	FY 2009
(U) Exploit existing space and national systems for tactical applications through rapid-prototyping projects; influence the design and operation of future systems; educate and train operational forces	10.570	10.940	11.046
(U) Conduct Global Positioning System jammer detection and location (GPS JLOC) system projects	0.098	0.000	0.000
(U) Provide program support and other government support	0.492	0.512	0.532
(U) Total Cost	11.160	11.452	11.578

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

Projects are selected for development based upon needs identified by the program's customers - DOD Departments, Combatant Commands, Components, MAJCOMs, and/or National Intelligence Agencies - and approved via the Space Innovation and Development Center (SIDC) strategic planning process. Acquisition strategies for projects are chosen on a case-by-case basis for optimum results. Many projects are executed via existing contracts maintained by other agencies; others are executed via Air Force TENCAP contracts established with vendors responding to annual Broad Area Announcements issued by SIDC. In all cases the U.S. government 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 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Exploiting existing systems through rapid-prototyping projects; influencing future systems; educating and training	Various	Various	198.993	10.570	Dec-06	10.940	Dec-07	11.046	Dec-08	Continuing	TBD	
GPS JLOC projects (including Nightshade and Namath)	Various	Various	10.551	0.098	Mar-07	0.000		0.000		0.000	10.649	
Subtotal Product Development			209.544	10.668		10.940		11.046		Continuing	TBD	0.000
Remarks:												
(U) Support												
Program oversight	Various	Various	7.305	0.492	Nov-06	0.512	Dec-07	0.532	Dec-08	Continuing	TBD	
Subtotal Support			7.305	0.492		0.512		0.532		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			216.849	11.160		11.452		11.578		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207247F Air Force TENCAP	PROJECT NUMBER AND TITLE 0001 Air Force TENCAP

Air Force TENCAP Schedule

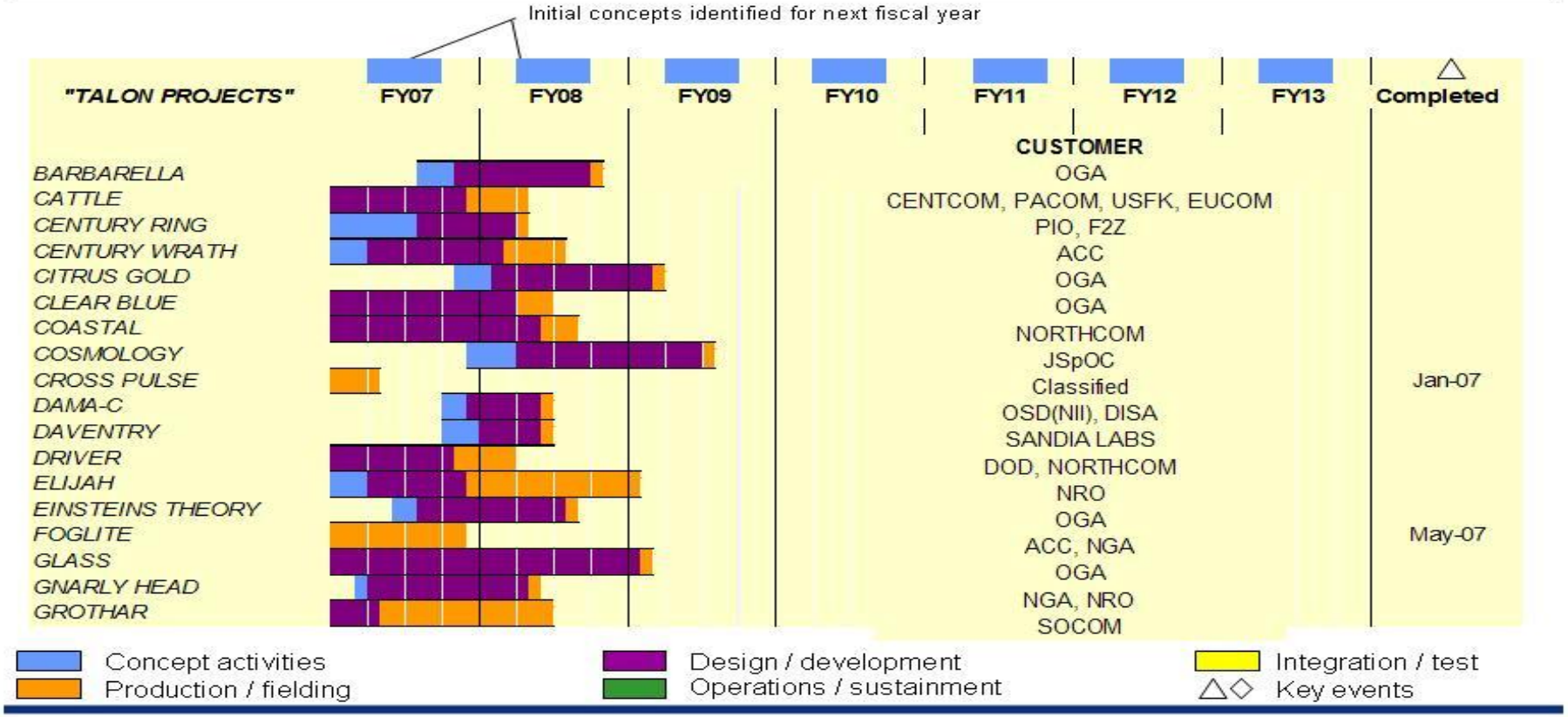

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207247F Air Force TENCAP	PROJECT NUMBER AND TITLE 0001 Air Force TENCAP

Air Force TENCAP Schedule

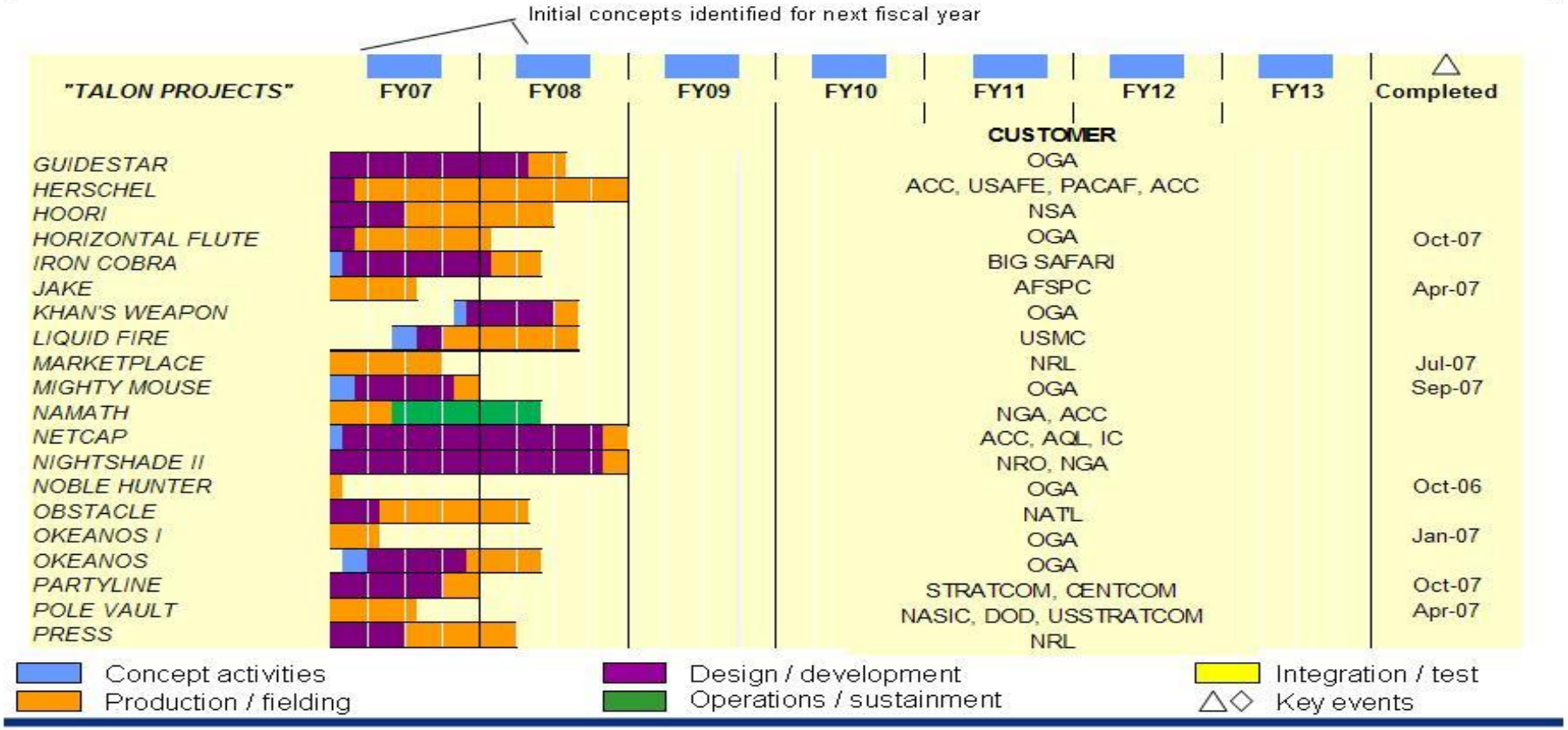

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207247F Air Force TENCAP	PROJECT NUMBER AND TITLE 0001 Air Force TENCAP

Air Force TENCAP Schedule

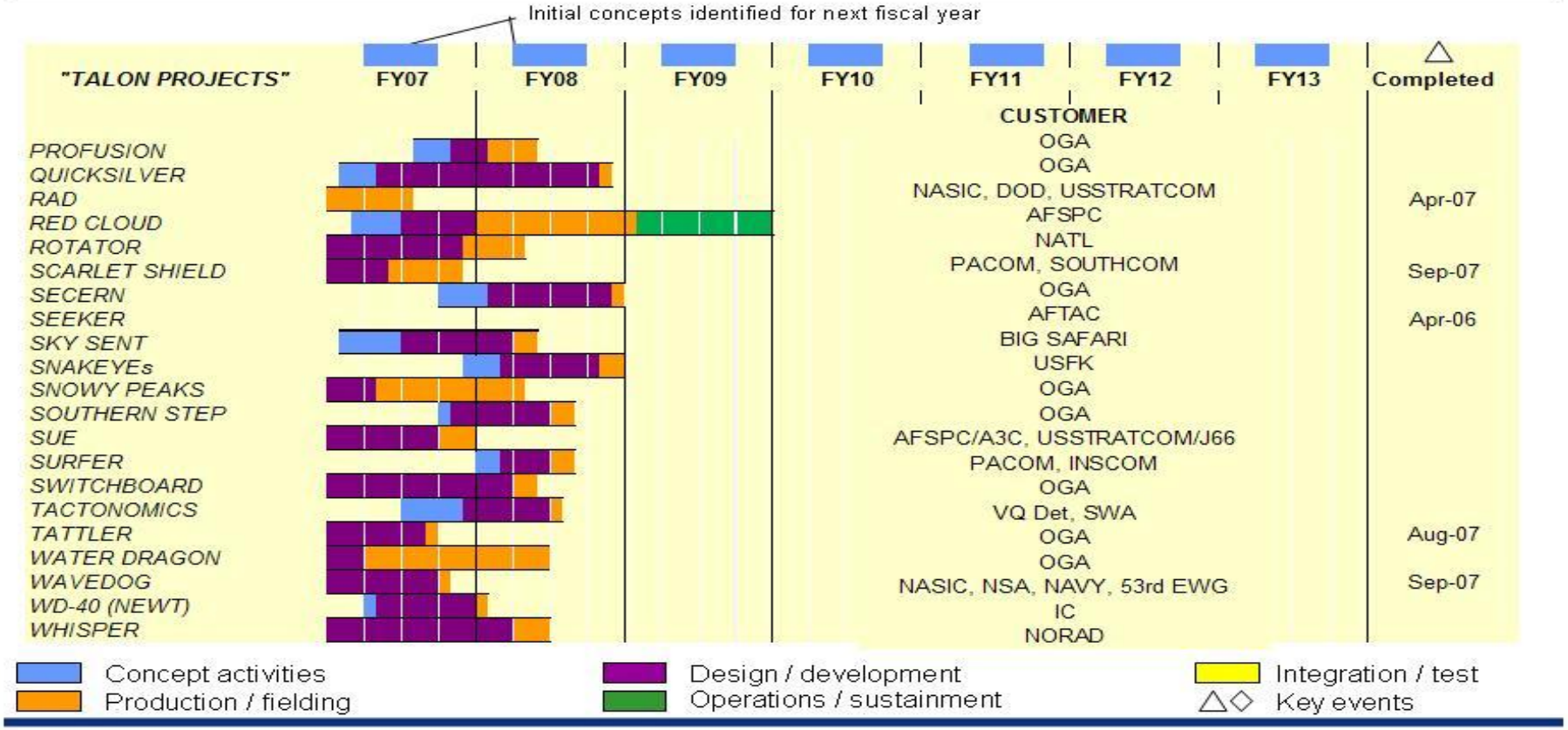

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207247F Air Force TENCAP	PROJECT NUMBER AND TITLE 0001 Air Force TENCAP

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

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

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PE NUMBER: 0207253F
PE TITLE: Compass Call

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207253F Compass Call

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	9.586	8.549	4.670	13.242	21.216	19.163	12.540	Continuing	TBD
4804	Compass Call	9.586	8.549	4.670	13.242	21.216	19.163	12.540	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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

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

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

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

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207253F Compass Call

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	9.931	4.603	4.709
(U)	Current PBR/President's Budget	9.586	8.549	4.670
(U)	Total Adjustments	-0.345	3.946	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.054	
	Congressional Increases		4.000	
	Reprogrammings	-0.066		
	SBIR/STTR Transfer	-0.279		

(U) Significant Program Changes:

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

(U) FY08 Congressional Add totaling $4.0M for capabilities enhancements and baseline developments.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207253F Compass Call	PROJECT NUMBER AND TITLE: 4804 Compass Call	

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4804	Compass Call	9.586	8.549	4.670	13.242	21.216	19.163	12.540	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 is the USAF's wide-area, airborne Command and Control Warfare (C2W) / Information Operations (IO) weapon system. It interdicts adversary use of the electronic battlespace and is a key active component in the information battlespace and global war on terror. COMPASS CALL's sophisticated electronic combat system is capable of surgical denial or disruption of adversary radio frequency (RF) communications systems and sensors. The system was fielded in 1983 and to date has evolved through the Block 35/Baseline 0 configuration.

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

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

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

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

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Development, integration, and test of classified techniques and electronic attack infrastructure (Special Purpose Emitter Array)	0.324	0.643	1.013
(U)	Development,integration, and test of Digital Signal Acqusition and Analysis Subsystem	2.125	2.346	1.148
(U)	Integration and test of Block 35 Human Machine Interface (HMI)	1.675	1.560	1.109
(U)	Congressional Add: Radar Situational Awareness and Targeting (RSAT) demonstration concept	1.000	0.000	1.400
(U)	Congressional Add: Network centric information operations improvements	0.000	4.000	0.000
(U)	Congressional Add: Operational system development	4.462	0.000	0.000
(U)	Total Cost	9.586	8.549	4.670

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207253F Compass Call	PROJECT NUMBER AND TITLE: 4804 Compass Call

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) PE 0207253F, Aircraft Modification (3010)	70.330	44.987	24.605	19.856	54.484	26.158	30.020	Continuing	TBD
(U) PE 0207253F, Aircraft Initial Spares (3010)	11.327	14.243	12.441	16.210	16.412	16.737	17.068	Continuing	TBD

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Compass Call RDT&E	SS/FFP&C PFF	BAE Systems, Nashua NH		4.462	Jan-07	4.000	Jan-08	1.400	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	4.462		4.000		1.400		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) Primary Mission Equipment												
Compass Call RDT&E	CPFF	BAE Systems, Nashua NH		5.124	Jan-07	4.549	Jan-08	3.270	Jan-09	Continuing	TBD	TBD
Subtotal Primary Mission Equipment			0.000	5.124		4.549		3.270		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	9.586		8.549		4.670		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207253F Compass Call	PROJECT NUMBER AND TITLE: 4804 Compass Call

Compass Call Development

Page 1 of 1 — 1/9/07

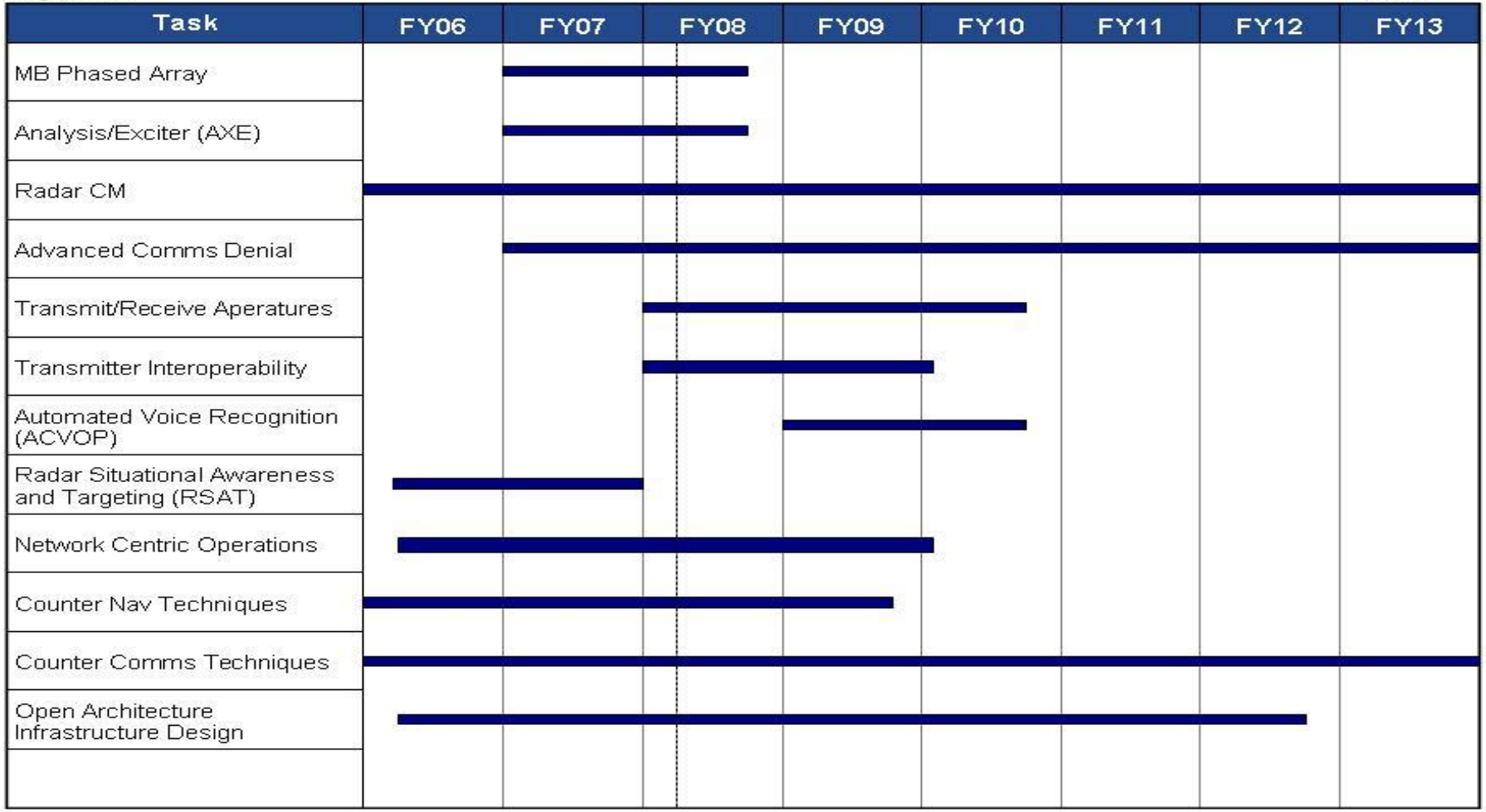

Exhibit R-4a, RDT&E Schedule Detail

DATE: February 2008

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

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

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

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

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	152.969	138.159	150.956	162.111	167.502	170.448	173.933	Continuing	TBD
1012	Aircraft Engine Component Improvement Program	152.969	138.159	150.956	162.111	167.502	170.448	173.933	Continuing	TBD

Note: FY08 funding totals do not include $20M FY2008 GWOT requirements still pending Congressional approval.

(U) A. Mission Description and Budget Item Justification

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

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	153.736	139.042	163.137
(U)	Current PBR/President's Budget	152.969	138.159	150.956
(U)	Total Adjustments	-0.767	-0.883	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.883	
	Congressional Increases			
	Reprogrammings	3.467		
	SBIR/STTR Transfer	-4.234		
(U)	Significant Program Changes:			

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207268F Aircraft Engine Component Improvement Program (CIP)

Note: Engine CIP FY09 funding reduced in FY09 PB to support higher Air Force priorities.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
1012	Aircraft Engine Component Improvement Program	152.969	138.159	150.956	162.111	167.502	170.448	173.933	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 to maintain flight safety (highest priority), to correct service revealed deficiencies, to improve system operational readiness (OR) and reliability & maintainability (R&M), to reduce engine Life Cycle Cost (LCC), and to sustain engines throughout their service life. Historically, aircraft systems change missions, tactics, and environments (including new fuels) to meet changing threats throughout their lives. New technical problems can develop in the engines through actual use and Engine CIP provides the means to develop fixes for these field problems. Engine CIP funding is driven by field events and types/maturity of engines, not by the total engine quantity. The program starts with delivery of the first production engine purchased with procurement funds, and continues over the engine's life, gradually decreasing to a minimum level (safety/depot repairs) sufficient to keep older inventory engines operational. Engine CIP, through "Lead the Fleet" operational use and accelerated mission testing, finds and fixes engine-related problems ahead of operational impacts. Engine CIP addresses out-of-warranty usage/life and enables the Air Force to obtain additional warranties when manufacturers incorporate Engine CIP improvements into production engines. Engine CIP ensures continued improvements in engine R&M factors, which reduce out year support costs. Historically, R&M related Engine CIP efforts significantly reduce out year Operations and Maintenance (O&M) and spares costs. Air Force Major Commands assume a viable Engine CIP effort is in place when submitting their budget requests for O&M and engine spares. Without the out year cost avoidance provided by Engine CIP, out year support funding would have to be significantly increased.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continuing CIP tasks (such as, but not limited to, safety, improvement, support equipment, and repair tasks)	128.579	108.999	120.611
(U) Continuing engine testing (such as, but not limited to, altitude, sea level, and flight tests)	22.568	25.801	26.745
(U) Continuing mission support	1.822	3.359	3.600
(U) Total Cost	152.969	138.159	150.956

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

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

RELATED ACTIVITIES:

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

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

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0207268F Aircraft Engine Component Improvement Program (CIP)**	**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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
GE-Evandale, OH	CPAF	Evandale, OH		46.061	Jan-07	31.713	Jan-08	34.909	Jan-09	Continuing	TBD	
Pratt & Whitney	CPAF	Hartford, CT		71.973	Jan-07	65.935	Jan-08	72.426	Jan-09	Continuing	TBD	
GE-Lynn, MA	CPFF	Lynn, MA		5.031	Jan-07	6.770	Jan-08	7.429	Jan-09	Continuing	TBD	
Rolls Royce/Allison	CPFF	Indianapolis, IN		1.721	Jan-07	2.107	Jan-08	2.752	Jan-09	Continuing	TBD	
Teledyne	CPFF	Toledo, OH		0.172	Jan-07	0.030	Jan-08	0.033	Jan-09	Continuing	TBD	
Honeywell	CPFF	Phoenix, AZ		3.083	Jan-07	2.294	Jan-08	2.903	Jan-09	Continuing	TBD	
Williams International	CPFF	Walled Lake, MI		0.538	Jan-07	0.150	Jan-08	0.159	Jan-09	Continuing	TBD	
Subtotal Product Development			0.000	128.579		108.999		120.611		Continuing	TBD	0.000
Remarks:												
(U) Support												
In House Support/ Misc				1.822	Oct-07	3.359	Oct-08	3.600	Oct-09	Continuing	TBD	
Subtotal Support			0.000	1.822		3.359		3.600		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
AF Flight Test Center - Edwards AFB, CA		Edwards AFB, CA		0.000	Jan-07	0.000	Jan-08	0.000	Jan-09	Continuing	TBD	
Arnold Engineering Development Center - Arnold AFB, TN		Arnold AFB, TN		17.477	Jan-07	14.900	Jan-08	15.726	Jan-09	Continuing	TBD	
NASA Glenn		Cleveland, OH		0.252	Jan-07	0.000	Jan-08	0.000	Jan-09	Continuing	TBD	
Fuel		N/A		4.839	Jan-07	10.901	Jan-08	11.019	Jan-09	Continuing	TBD	
Subtotal Test & Evaluation			0.000	22.568		25.801		26.745		Continuing	TBD	0.000
Remarks: Prior years have included fuel costs with the applicable contractors. Fuel to support T&E is now broken out separately.												
(U) Total Cost			0.000	152.969		138.159		150.956		Continuing	TBD	0.000

Footnote: Total prior to FY 2007 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 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207268F Aircraft Engine Component Improvement Program (CIP)	PROJECT NUMBER AND TITLE 1012 Aircraft Engine Component Improvement Program

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

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(U) Not applicable. CIP is a continuing engineering support program that funds 300-350 separate engineering tasks per year.	1-4Q	1-4Q	1-4Q

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

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

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	1.554	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4931 Eagle Vision	1.554	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	1.587		
(U)	Current PBR/President's Budget	1.554		
(U)	Total Adjustments	-0.033		
(U)	Congressional Program Reductions	-0.019		
	Congressional Rescissions	-0.006		
	Congressional Increases			
	Reprogrammings	-0.008		
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4931 Eagle Vision	1.554	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

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 2007	FY 2008	FY 2009
(U) Continue to update baselines and reduce footprints on Eagle Vision units	0.439		
(U) Continue to provide sustaining system engineering and technical support	1.115		
(U) Total Cost	1.554	0.000	0.000

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN	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 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
TBD	SS/FFP	Various		0.399	Nov-07					Continuing	TBD	TBD
Subtotal Product Development			0.000	0.399		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Support												
MITRE	SS/FFP	Various		0.655	Nov-07					Continuing	TBD	TBD
ITSP	C/FFP	Various		0.500	Nov-07					Continuing	TBD	TBD
Subtotal Support			0.000	1.155		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
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	1.554		0.000		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207277F Chief's Innovation Program	PROJECT NUMBER AND TITLE 4931 Eagle Vision

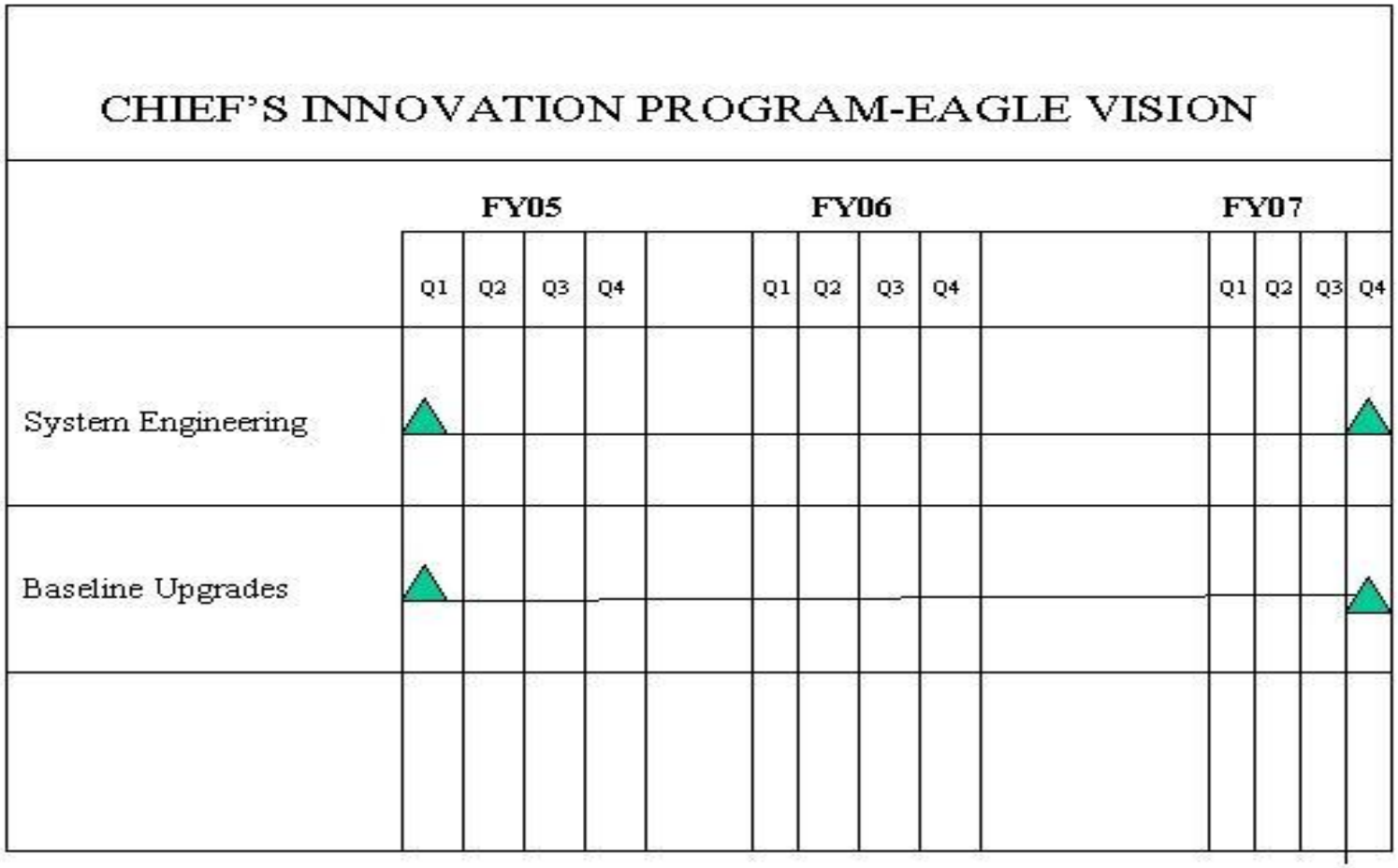

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207277F Chief's Innovation Program	PROJECT NUMBER AND TITLE 4931 Eagle Vision

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

BUDGET ACTIVITY: 07 Operational System Development

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

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	32.995	12.074	13.035	0.000	0.000	0.000	0.000	0.000	1,062.602
4515	Joint Air-to-Surface Standoff Missile (JASSM)	32.995	12.074	13.035	0.000	0.000	0.000	0.000	0.000	1,062.602

FY2008 funding totals do not include $23M FY2008 GWOT requirement still pending.

(U) A. Mission Description and Budget Item Justification

The Joint Air-to-Surface Standoff Missile (JASSM) is an Air Force program designated ACAT 1D in Jun 2007. This program provides a long range, conventional air-to-surface, autonomous, precision guided, standoff cruise missile compatible with fighter and bomber aircraft able to attack a variety of fixed or relocatable targets. Aircraft integration is complete on the B-52H, F-16 (Block 50), B-1, and B-2. Objective aircraft include the F-15E, F-16 (Block 40), F-117, F-35, and F/A-18E/F. The government is buying the JASSM system based on a contractor-developed, government-approved System Performance Specification (SPS) which became contractually binding at downselect. The contractor assumes total system performance responsibility as defined in the SPS and warrants system performance for 15 years. In Jun 2007, The Defense Acquisition Board (DAB) directed the program office to develop a Plan of Action and Milestones (POA&M). The Program Office developed a plan to restructure the program to improve system reliability through a combination of component upgrades, producibility enhancements, production quality reviews, comprehensive ground and flight testing, component obsolescence management, and pursue affordability initiatives. If JASSM is recertified in Apr/May 2008 timeframe, JASSM-Extended Range (ER) developmental efforts will restart. 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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	40.727	12.152	35.689
(U)	Current PBR/President's Budget	32.995	12.074	13.035
(U)	Total Adjustments	-7.732	-0.078	
(U)	Congressional Program Reductions	0.000	0.000	
	Congressional Rescissions	0.000	-0.078	
	Congressional Increases	0.000	0.000	
	Reprogrammings	-7.000	0.000	
	SBIR/STTR Transfer	-0.732	0.000	

(U) Significant Program Changes:

Funding: In FY 09, deleted the funding for the development of the JASSM Weapon Data Link and the Maritime Interdiction version of JASSM. This reduced the program by $22.7M.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4515	Joint Air-to-Surface Standoff Missile (JASSM)	32.995	12.074	13.035	0.000	0.000	0.000	0.000	0.000	1,062.602
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Joint Air-to-Surface Standoff Missile (JASSM) is an Air Force program designated ACAT 1D in Jun 2007. This program provides a long range, conventional air-to-surface, autonomous, precision guided, standoff cruise missile compatible with fighter and bomber aircraft able to attack a variety of fixed or relocatable targets. Aircraft integration is complete on the B-52H, F-16 (Block 50), B-1, and B-2. Objective aircraft include the F-15E, F-16 (Block 40), F-117, F-35, and F/A-18E/F. The government is buying the JASSM system based on a contractor-developed, government-approved System Performance Specification (SPS) which became contractually binding at downselect. The contractor assumes total system performance responsibility as defined in the SPS and warrants system performance for 15 years. In Jun 2007, The Defense Acquisition Board (DAB) directed the program office to develop a Plan of Action and Milestones (POA&M). The Program Office developed a plan to restructure the program to improve system reliability through a combination of component upgrades, producibility enhancements, production quality reviews, comprehensive ground and flight testing, component obsolescence management, and pursue affordability initiatives. If JASSM is recertified in Apr/May 2008 timeframe, JASSM-Extended Range (ER) developmental efforts will restart. 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 2007	FY 2008	FY 2009
(U) Continue JASSM-ER Phase II development, including component upgrades/studies/development.	28.731	5.074	5.000
(U) Continue Baseline/ER reliability initiatives/component upgrades, ground/flight test support,and affordability initiatives.	3.233	6.000	6.535
(U) Continue program office/mission support.	1.031	1.000	1.500
(U) Total Cost	32.995	12.074	13.035

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Missile Procurement (AF) JASSM	153.533	160.036	240.295	241.522	242.444	250.412	254.755	2,974.106	4,943.430
(U) SEEK EAGLE	2.962	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.265

Total includes prior year not shown.

(U) D. Acquisition Strategy

The JASSM Reliability Improvement Plan of Action and Milestones (POA&M) Phase I schedule culminates with a DAB in Spring 2008 to support the JASSM

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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)**

Nunn-McCurdy certification. Key certification entrance criteria for this effort include successful completion of robust functional ground test (FGT) and flight test to determine reliability of the Lot 4 missile.

All major contracts within this Program Element have been awarded through full and open competition. The EMD phase option for JASSM is Cost Plus Award Fee (CPAF).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
MDA - PDRR I	C/CPFF	McDonnell Douglas Aircraft, MO	120.571	0.000	N/A	0.000	N/A	0.000	N/A	0.000	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	409.915	0.000	N/A	0.000	N/A	0.000	N/A	0.000	409.915	409.915
LM - JASSM ER Risk Reduction Phase I	SS/FFP	Lockheed Martin, FL	9.700	0.000	N/A	0.000	N/A	0.000	N/A	0.000	9.700	9.700
LM - JASSM ER Development Phase II	SS/CPAF	Lockheed Martin, FL	82.431	28.731	Feb-07	4.474	Jun-08	5.000	Jan-09	0.000	120.636	120.636
LM - Baseline/ER reliability initiatives,component upgrades		Lockheed Martin, FL	0.000	0.000	N/A	6.000	Feb-08	5.535	Jan-09		11.535	10.035
Data Link	SS/CPFF	Lockheed Martin, FL	8.800	0.000	N/A	0.000	N/A	0.000	N/A		8.800	8.800
LM - JASSM Maritime Interdiction				0.000	N/A	0.000	N/A	0.000	N/A		0.000	0.000
Subtotal Product Development			782.526	28.731		10.474		10.535		0.000	832.266	830.766
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	6.031	0.000	N/A	0.000	N/A	0.000	N/A	0.000	6.031	6.031
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	15.950	0.000	N/A	0.000	N/A	0.000	N/A	0.000	15.950	15.950
Other Support	Misc	various	37.240	1.031	N/A	1.000	N/A	1.500	N/A		40.771	40.771
Subtotal Support			120.518	1.031		1.000		1.500		0.000	124.049	124.049
Remarks:												
(U) Test & Evaluation												
46TW	PO	Eglin AFB, FL	95.932	1.526	N/A	0.600	N/A	1.000	N/A		99.058	100.558
Arnold Eng Dev Center	PO	Arnold AFB, TN	5.522	1.707	N/A	0.000	N/A	0.000	N/A	0.000	7.229	7.229
Subtotal Test & Evaluation			101.454	3.233		0.600		1.000		0.000	106.287	107.787
Remarks:												
(U) Total Cost			1,004.498	32.995		12.074		13.035		0.000	1,062.602	1,062.602

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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)

FOR OFFICIAL USE ONLY - -

JASSM Top Level Schedule

As of: 7 Jan 08

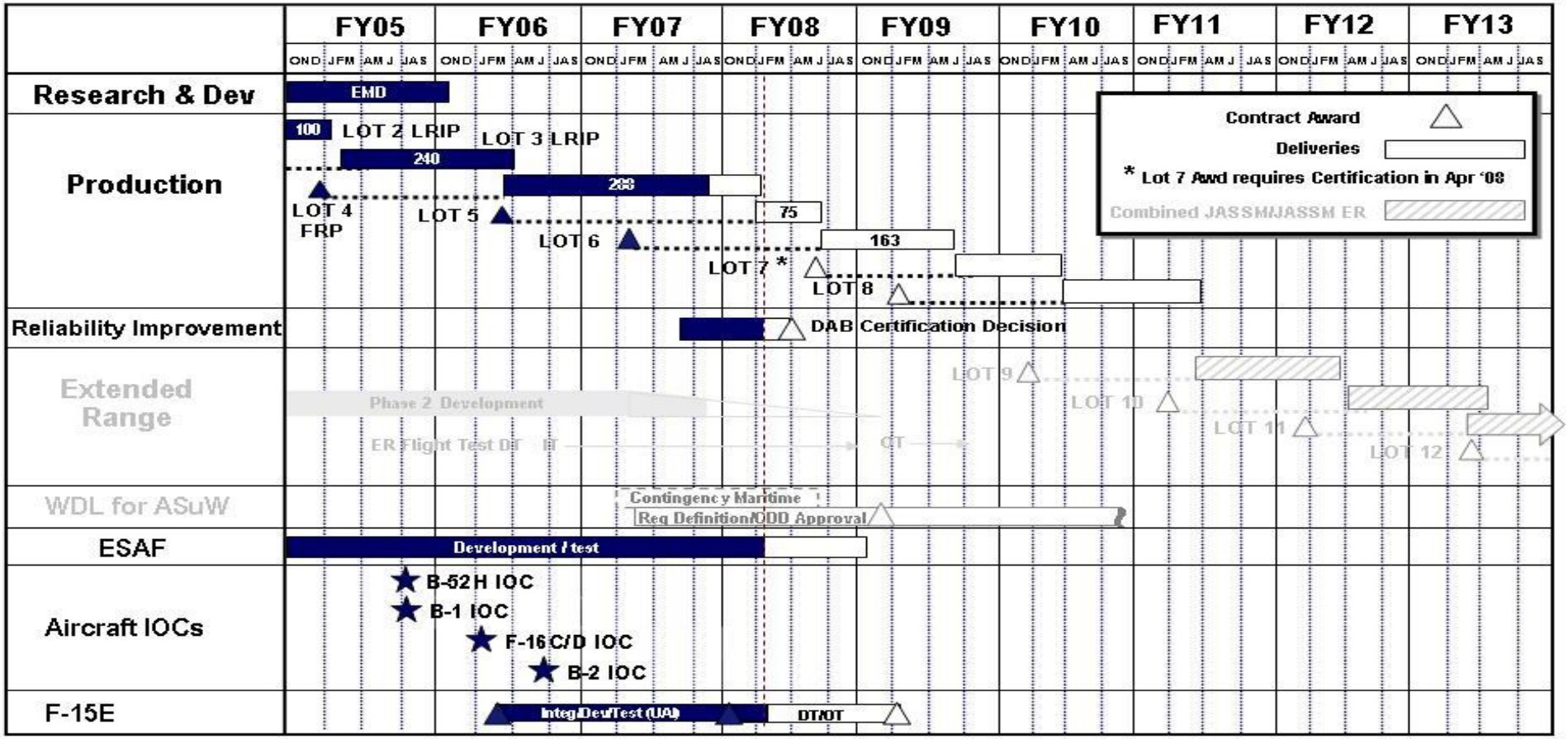

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207325F Joint Air-to-Surface Standoff Missile (JASSM)	PROJECT NUMBER AND TITLE: 4515 Joint Air-to-Surface Standoff Missile (JASSM)

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) JASSM Program Certification		2-3Q	
(U) JASSM-ER development (based on recertification efforts)			2-4Q

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

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

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	74.841	100.173	118.834	119.414	121.631	125.588	126.880	Continuing	TBD
4372	Space C2 Operations	0.000	8.530	24.457	6.537	15.562	17.926	18.299	Continuing	TBD
5117	Integration Development	74.841	71.881	81.137	93.476	83.399	83.745	84.231	Continuing	TBD
5218	Applications Development	0.000	7.646	4.256	8.622	10.186	11.399	11.602	Continuing	TBD
5220	Unit Level	0.000	6.585	6.777	7.538	7.605	7.751	7.888	Continuing	TBD
5242	Command and Control Air Replanning and Monitoring (C2ARM)	0.000	5.531	2.207	3.241	4.879	4.767	4.860	Continuing	TBD

FY2008 funding totals do not include $2.1M FY2008 GWOT requirements still pending Congressional consideration.

The GWOT request for Air and Space Operations Center Weapon System, Project 675117 will provide Analyst Support Architecture/Predictive Awareness and Network Centric Analysis for Collaborative Intelligence Assessment (ASA/PANACIA). A CENTAF Urgent Operational Need for common Signals Intelligence analytical tool was validated by Air Combat Command in Mar 07. Need is to acquire, integrate and field PANACIA multi-INT fusion capability to be integrated into the Intelligence, Surveillance and Reconnaisance Division of Al Udeid Combined Air and Space Operations Center.

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

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

Command and Control Air Replanning and Monitoring (C2ARM) is continuation of work started under the Family of Interoperable Operational Pictures (FIOP) Program Element for Web Enabled Execution Management Capability (WEEMC), later renamed Command and Control Execution Manager (C2EM). Funding prior to FY08 was received from various sources; the Air Force normalized the funding line in FY08 and programmed dollars through the Future Years Defense Program (FYDP) for this effort.

(U) A. Mission Description and Budget Item Justification

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

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207410F Air and Space Operations Center - Weapon System (AOC-WS)

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

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

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

C2 Air Re-planning and Monitoring (C2ARM) [formerly Command and Control Execution Manager (C2EM)] continues to develop Air Force unique execution management capabilities and interface to the future Army Joint Automated Deep Operations Command System - Net Centric (JADOCS-NC) providing new web based joint mission execution management tools for the warfighter.

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

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	76.849	111.557	133.469
(U)	Current PBR/President's Budget	74.841	100.173	118.834
(U)	Total Adjustments	-2.008	-11.384	
(U)	Congressional Program Reductions		-10.745	
	Congressional Rescissions		-0.639	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-2.008		

(U) Significant Program Changes:

In FY08 and out, funding for 675218 Applications Development, 675220 Unit Level, 675242 C2ARM, and 675372 Space C2 was moved to PE 0207410F.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 4372 Space C2 Operations	

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4372 Space C2 Operations	0.000	8.530	24.457	6.537	15.562	17.926	18.299	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

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

(U) A. Mission Description and Budget Item Justification

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Space C2 Technology Risk Reduction: technology development and demonstration of various technology elements (e.g., Space User Defined Operational Picture (UDOP) and security core services). Develops the to-be services oriented net-centric system architecture for the development phase. Creates and coordinates Milestone B documentation.	0.000	8.530	4.750
(U) Space C2 System: develop, test, and deliver space C2 services that will integrate Space Situational Awareness (SSA) data to provide an integrated space information environment for the JSpOC C2 node and improved deliberate assessment, planning, tasking and course of action (COA) development capability. Specifically, this system will provide an collaborative information environment utilizing a User-defined Operational Picture (UDOP) at the secret and TS/SCI levels. Capabilites developed will address the following Key Performance Perameters (KPPs): Space UDOP, emergency action conferencing, system availablity, and net-readiness. Additionally, it will address the following Key System Attributes (KSAs): event monitoring, monitoring force and resource status, situation assessment, JSpOC Integrated Workspace, system reliability, and total ownership cost. Also, the program will continues to develop an integrated Space/Theater C2 operational environment and service oriented, net-centric architecture. This funding will also provide Space C2 sevices and infrastructure technology risk reduction, demonstrations, operational Pilots, and evaluation of 3rd party-developed space services that will provide the	0.000	0.000	19.707

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 4372 Space C2 Operations

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

		FY 2007	FY 2008	FY 2009
	foundational core services and C2 for other space systems that provide information to the JSpOC.			
(U)	Total Cost	0.000	8.530	24.457

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

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

(U) D. Acquisition Strategy

Risk Reduction Technology Development performed by Air Force Research Laboratory. System Development will be a continuation of Integrated Space Command and Control (ISC2) contract awarded with full and open competition for Space C2 applications and services. Leverages the Air and Space Operations Center-Weapon System Integrator (AOC WSI) contract for enterprise integration, core services, and infrastructure. Uses evolutionary acquistion strategy based on spiral/incremental development with emphasis on risk reduction techonology demonstrations and operational pilots.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

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

PROJECT NUMBER AND TITLE: 4372 Space C2 Operations

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Space C2 System Development	CP/AF	Lockheed Martin, Colorado Springs, CO		0.000		0.000		16.898	Mar-09	0.000	16.898	TBD
Space C2 Technology Risk Reduction	Mult	Air Force Research Laboratory, Albuquerque, NM				3.564	Feb-08	2.100	Nov-08		5.664	
Subtotal Product Development			0.000	0.000		3.564		18.998		0.000	22.562	TBD
Remarks:												
(U) Support												
Systems Engineering	CP/FF	MITRE, Colorado Springs, CO				2.910	Nov-07	2.626	Nov-08	0.000	5.536	TBD
A&AS	CP/FF	PASS/ETAS, Colorado Springs, CO				1.619	Nov-07	2.379	Nov-08		3.998	
Program Support		Colorado Springs, CO				0.437	Nov-07	0.454	Nov-08	0.000	0.891	TBD
Subtotal Support			0.000	0.000		4.966		5.459		0.000	10.425	TBD
Remarks:												
(U) Total Cost			0.000	0.000		8.530		24.457		0.000	32.987	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 4372 Space C2 Operations

Space C2 Program Schedule

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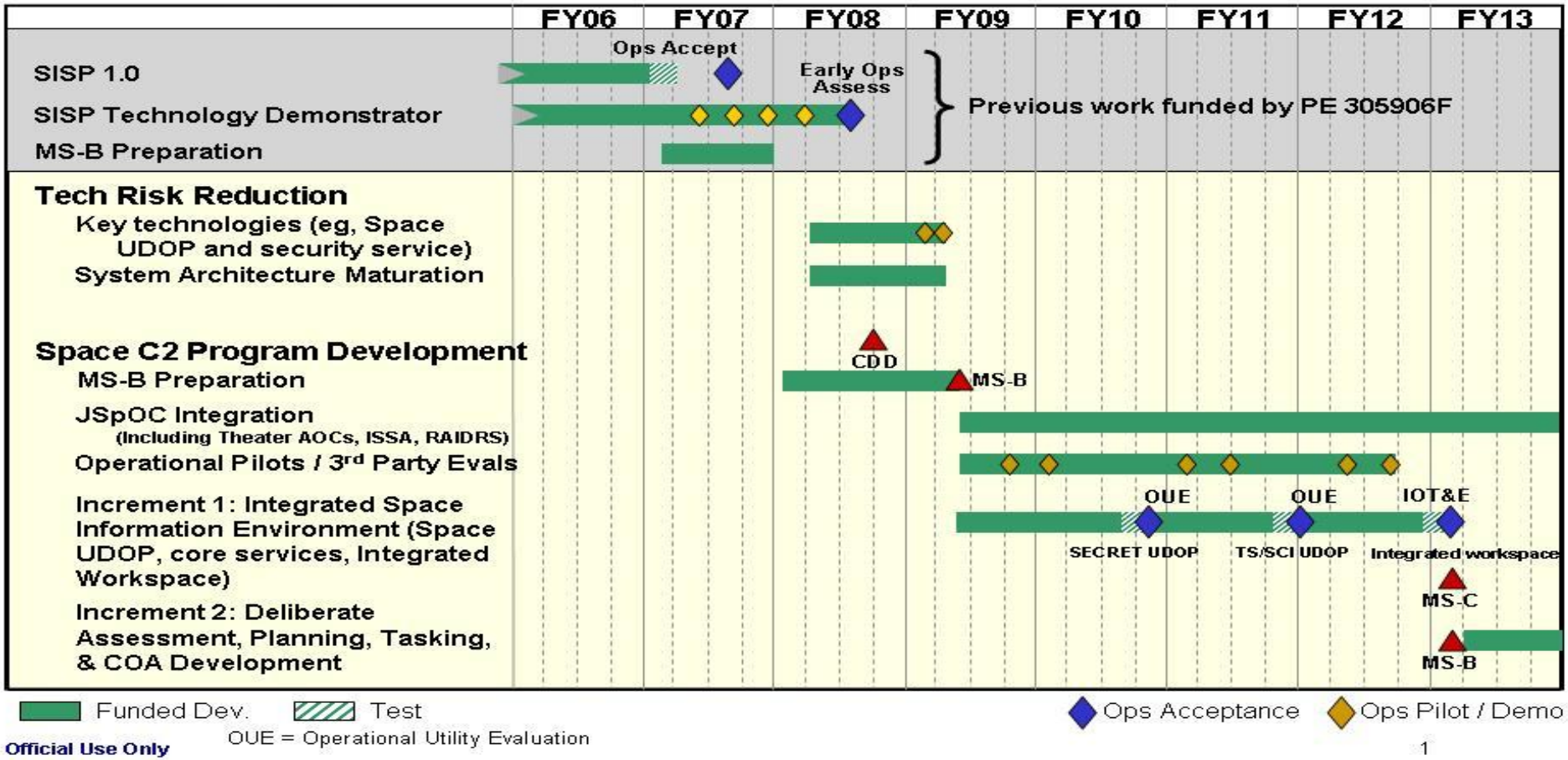

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 4372 Space C2 Operations

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Space C2 Technology Risk Reduction Demonstrations, Pilots			1Q
(U) System Architecture			1Q
(U) Space C2 MS B (Increment 1)			2Q
(U) Pre MS A/B Tasks		4Q	

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5117 Integration Development	74.841	71.881	81.137	93.476	83.399	83.745	84.231	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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

The AOC WS Integration Development project integrates system hardware and software to make the AOC WS a viable weapons system. This integration is in support of Falconer AOCs, Tailored Falconer AOCs, Functional AOCs, and Support units that are configured according to mission need. The project will develop and integrate Command and Control (C2) and Intelligence, Surveillance and Reconnaissance (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 develop the AOC through progressively improving capability increments. The AOC WS uses the Weapon System Integrator (WSI) contractor to ensure system of systems perspective and systems engineering rigor, to move the AOC WS Modernization to a Network-Centric Environment (NCE), to help develop the "to be" architecture, and to conduct other weapon system standardization and modernization activities as defined in AOC WS requirements documents. The AOC WS Integration Development project provides a structure to 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 2007	FY 2008	FY 2009
(U) 10.1 Continue AOC integration and development of items to include, but not limited to, visualization, Coalition and Joint interoperability, airspace management and deconfliction, strategy and assessment, information management and keeping systems current and relevant to COCOM requirements.	55.954	37.805	20.439
(U) 10.1 Test, Integration, and Training (To include, but not limited to: Type 1, Part Task Trainer, Distributed Mission Operations, Virtual University, and Conversion of Courseware to Computer Based Training)	4.538	6.448	6.320
(U) 10.2 AOC Modernization. Development of a robust, open, net-centric infrastructure implemented by a services-oriented architecture. Includes initial integration of baseline capabilities and development of items to include, but not limited to, dynamic planning and execution, information management, multi-level security, predictive battlespace awareness and airspace management in support of the migration towards globally-linked Air and Space Operations Centers.	1.500	13.544	40.409

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	10.2 Test, Modernization, and Training (To include, but not limited to: Type 1, Part Task Trainer, Distributed Mission Operations, Virtual University, and Conversion of Courseware to Computer Based Training)	0.000	0.000	1.299
(U)	Systems Engineering	9.106	8.424	7.883
(U)	Program Management Support	3.743	5.660	4.787
(U)	Total Cost	74.841	71.881	81.137

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF PEC: 0207410F; BPAC: 83453A	26.797	43.363	35.050	53.216	28.766	22.181	31.446	Continuing	TBD

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
AOC Software Integration	CPAF	LMMS, Colorado Springs, CO		16.110	Jan-07					Continuing	TBD	TBD
10.1 Integration & Version Upgrades	CPAF	LM WSI, Colorado Springs, CO		36.074	Jan-07	37.805	Jan-08	20.439	Nov-08	Continuing	TBD	TBD
10.1 Training and Test	MIPR	AFMC,ESC, Hanscom AFB, MA, Eglin AFB, FL, Various		4.538	Nov-06	6.448	Dec-07	6.320	Dec-08	Continuing	TBD	TBD
											0.000	
10.2 Modernization & Integration	CPAS	LM WSI, Colorado Springs, CO		1.500	Sep-07	13.544	Jan-08	40.409	Nov-08	Continuing	TBD	TBD
10.2 Training and Test	MIPR	AFMC, ESC, Hanscom AFB, MA, Eglin AFB, FL, Various		0.000		0.000		1.299	Dec-08	Continuing	TBD	TBD
											0.000	
Other Contracts (GSA, ETC)	MIPR	Various		3.770	Nov-06					Continuing	TBD	TBD
Subtotal Product Development			0.000	61.992		57.797		68.467		Continuing	TBD	TBD
Remarks:												
(U) Support												
Systems Engineering	CPFF; FFP	MITRE, Bedford, MA; ETASS, ESC, Hanscom AFB, MA		9.106	Oct-06	8.424	Oct-07	7.883	Oct-08	Continuing	TBD	TBD
											0.000	
Program Office Support	Various	AFMC/ESC, Hanscom AFB, MA		3.743	Oct-06	5.660	Oct-07	4.787	Oct-08	Continuing	TBD	TBD
Subtotal Support			0.000	12.849		14.084		12.670		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	74.841		71.881		81.137		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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

AOC WS Integrated Master Schedule

As of 7 Jan 08

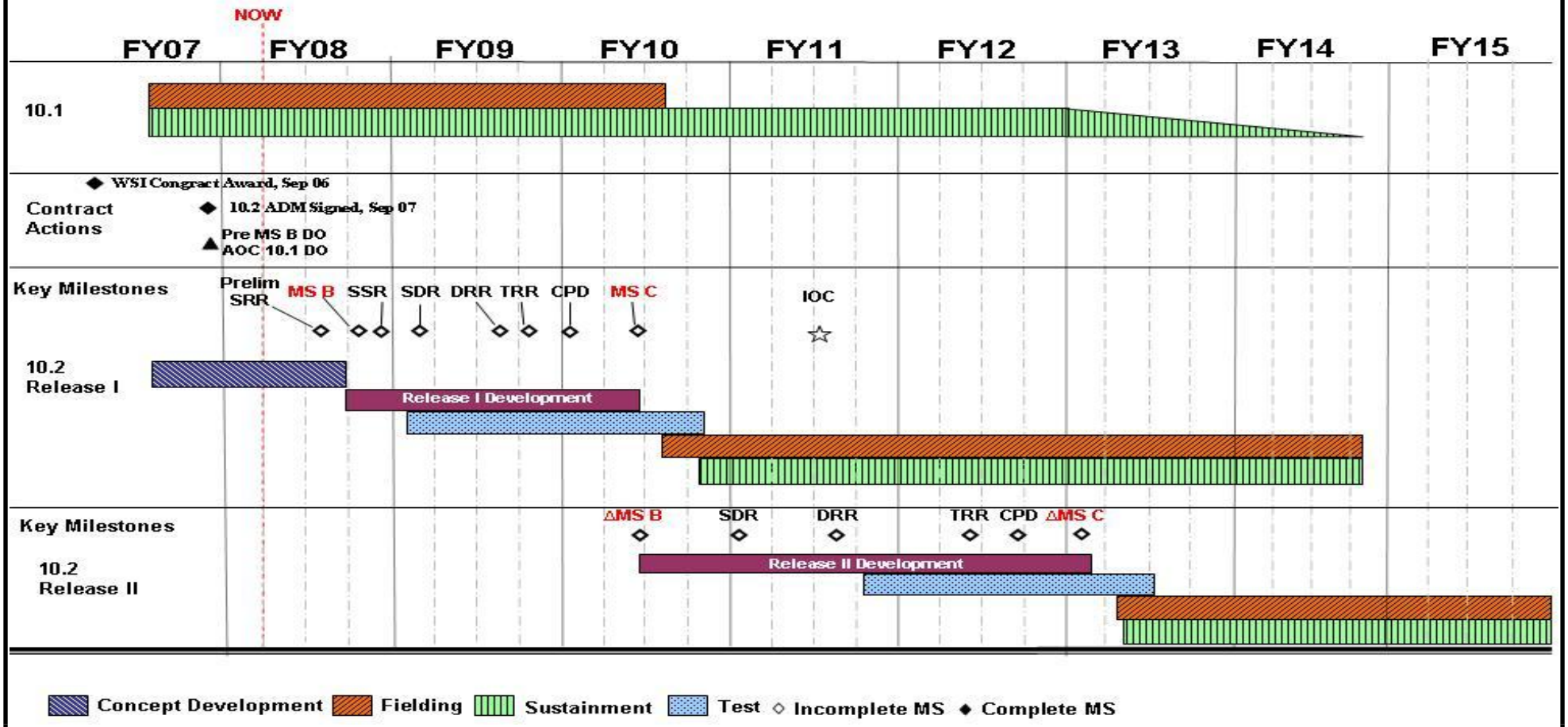


Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5117 Integration Development

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Increment 10.1 Fielding	1-4Q	1-4Q	1-4Q
(U) AOC 10.2 Concept Development	1-4Q	1-3Q	
(U) AOC System Design/Development 10.2		3-4Q	1-4Q
(U) Increment 10.2 Integration/Test			1-4Q
(U) Increment 10.2 MS B		4Q	

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

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

PROJECT NUMBER AND TITLE: 5218 Applications Development

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5218 Applications Development	0.000	7.646	4.256	8.622	10.186	11.399	11.602	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

TBMCS Force Level provides operational viability of the current Joint System of Record (TBMCS 1.1.3) which delivers joint air battle planning, management and execution capabilities. The TBMCS Force Level follow on effort, known as Command and Control Air Operations Software (C2AOS), continues to evaluate future air and space command and control concepts identified through research, risk reduction, prototyping, current operations, exercises and demonstrations. This technology assessment will enable joint force-level command, control and intelligence applications providing joint air battle planning/re-planning, force allocation, management and execution capabilities to transition towards a net-centric environment. C2AOS focuses on, but is not limited to support of the Joint Forces Air Component Commander, the Air and Space Operations Center (AOC) and Net Enabled Command Capability (NECC) to include: planning and replanning of the Air Battle Plan; generation and dissemination of the Air Tasking Order; air and space defensive planning and execution; targeting; weaponeering; and numerous other applications supporting air operations command and control, utilized in the joint environment.

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 2007	FY 2008	FY 2009
(U) TBMCS Force Level Support	0.000	1.383	0.000
(U) NATO ICR&D (International Cooperation Research & Development) projects	0.000	0.300	0.450
(U) C2AOS (risk reduction and technology assessment)	0.000	0.625	0.000
(U) Training Development	0.000	1.500	0.800
(U) Test & Evaluation	0.000	1.180	0.800
(U) Program Support	0.000	2.658	2.206
(U) Total Cost	0.000	7.646	4.256

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF, PE 0207410F, WSC 834520, PROG BG1000	0.000	11.863	11.994	16.135	15.086	15.433	15.790	Continuing	TBD
(U) O&M, PE 0207410F, PROG BG1000		16.209	16.942	18.247	17.432	16.726	16.686	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5218 Applications Development

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

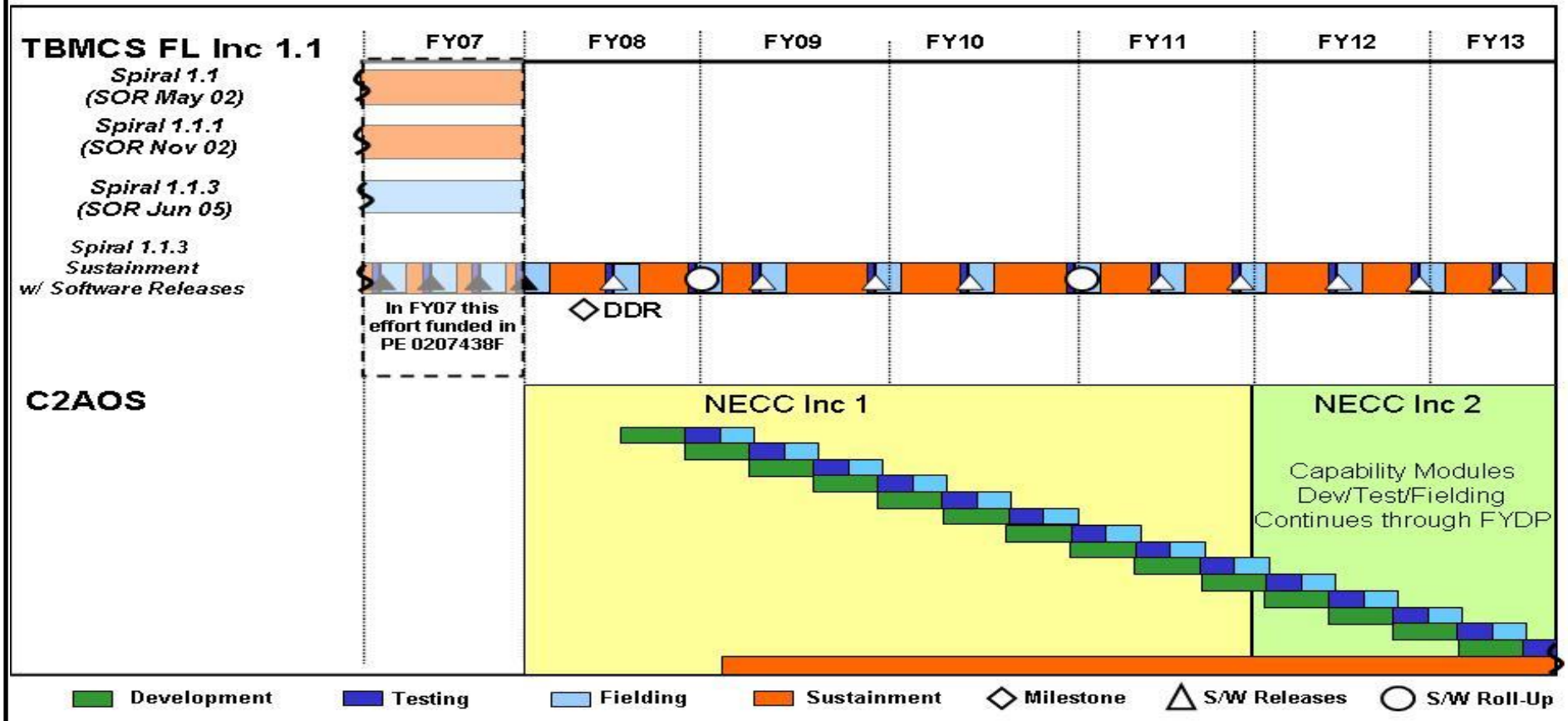
PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)

PROJECT NUMBER AND TITLE: 5218 Applications Development

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
C2AOS (risk reduction and technology assessment)	Various	FFRDC and A&AS, Hanscom AFB, MA	0.000	0.000		0.625	Oct-07	0.000	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.625		0.000		Continuing	TBD	TBD
Remarks:												
(U) Support												
TBMCS Force Level Support	FFP/FPIF/CPAF	Lockheed Martin, Colorado Springs, CO	0.000	0.000		1.383	Oct-07	0.000	Oct-08	Continuing	TBD	TBD
Subtotal Support			0.000	0.000		1.383		0.000		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Test and Evaluation	MIPR	46th Test Squadron, Eglin AFB, FL	0.000	0.000		1.180	Nov-07	0.800	Nov-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		1.180		0.800		Continuing	TBD	TBD
Remarks:												
(U) Management												
Program Support (MITRE, A&AS, Travel)	Various	Hanscom AFB, MA	0.000	0.000		2.658	Oct-07	2.206	Oct-08	Continuing	TBD	TBD
Subtotal Management			0.000	0.000		2.658		2.206		Continuing	TBD	TBD
Remarks:												
(U) Training Development												
Training development	CPAF	Lockheed Martin, Colorado Springs, CO	0.000	0.000		1.500	Feb-08	0.800	Feb-09		2.300	
Subtotal Training Development			0.000	0.000		1.500		0.800		0.000	2.300	0.000
Remarks:												
(U) NATO ICR&D Projects												
NATO ICR&D Projects	Various	Hanscom AFB, MA	0.000	0.000		0.300	Oct-07	0.450	Oct-08		0.750	
Subtotal NATO ICR&D Projects			0.000	0.000		0.300		0.450		0.000	0.750	0.000
Remarks:												
(U) Total Cost			0.000	0.000		7.646		4.256		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5218 Applications Development

TBMCS-FL/C2AOS



As of 8 January 2008

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5218 Applications Development

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) TBMCS Force Level		1-4Q	1-4Q
(U) C2AOS (risk reduction and technology assessment)		1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0207410F Air and Space Operations Center - Weapon System (AOC-WS)	5220 Unit Level

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5220 Unit Level	0.000	6.585	6.777	7.538	7.605	7.751	7.888	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Unit Level (UL) program, as the follow on to Theater Battle Management Core Systems-Unit Level, develops, integrates, fields, and maintains an evolving sequence of increasing software capabilities (Unit Command & Control - UC2) that support the execution of the air battle plan and the air tasking order message received from the force level systems. Unit Level Operations software systems provide both the scheduling and mission preparation activities at the wing and squadron level and the capabilities to report and track the success of each mission and influence decisions on future Air Battle Planning to refine future missions. Unit Level Intelligence capabilities ensure detailed threat, target and imagery information are made available to mission commanders and aircrews planning current flight operations. UL is fielded to the Wing Operations Center (WOC), the Maintenance Operations Center (MOC), the Squadron Operations Center (SOC), and many other work-centers.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continue Unit Level Operations and Intelligence increment software development/integration (formerly known as TBMCS-Unit Level)	0.000	4.301	4.372
(U) Test Support	0.000	0.845	0.860
(U) System Engineering	0.000	0.626	0.651
(U) Program Support (including contract engineering support, tech support, etc)	0.000	0.813	0.894
(U) Total Cost	0.000	6.585	6.777

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF, PE 0207410F, WSC 834520, PROG BG2000	0.000	10.686	10.531	12.863	11.939	12.172	12.231	Continuing	TBD
(U) O&M, PE 0207410F, PROG BG2000		2.860	2.169	2.183	1.079	1.099	1.703	Continuing	TBD

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

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

PROJECT NUMBER AND TITLE: **5220 Unit Level**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Increment Development	TBD	TBD		0.000		4.301	Feb-08	4.372	Mar-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		4.301		4.372		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												
Test Support	MIPR	46TS, Eglin AFB, FL		0.000		0.845	Oct-07	0.860	Oct-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.845		0.860		Continuing	TBD	TBD
Remarks:												
(U) System Engineering												
	CPFF	MITRE, Bedford, MA				0.626	Oct-07	0.651	Oct-08	Continuing	TBD	TBD
Subtotal System Engineering			0.000	0.000		0.626		0.651		Continuing	TBD	TBD
Remarks:												
(U) Program Support												
	various	Hanscom AFB, MA				0.813	Oct-07	0.894	Oct-08	Continuing	TBD	TBD
Subtotal Program Support			0.000	0.000		0.813		0.894		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			0.000	0.000		6.585		6.777		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5220 Unit Level

UL/UC2 Program Schedule

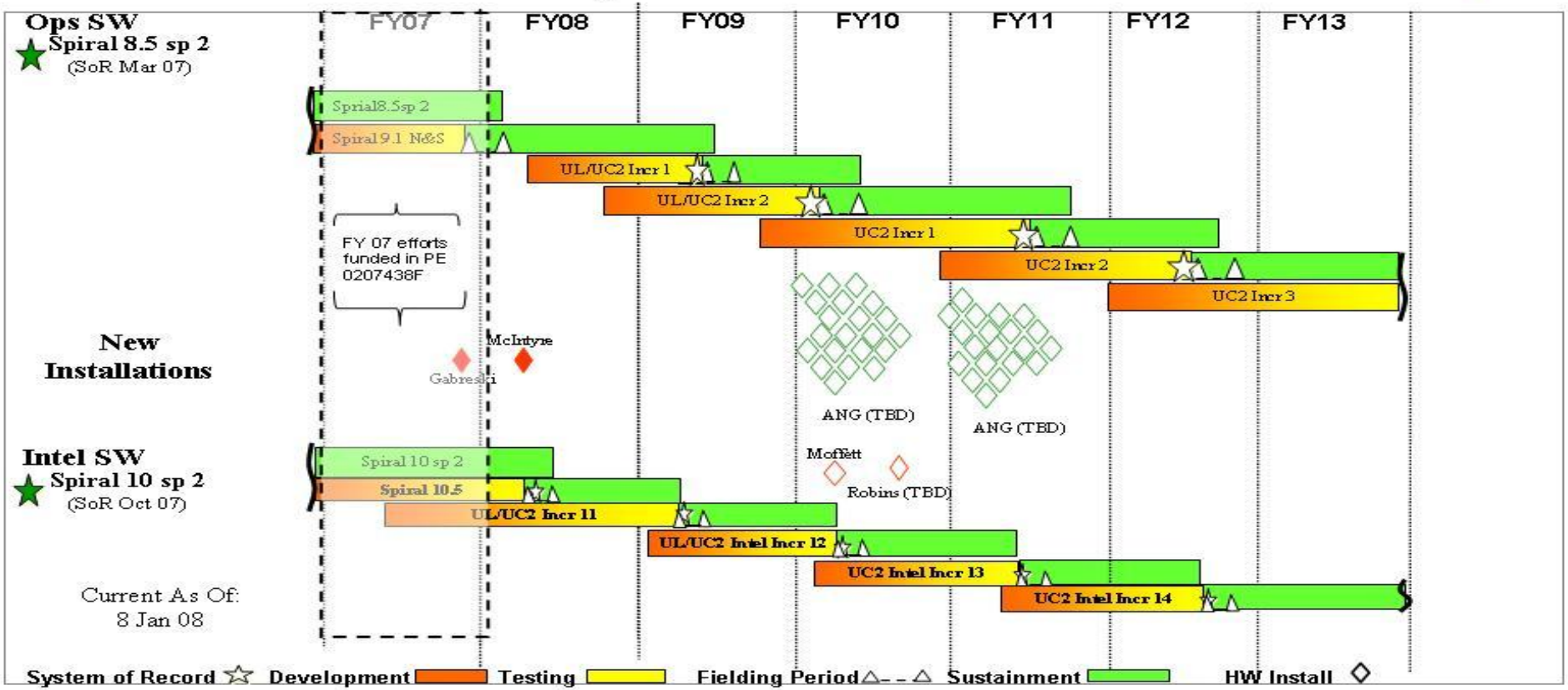


Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5220 Unit Level

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Continue Unit Level Operations and Intelligence Increments/Spirals		1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5242 Command and Control Air Replanning and Monitoring (C2ARM)	

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5242	Command and Control Air Replanning and Monitoring (C2ARM)	0.000	5.531	2.207	3.241	4.879	4.767	4.860	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

Command and Control Air Replanning and Monitoring (C2ARM) is continuation of work started under the Family of Interoperable Operational Pictures (FIOP) Program Element for Web Enabled Execution Management Capability (WEEMC), later renamed Command and Control Execution Manager (C2EM). Funding prior to FY08 was received from various sources; the Air Force normalized the funding line in FY08 and programmed dollars through the Future Years Defense Program (FYDP) for this effort.

(U) A. Mission Description and Budget Item Justification

In FY08, C2ARM shifted its focus from joint execution management to all aspects of air component mission monitoring and replanning. The joint execution management capabilities developed under WEEMC and C2EM will be made available to the military services for integration into their command and control systems, including the Air and Space Operations Center Weapon System (AOC WS). Following the completion of joint execution-management capability development, C2ARM will focus on, but will not be limited to, development of data services and improving the net-centric environment for a variety command, control and intelligence applications within the Air and Space Operations Center (AOC) as an enabler for transition to Net Enabled Command Capability. C2ARM will provide information services for air battle planning execution data to Command and Control Air Operations Software (C2AOS).

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) C2ARM Development/Test	0.000	4.360	1.642
(U) System Engineering	0.000	0.538	0.215
(U) Program Support	0.000	0.633	0.350
(U) Total Cost	0.000	5.531	2.207

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) None									

(U) D. Acquisition Strategy

New award multi-year contract, evolutionary acquisition strategy, one delivery with increased capability per year, Competitive or limited competitive, CPIF.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

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

PROJECT NUMBER AND TITLE: **5242 Command and Control Air Replanning and Monitoring (C2ARM)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Product Development	TBD	TBD				4.360	May-08	1.642	May-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		4.360		1.642		Continuing	TBD	TBD
Remarks:												
(U) Support												
Program Office Support	TBD	TBD	0.000	0.000		0.633	Jan-08	0.350	Jan-09	Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.633		0.350		Continuing	TBD	TBD
Remarks:												
(U) Management												
Management	TBD	TBD	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) Systems Engineering												
Systems Engineering	TBD	TBD	0.000	0.000		0.538	Jan-08	0.215	Oct-08	Continuing	TBD	TBD
Subtotal Systems Engineering			0.000	0.000		0.538		0.215		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	0.000		5.531		2.207		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207410F Air and Space Operations Center - Weapon System (AOC-WS)**	PROJECT NUMBER AND TITLE **5242 Command and Control Air Replanning and Monitoring (C2ARM)**

C2ARM Milestone Schedule

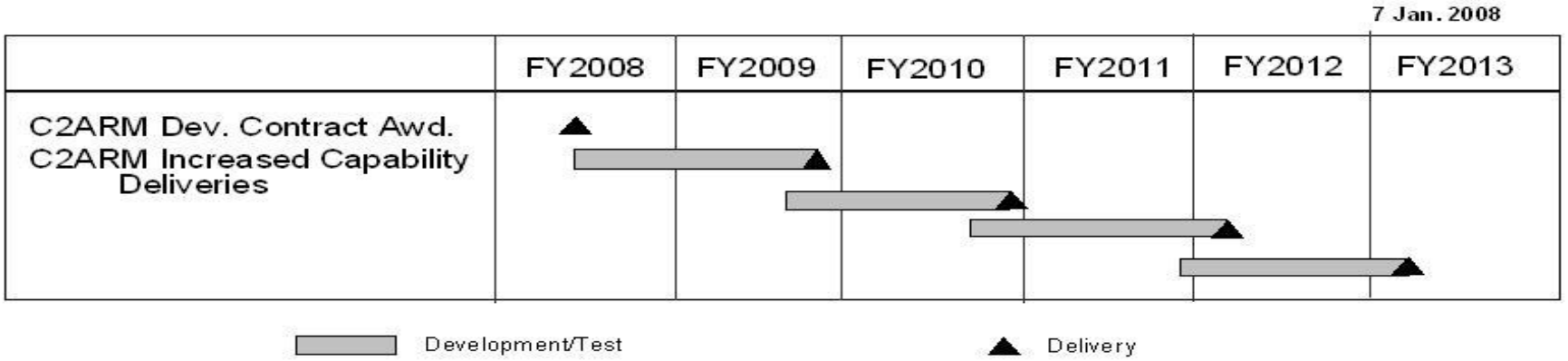


Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5242 Command and Control Air Replanning and Monitoring (C2ARM)

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) C2ARM Development Contract Award		3Q	
(U) C2ARM Increased Capability Deliveries			4Q

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PE NUMBER: 0207412F
PE TITLE: Modular Control System

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207412F Modular Control System

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	9.202	24.791	60.590	21.163	22.514	21.969	22.192	Continuing	TBD
485L	Theater Air Control System Imp (TACSI)	9.202	24.791	60.590	21.163	22.514	21.969	22.192	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Battle Control System-Mobile (BCS-M) (PE 0207412F) is a Family-of-Systems (FOS) that supports mobile ground-based command and control (C2). The Battle Control Center (BCC) is one element of the BCS-M and replaces the legacy AN/TYQ-23 Modular Control System (MCS) now operational in the Air Force's Control and Reporting Centers (CRC). BCS-M also supports development of the AN/TRC-215 Remote Radio Secure Voice System (RRSVS) and a replacement for the AN/TPS-75 long-range, tactical ground radar. The AN/TPS-75 replacement is known as Three Dimensional Expeditionary Long Range Radar (3DELRR).

The BCC C2 execution node supports the Joint Forces Air Component Commander (JFACC) and is interoperable with 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 Surveillance Target Attack Radar System (JSTARS), and the Air Operations Center (AOC). In addition, the BCC is tasked to operate with Joint ground-based and airborne C2 nodes as well as Air Force and Joint tactical aircraft. As the tactical execution arm of the AOC, the BCC conducts OCONUS persistent C2 missions as well as supporting specialized CONUS Homeland Defense "gap-filler" missions; key capabilities are theater air defense, airspace surveillance, aircraft identification, airspace management, and tactical data link management. Support and execution of all of these missions hinges on a capable radar enabling the BCC.

BCS-M is a low density/high demand rapidly deployable ground C2 asset. Currently the USAF CRCs are fully employed in Operations IRAQI FREEDOM, ENDURING FREEDOM, and NOBLE EAGLE. CENTAF is urgently advocating the need to update and replace the legacy MCS equipment/capabilities to support ongoing operations.

The BCS-M Program Office (ESC) uses an incremental development and acquisition strategy to further advance C2 capabilities on the battlefield. BCS-M acquisition activities include, but are not limited to: requirements analysis, modeling and simulation, risk reduction, acquisition planning, enterprise integration, and prototype development (i.e., radio/radar/data link remoting, software development, radar development, future communications requirements). For its development of the BCC, the BCS-M program office capitalized on technologies and lessons learned from the Area Cruise Missile Defense (ACMD) Advanced Capabilities Technology Demonstration (ACTD). The BCC's battle management software is being developed in coordination with the BCS-Fixed program, leverages capabilities from the AWACS 40/45 Program, and integrates evolutionary upgrades carried forward from the legacy CRC. This program will institute development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability. The BCS-M Program Office implements 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 replaced.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207412F Modular Control System

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	8.743	16.505	23.695
(U)	Current PBR/President's Budget	9.202	24.791	60.590
(U)	Total Adjustments	0.459	8.241	
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases		8.500	
	Reprogrammings	0.700		
	SBIR/STTR Transfer	-0.241	-0.259	

(U) Significant Program Changes:

- Funding increases from FY07 to FY08 and out because of parallel common software development activities.
- Funding increases from FY08 to FY09 because Three Dimensional Expeditionary Long Range Radar (3DELRR) (formerly Radar Replacement) will be in progress.
- The FY08 President's Budget zeroed out the USMC acquisition for a new long range radar. The acquisition strategy for the Radar Replacement component of the BCS-M program had been based on the USAF and USMC jointly developing system requirements with each service expected to procure the resulting product. The FY08 change in USMC funding drives the need to revise this strategy.
- The increase in FY08 RDT&E reflects an FY08 Congressional transfer of $8.5M from procurement to RDT&E to support the development of a BCS-M replacement radar (3DELRR) and continued software upgrades to the Battle Control Center (BCC).
- The increase in FY09 RDT&E reflects an FY09 ZBT of $37.4M from procurement to RDT&E to support the development of a BCS-M replacement radar (3DELRR) and continued software upgrades to the BCC. Subsequent funding adjustments for the program will be addressed during the FY10 POM process, primarily to replace lost USMC RDT&E funding.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
485L	Theater Air Control System Imp (TACSI)	9.202	24.791	60.590	21.163	22.514	21.969	22.192	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Battle Control System-Mobile (BCS-M) (PE 0207412F) is a Family-of-Systems (FOS) that supports mobile ground-based command and control (C2). The Battle Control Center (BCC) is one element of the BCS-M and replaces the legacy AN/TYQ-23 Modular Control System (MCS) now operational in the Air Force's Control and Reporting Centers (CRC). BCS-M also supports development of the AN/TRC-215 Remote Radio Secure Voice System (RRSVS) and a replacement for the AN/TPS-75 long-range, tactical ground radar. The AN/TPS-75 replacement is known as Three Dimensional Expeditionary Long Range Radar (3DELRR).

The BCC C2 execution node supports the Joint Forces Air Component Commander (JFACC) and is interoperable with 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 Surveillance Target Attack Radar System (JSTARS), and the Air Operations Center (AOC). In addition, the BCC is tasked to operate with Joint ground-based and airborne C2 nodes as well as Air Force and Joint tactical aircraft. As the tactical execution arm of the AOC, the BCC conducts OCONUS persistent C2 missions as well as supporting specialized CONUS Homeland Defense "gap-filler" missions; key capabilities are theater air defense, airspace surveillance, aircraft identification, airspace management, and tactical data link management. Support and execution of all of these missions hinges on a capable radar enabling the BCC.

BCS-M is a low density/high demand rapidly deployable ground C2 asset. Currently the USAF CRCs are fully employed in Operations IRAQI FREEDOM, ENDURING FREEDOM, and NOBLE EAGLE. CENTAF is urgently advocating the need to update and replace the legacy MCS equipment/capabilities to support ongoing operations.

The BCS-M Program Office (ESC) uses an incremental development and acquisition strategy to further advance C2 capabilities on the battlefield. BCS-M acquisition activities include, but are not limited to: requirements analysis, modeling and simulation, risk reduction, acquisition planning, enterprise integration, and prototype development (i.e., radio/radar/data link remoting, software development, radar development, future communications requirements). For its development of the BCC, the BCS-M program office capitalized on technologies and lessons learned from the Area Cruise Missile Defense (ACMD) Advanced Capabilities Technology Demonstration (ACTD). The BCC's battle management software is being developed in coordination with the BCS-Fixed program, leverages capabilities from the AWACS 40/45 Program, and integrates evolutionary upgrades carried forward from the legacy CRC. This program will institute development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability. The BCS-M Program Office implements 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 replaced.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207412F Modular Control System	PROJECT NUMBER AND TITLE: 485L Theater Air Control System Imp (TACSI)

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)				
(U)	Continue development & delivery 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 upgrades into BCS-M, and sensor replacement/upgrade, known as Three Dimensional Expeditionary Long Range Radar (3DELRR).	6.422	18.902	53.347
(U)	Test and evaluation in support of BCS-M		1.276	2.609
(U)	Continue Program (i.e., travel, supplies, equipment, miscellaneous)	0.307	0.409	0.410
(U)	Continue Systems Engineering/Technical Support	2.473	4.204	4.224
(U)	Total Cost	9.202	24.791	60.590
	Increase in Systems Engineering/Technical support due to realignment.			

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Other APPN									
(U)	OPAF PE 0207412F (Other Procurement Air Force, WSC 833040, Theater Air Control System Improvement	38.271	24.881	31.282	72.854	88.479	85.085	86.764	Continuing	TBD

(U) D. Acquisition Strategy

The Battle Control System (BCS) Family of Systems is utilizing an incremental development and acquisition strategy to further advance C2 capabilities supporting future aerospace operations.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Development of Evolutionary Upgrades - Integration, contractor testing & system delivery, BCC	MIPR	NAWC/Aircraft Division, Patuxent River, MD		4.528	Jan-07	6.050	Dec-07	11.151	Nov-08	Continuing	TBD	TBD
Development of Evolutionary Upgrades - Incremental Development, BCC	CPIF & CPAF/SS	Thales Raytheon Systems, Fullerton, CA		0.558	Mar-07	8.172	Dec-07	15.987	Nov-08	Continuing	TBD	TBD
Development of Evolutionary Upgrades - Risk Reduction, 3DELRR	T&M	Technology Services Corp., Silver Spring, MD		0.300	Feb-07						0.300	0.300
Development of Evolutionary Upgrades - Risk Reduction, 3DELRR	T&M	Sensis Group, East Syracuse, NY		0.568	Nov-06						0.568	0.568
Development of Evolutionary Upgrades - Risk Reduction, 3DELRR	MIPR	AFRL, Rome, NY				3.710	Mar-08	0.120	Oct-08	Continuing	TBD	TBD
Development of Evolutionary Upgrades - Prototyping, 3DELRR	FFP	TBD						23.589	Apr-09	Continuing	TBD	TBD
Development of Evolutionary Upgrades - Remote Radio Spiral 3	MIPR	AFRL, Rome, NY		0.468	Dec-06	0.470	Dec-07	0.100	Oct-08	Continuing	TBD	TBD
Development of Evolutionary Upgrades - Remote Radio Spiral 4; JTTRS Integration	MIPR	AFRL, Rome, NY						0.700	Oct-08	Continuing	TBD	
Development of Evolutionary Upgrades - Remote Radio Spiral 4; JTTRS Integration	MIPR	NAWC/Aircraft Division, Patuxent River, MD						0.700	Oct-08	Continuing	TBD	TBD
Development of Evolutionary Upgrades - Mode 5/S	TBD	TBD				0.500	Mar-08	1.000	Feb-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	6.422		18.902		53.347		Continuing	TBD	TBD
Remarks:												
(U) Support												
Program Office Support	Various	Various		0.307	Oct-06	0.409	Oct-07	0.410	Oct-08	Continuing	TBD	TBD
Systems Engineering	FFP	MITRE, Bedford MA		1.365	Oct-06	1.748	Dec-07	1.704	Oct-08	Continuing	TBD	TBD
Technical Support	T&M	Various		1.108	Dec-06	2.456	Jan-08	2.520	Jan-09	Continuing	TBD	TBD
Subtotal Support			0.000	2.780		4.613		4.634		Continuing	TBD	TBD
Remarks:												

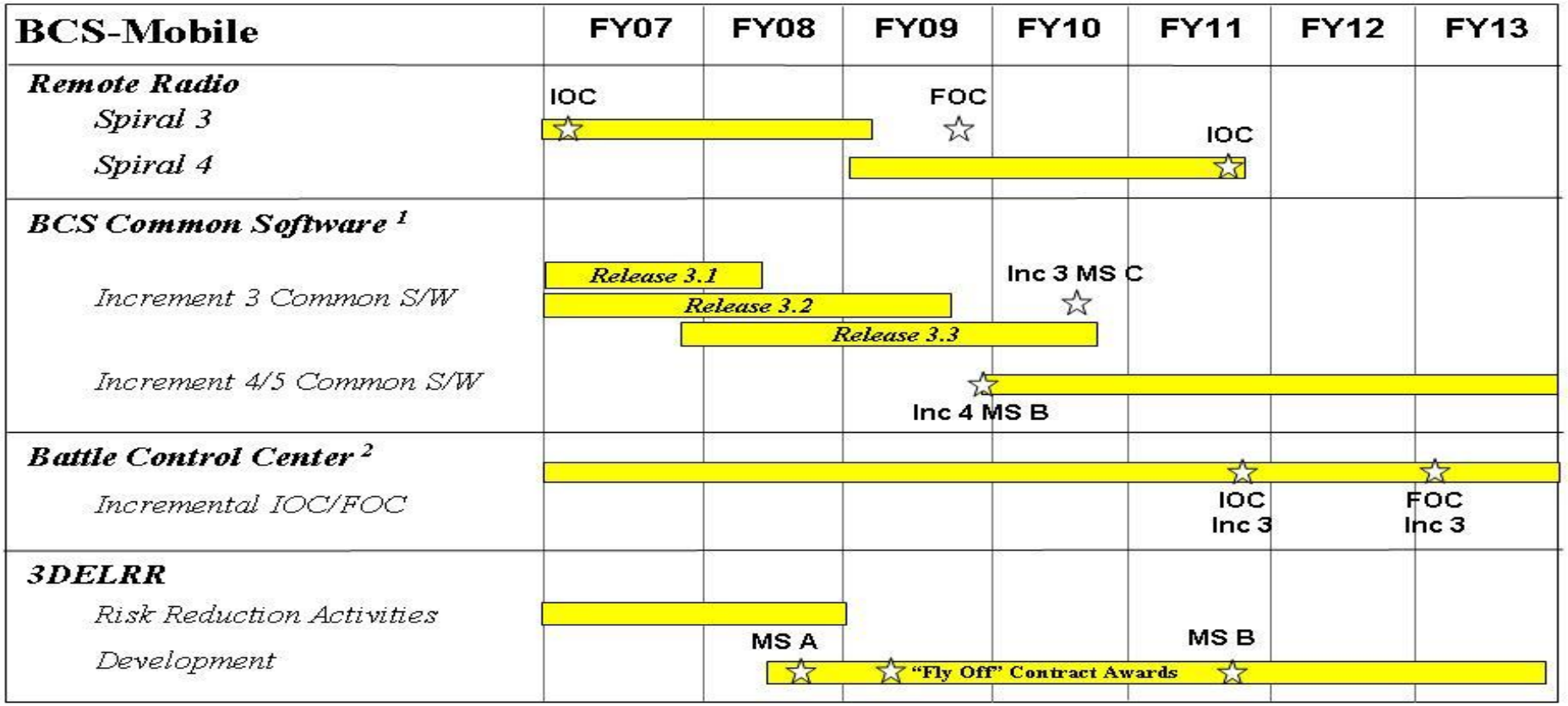
Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0207412F Modular Control System**	**485L Theater Air Control System Imp (TACSI)**

(U) Test & Evaluation												
46th Test Wing/Other Test Activity	Various	Various			1.276	Dec-08	2.609	Nov-09	Continuing	TBD	
Subtotal Test & Evaluation			0.000	0.000	1.276		2.609		Continuing	TBD	0.000
Remarks:											
(U) Total Cost			0.000	9.202	24.791		60.590		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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)



[1] Software Increments 1 & 2 were delivered to BCS-F
[2] BCC incremental upgrades will come from the BCS Common Software development

Major Event or Milestone ☆
Ongoing Activity ▭

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

As of Jan 2008

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(U) BCS-M Remote Radio Spiral 3 IOC	1Q		
(U) BCS-M Remote Radio Spiral 3 FOC			3Q
(U) BCS Common Software Increment 4 MS B			4Q
(U) BCS-M 3DELRR Milestone A		3Q	
(U) BCS-M 3DELRR Prototyping Fly-Off Contract Awards			2Q

PE NUMBER: 0207417F
PE TITLE: Airborne Warning and Control System (AWACS)

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207417F Airborne Warning and Control System (AWACS)

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	157.751	151.593	126.300	170.511	151.932	219.379	154.736	Continuing	TBD
411L	Airborne Warning & Control System (AWACS)	157.751	151.593	126.300	170.511	151.932	219.379	154.736	Continuing	TBD

1. FY2008 funding totals do not include $72.5M FY2008 GWOT requirements still pending Congressional consideration.

(U) A. Mission Description and Budget Item Justification

A. Mission Description

The funding set forth in this document investigates, develops, and integrates system improvements to enable the E-3 AWACS to remain an effective airborne battle management and surveillance system for command and control of combat forces and for strategic defense of the U.S. This PE funds the following efforts: Modernization Programs: (RDT&E, AF)

1) The Integrated DAMA (Demand Assigned Multiple Access) / GATM (Global Air Traffic Management) Program seeks to make communications and navigation improvements required to meet current mandated DAMA SATCOM (Satellite Communication) and Air Traffic Control (ATC) requirements.

A) DAMA SATCOM is a Chairman Joint Chiefs of Staff (CJCS)--mandated Ultra-High Frequency (UHF) satellite communications upgrade consisting of two new UHF DAMA terminals and new Radio Frequency (RF) components, to mitigate co-site interference, replacing the two non-DAMA UHF SATCOM radios on each aircraft. The DAMA enhancements will expand user availability of severely limited DoD UHF SATCOM channels, improving the interoperability and efficiency of DoD UHF SATCOM systems.

B) GATM is a FAA/International Civil Aviation Organization (ICAO)/EUROCONTROL--mandated ATC upgrade consisting of new Very High Frequency (VHF) radios with 8.33 kHz channel spacing, Traffic-alert Collision Avoidance System (TCAS)/Mode-S Identification Friend or Foe (IFF) transponder and Reduced Vertical Separation Minimum (RVSM) capability. The ATC enhancements will permit more aircraft to fly closer together in congested airspace worldwide, particularly in European airspace. Non-compliance has already resulted in airspace restrictions and denials, impacting AWACS's ability to support worldwide response in situations requiring immediate on-scene command and control (C2) battle management.

2) Block 40/45 is replacing AWACS 1970's vintage mission systems that are experiencing Diminishing Manufacturing Sources (DMS) issues, are difficult and expensive to upgrade, and limit overall AWACS system performance. The Block 40/45 upgrade will improve quality and timeliness of sensor data to the shooter, improve Combat Identification (CID), improve AWACS contribution to Time Critical Targeting via Data Link Infrastructure, improved electronic support measures processing, and enable more effective, faster upgrades via an open systems, Ethernet based architecture. The upgrade will also update the ground support infrastructure including training systems.

3) NAVWAR (Navigation Warfare) is mandated by Chairman Joint Chiefs Staff Instruction (CJCSI) 6140.01A (31 Mar 04) and requires all DoD Global Positioning System (GPS) users to incorporate National Security Agency (NSA) Selective Availability Anti-Spoofing Module (SAASM) provisions for the transition to 'black

keys'; to eliminate requirements to acquire GPS satellites using the civil signal (C/A); and to incorporate new technology into the navigation sensor.

4) Next Generation Identification Friend or Foe (NGIFF): Upgrades the existing Mark XII IFF Interrogator with a Mode 5/S Interrogator extending the effective range of the AWACS Interrogator while helping discriminate between closely-spaced targets. The requirement is documented in the Required Operational Capability (ROC), ADC/TAC-1-66 & Combat ID (CID) Capstone Requirement Document (CRD), 19 March 2001, JROCM 047-07 signed 5 Mar 2007, and USAF CDR 003-97. Mode 5 IFF is designed to augment the obsolete Mode 4 waveform, providing a more secure IFF function. The Mode S capability provides civil airspace IFF interrogation for Homeland Defense and airspace control.

5) DRAGON (DMS Replacement of Avionics for Global Operations and Navigation) (formerly AMP) 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 DRAGON 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 that become unsustainable beyond 2010, are included in the DRAGON.

6) Command & Control, Intelligence, Surveillance and Reconnaissance (C2ISR): C2ISR System Architecture Improvements provide timely enhancements to improve critical areas of the AWACS mission system, primarily in two distinct areas:
A) Mission Capable (MC) rate improvement: Reliability, Maintainability & Availability (RM&A) analysis and development projects provide system improvements that help meet/exceed the MC rate standard of this critical C2 platform, therefore increasing airframe longevity in order to support its flight commitment to end of operational life. Such efforts focus on increasing reliability of the air vehicle, command and control, computer, sensor systems and infrastructure improvements as well as providing solutions to diminishing manufacturing sources. Efforts will also focus on insertion of new technologies with the aim of reducing maintenance man-hours along with periodic depot maintenance improvements to increase aircraft availability. Programs will focus on risk reduction, development, and fielding.
B) C2ISR enhancement and integration: AWACS seeks to fulfill the requirements of Joint Vision 2020 as well as Aerospace Expeditionary Forces (AEF) and other Task Force Concept of Operations to meet the needs of the operator. AWACS seeks to enhance network-centric warfare capabilities with other C2ISR systems by horizontally integrating machine-to-machine interfaces into AWACS in order to digitize the kill chain. Sensor and communications improvements, such as the ability to send, receive and fuse the air (and ground) picture via data link to fighter aircraft, will be developed through rapid prototyping, modeling, simulation, and participation in live and simulated Joint exercises (e.g., Joint Combat Identification Evaluation Team (JCIET) and Joint Distributed Engineering Plant (JDEP)). Collaborative efforts with other sensor platforms through capabilities such as network-centric operations will also enhance horizontal integration efforts. Certain near-term efforts, required by the operator to improve the timeliness and accuracy of information passed to/from fighter aircraft in the engagement zone and to provide consistent and re-playable mission data once the mission is complete, are quick reaction capabilities that can be developed & fielded to support the air war. The program includes concept exploration, technology development and demonstration efforts that support continuous improvements to C2ISR capabilities of manned & unmanned platforms, space, data links and advanced Battle Management decision tools. C2ISR continues to support and develop self-protection capabilities to enable current and future threat deterrence. Fielding strategies will provide for immediate field retrofit when able, otherwise fielding will occur in subsequent modernization programs. All programs are designed to integrate with & transition into the next C2ISR Platform. The AWACS program will coordinate with and participate in

projects developing international standards (including NATO standards) to ensure joint, allied, and coalition interoperability.

7) The Training, Support, and Infrastructure programs cover an array of cross cutting programs and activities in support of AWACS modification and enhancement programs. These programs include managing the AWACS developmental infrastructure, support equipment concurrency, modernization planning/analysis, and trainer/simulator integration and concurrency. The E-3 Radar Systems Integration Lab/Software Development Facility must be maintained, operated and supported by contract to provide customers with a functioning E-3 radar configuration in support of AWACS radar development, production and sustainment programs. New support equipment technologies and test strategies need to be analyzed to ensure concurrent capability to sustain current, modified and upgraded E-3 equipment. Trainer/simulator concurrency analysis and definition is required to ensure trainers and simulators are kept current with the AWACS baseline. Associate contractor agreements are used to establish concurrency between prime integrators and training service providers.

8) Test System 3/Integration Labs: The E-3 AWACS Developmental Test and Evaluation (DT&E) aircraft, Test System 3 (TS-3, tail number 73-1674) and the Avionics Integration Laboratory (AIL) are Government owned/contractor managed, maintained and operated assets. These test-ready assets support AWACS modernization, including advanced projects and sustainment projects, and allow AWACS to participate in live-fly (e.g., Joint Expeditionary Force Experiment) and ground-based interoperability testing. These assets also support multiple international Airborne Early Warning and Control (AEW&C) projects on a fee basis, including French, RSAF, UK, Japan, and NATO.

9) Communication projects provide the AWACS system with an effective method for electronically transmitting and receiving critical mission information such as the Air Tasking Order (ATO). Comm projects will focus on engineering and retrofitting the entire fleet.

10) Collaborative and cooperative efforts will examine re-engining the E-3 airframe replacing the existing, original engines with new engines. New engines will ensure long-term viability of the platform and increase fuel-efficiency, improve reliability, and increase power quantity and quality available to on-board mission systems. The efforts will pursue synergies and leverage the efforts of other U.S. 707-based airframes as well as the International AWACS partners that operate the 707 AWACS (United Kingdom, France, and Saudi Arabia).

11) The Support the Warfighter program supports AWACS capability requirements to create and sustain the force. This program includes the design, development, and modernization of equipment and systems to ensure that E-3 can respond to urgent wartime/contingency acquisition requirements. Efforts include the upgrade of key capabilities to meet contingency needs, the modernization of test systems, the integration of battle management and data link enhancements, and support for reliability, maintainability and availability initiatives.

This program is in Budget Activity 7, Operational Systems Development, due to efforts supporting a fielded, post Milestone III operational weapon system.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207417F Airborne Warning and Control System (AWACS)

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	164.982	152.721	127.984
(U)	Current PBR/President's Budget	157.751	151.593	126.300
(U)	Total Adjustments	-7.231		
(U)	Congressional Program Reductions		-0.160	
	Congressional Rescissions		-0.968	
	Congressional Increases			
	Reprogrammings	-2.873		
	SBIR/STTR Transfer	-4.358		

(U) Significant Program Changes:

1. Avionics Modernization Program (AMP) was redesignated as the DMS Replacement of Avionics for Global Operations and Navigation (DRAGON). The change captures the dual requirements to replace aging avionics equipment, and to upgrade the navigational systems to comply with US and International Air Traffic Control mandates.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
411L	Airborne Warning & Control System (AWACS)	157.751	151.593	126.300	170.511	151.932	219.379	154.736	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

1. FY2008 funding totals do not include $72.5M FY2008 GWOT requirements still pending Congressional consideration.

(U) A. Mission Description and Budget Item Justification

A. Mission Description

The funding set forth in this document investigates, develops, and integrates system improvements to enable the E-3 AWACS to remain an effective airborne battle management and surveillance system for command and control of combat forces and for strategic defense of the U.S. This PE funds the following efforts:
Modernization Programs: (RDT&E, AF)

1) The Integrated DAMA (Demand Assigned Multiple Access) / GATM (Global Air Traffic Management) Program seeks to make communications and navigation improvements required to meet current mandated DAMA SATCOM (Satellite Communication) and Air Traffic Control (ATC) requirements.

A) DAMA SATCOM is a Chairman Joint Chiefs of Staff (CJCS)--mandated Ultra-High Frequency (UHF) satellite communications upgrade consisting of two new UHF DAMA terminals and new Radio Frequency (RF) components, to mitigate co-site interference, replacing the two non-DAMA UHF SATCOM radios on each aircraft. The DAMA enhancements will expand user availability of severely limited DoD UHF SATCOM channels, improving the interoperability and efficiency of DoD UHF SATCOM systems.

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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), improve AWACS contribution to Time Critical Targeting via Data Link Infrastructure, improved electronic support measures processing, and enable more effective, faster upgrades via an open systems, Ethernet based architecture. The upgrade will also update the ground support infrastructure including training systems.

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11) The Support the Warfighter program supports AWACS capability requirements to create and sustain the force. This program includes the design, development, and modernization of equipment and systems to ensure that E-3 can respond to urgent wartime/contingency acquisition requirements. Efforts include the upgrade of key capabilities to meet contingency needs, the modernization of test systems, the integration of battle management and data link enhancements, and support for reliability, maintainability and availability initiatives.

This program is in Budget Activity 7, Operational Systems Development, due to efforts supporting a fielded, post Milestone III operational weapon system.

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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)	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Accomplishments/Planned Programs			
(U)	Continuing Test System-3/AITS support and Program Sustaining efforts	17.833	23.827	21.258
(U)	Continuing Trainers, Simulators and Infrastructure (TSI) efforts	3.059	5.148	5.106
(U)	Continuing Block 40/45 SD&D effort including pre-production efforts	127.796	86.059	57.270
(U)	Continuing C2ISR System Architecture Improvements, Advanced Projects, MC Rate Improvements	7.914	9.398	9.185
(U)	Completing Navigational Warfare (NAVWAR) SD&D	1.149	0.050	0.000
(U)	Continuing RM&A - Support to the Warfighter Projects	0.000	4.424	4.293
(U)	Continuing Next Generation Identification Friend or Foe (IFF)	0.000	22.687	29.188
(U)	Total Cost	157.751	151.593	126.300

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E									
(U)	Other APPN									
(U)	Aircraft Procurement, AF, E-3 Mods	65.772	53.796	86.468	84.945	180.320	148.313	188.675	Continuing	TBD
(U)	E-3 Initial Spares, AF	5.829	7.221	6.304	10.980	18.767	19.140	19.517	Continuing	TBD

Note: APAF, E-3 Mods includes funds in PE 0809731F (1.325 in FY 2006 and 0.516 in FY 2007)

(U) D. Acquisition Strategy

Most major programs (Block 40/45, NAVWAR, TS-3 and lab support) will be sole source to the Boeing Corporation, Seattle, Wa.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

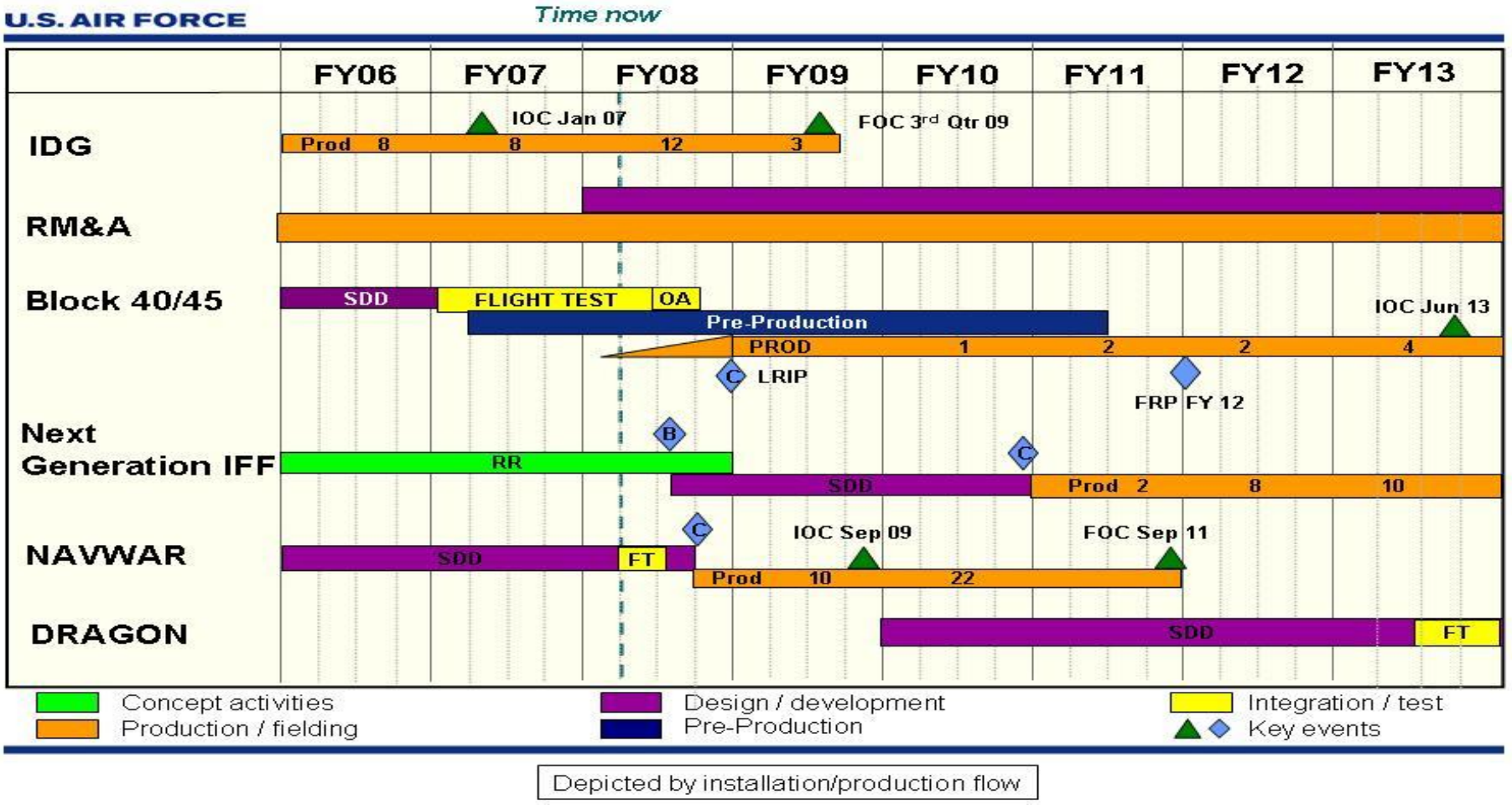
PE NUMBER AND TITLE: **0207417F Airborne Warning and Control System (AWACS)**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
(U) Block 40/45 SD&D and Pre-Production	SS/CPAF	Boeing - Seattle, WA	529.041	120.634	Oct-06	67.132	Oct-07	47.539	Oct-08	Continuing	TBD	TBD
(U) C2ISR Sys Arch Imp	SS/FPIF & CPAF	Boeing - Seattle, WA	46.684	5.059	Oct-06	4.977	Oct-07	5.484	Oct-08	Continuing	TBD	TBD
(U) NAVWAR	SS/Muliple	Boeing - Seattle, WA	10.250	1.149		0.000		0.000		0.000	11.399	10.250
(U) IFF	TBD	TBD	0.000	0.000		20.972	Jun-08	23.712	Jun-09	Continuing	TBD	TBD
(U) Support to the Warfighter	TBD	TBD	0.000	0.000		3.508	Jan-08	3.374	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			585.975	126.842		96.589		80.109		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	652.907	14.294		32.103		24.711		Continuing	TBD	TBD
Subtotal Support			652.907	14.294		32.103		24.711		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
(U) Test System-3 ADAPT Contract/AITS Contract / Other test activities	SS/Multiple	Boeing - Seattle, WA	433.269	13.556		17.753		16.374		Continuing	TBD	TBD
(U) Trainers, Simulators & Infrastructure (TSI)	SS/Multiple	Boeing - Seattle, WA	7.603	3.059	Jan-07	5.148	Jan-08	5.106	Jan-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			440.872	16.615		22.901		21.480		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			1,679.754	157.751		151.593		126.300		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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)

AWACS Schedule



Depicted by installation/production flow

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
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 2007	FY 2008	FY 2009
(U) IDG IOC	2Q		
(U) Reliability, Maintainability, & Availability (RM&A) Projects		1-4Q	1-4Q
(U) 40/45 Mission Systems Flight Testing Start	1Q		
(U) 40/45 Airworthiness Testing		2-3Q	
(U) 40/45 Operational Assessment		3Q	
(U) 40/45 Pre-Production	2-4Q	1-4Q	1-4Q
(U) 40/45 LRIP Milestone C			1Q
(U) 40/45 Production			1-4Q
(U) Next Generation IFF Risk Reduction	1-4Q	1-4Q	
(U) Next Generation IFF Milestone B		3Q	
(U) Next Generation IFF SDD		3-4Q	1-4Q
(U) NAVWAR SDD	1-4Q	1-3Q	
(U) NAVWAR Flight Test		2-3Q	
(U) NAVWAR Milestone C		3Q	
(U) NAVWAR Production		4Q	1-4Q
(U) NAVWAR IOC			4Q

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PE NUMBER: 0207418F
PE TITLE: TAC AIRBORNE CONTROL SYSTEM

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207418F TAC AIRBORNE CONTROL SYSTEM

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	2.262	3.366	1.530	0.000	0.000	0.000	0.000	Continuing	TBD
5234 TACP Support	2.262	3.366	1.530	0.000	0.000	0.000	0.000	Continuing	TBD

FY2008 funding totals do not include $3.096M FY2008 GWOT requirements still pending Congressional consideration.

In FY 2007 this is the first time this program element (PE) has had Research, Development, Testing and Evaluation (RDT&E) funds, Project Number 5234, Tactical Air Control Party (TACP) Support, includes new start efforts.

(U) A. Mission Description and Budget Item Justification

The Joint Terminal Controller Training and Rehearsal System (JTC TRS) project under the Tactical Airborne Control System funds developments necessary to provide Distributed Mission Operations (DMO) capable high-fidelity Joint Terminal Attack Controller (JTAC), and Combat Control Team (CCT) training and rehearsal system. Provides development funding to enable connectivity to DMO networks to allow geographically separated high-fidelity close air support platforms and JTACs/CCT teams to train together. Develops a system that will enable operators to conduct Joint Close Air Support (JCAS) training/mission rehearsal using tailored, dynamic scenarios that are relevant to mission tasking and capable of providing air traffic control training for CCT using tactical application of austere airbase operations. Using a system of systems approach JTC TRS provides incremental development to network in Increment 1 to aircrew full mission trainers and mission training centers, and by Increment 2, to Air Support Operations Centers (ASOCs) for Joint Tactical Air Strike Requests and air-ground coordination of Joint fires. Its primary focus is to provide a persistent total air-ground virtual training environment for networked air ground training and mission rehearsal capability that will develop both JTAC/CCT skills and train those air crews assigned to accomplish complex JCAS missions in close proximity to ground forces. Provides research and development to facilitate interoperability with joint/sister Service air ground simulation using industry standards.

This program is in Budget Activity 7, Operational System Development, because it updates and develops capabilities for current operational systems.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	2.303	3.387	1.543
(U)	Current PBR/President's Budget	2.262	3.366	1.530
(U)	Total Adjustments	-0.041		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.041		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207418F TAC AIRBORNE CONTROL SYSTEM

PROJECT NUMBER AND TITLE: 5234 TACP Support

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5234 TACP Support	2.262	3.366	1.530	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 Joint Terminal Controller Training and Rehearsal System (JTC TRS) project under the Tactical Airborne Control System funds developments necessary to provide Distributed Mission Operations (DMO) capable high-fidelity Joint Terminal Attack Controller (JTAC), and Combat Control Team (CCT) training and rehearsal system. Provides development funding to enable connectivity to DMO networks to allow geographically separated high-fidelity close air support platforms and JTACs/CCT teams to train together. Develops a system that will enable operators to conduct Joint Close Air Support (JCAS) training/mission rehearsal using tailored, dynamic scenarios that are relevant to mission tasking and capable of providing air traffic control training for CCT using tactical application of austere airbase operations. Using a system of systems approach JTC TRS provides incremental development to network in Increment 1 to aircrew full mission trainers and mission training centers, and by Increment 2, to Air Support Operations Centers (ASOCs) for Joint Tactical Air Strike Requests and air-ground coordination of Joint fires. Its primary focus is to provide a persistent total air-ground virtual training environment for networked air ground training and mission rehearsal capability that will develop both JTAC/CCT skills and train those air crews assigned to accomplish complex JCAS missions in close proximity to ground forces. Provides research and development to facilitate interoperability with joint/sister Service air ground simulation using industry standards.

This program is in Budget Activity 7, Operational System Development, because it updates and develops capabilities for current operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Development of high-fidelity simulation system for JTAC/CCT training	2.262		
(U) Continue development of high-fidelity simulation system for JTAC/CCT Training		3.366	1.530
(U) Total Cost	2.262	3.366	1.530

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) PE 0207418F, TAC Airborne Control System, Other Procurement , AF	0.000	0.000	7.300	1.800	1.800	0.000	0.000	Continuing	TBD
(U) PE 0207418F, TAC Airborne Control System, O&M , AF	0.000	0.300	2.300	0.000	0.000	0.000	0.000	Continuing	TBD

(U) D. Acquisition Strategy

The acquisition strategy will be based on full and open competition with 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 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
677 AESG AFMC		677 AESG AFMC, Wright Patterson AFB, OH		1.453	Apr-07	2.887	Mar-08	1.243	Mar-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	1.453		2.887		1.243		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												
Program Office Support		677 AESG AFMC, Wright Patterson AFB, OH		0.809		0.479		0.287		Continuing	TBD	TBD
Subtotal Management			0.000	0.809		0.479		0.287		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	2.262		3.366		1.530		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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)

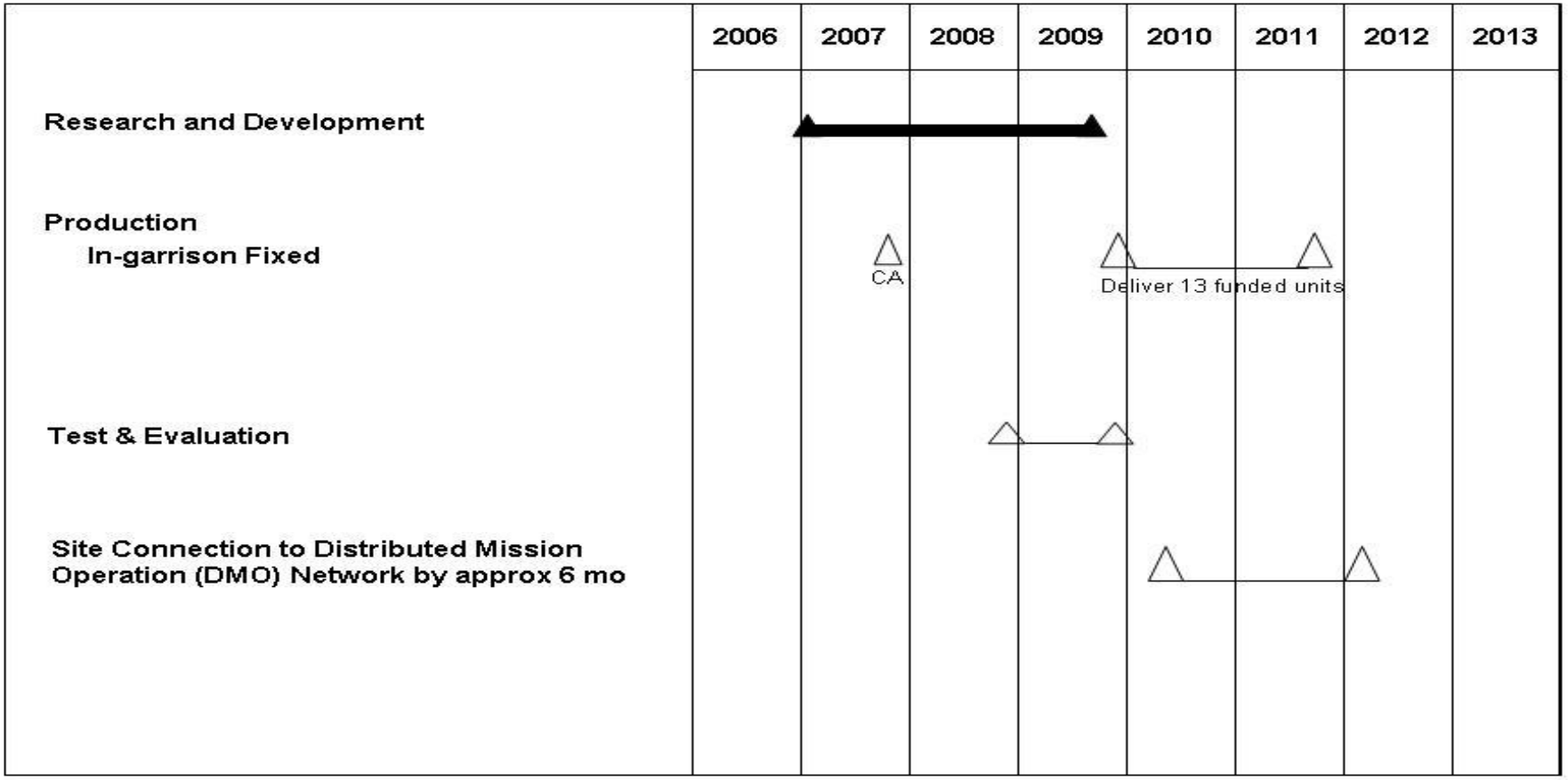

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207418F TAC AIRBORNE CONTROL SYSTEM	PROJECT NUMBER AND TITLE: 5234 TACP Support

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) JTC TRS In-garrison/Fixed Development	4Q	1-4Q	1-4Q
(U) JTC In-garrison/Fixed OT& E		4Q	1-4Q
(U) JTC In-garrison/Fixed Delivery			4Q

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PE NUMBER: 0207423F
PE TITLE: Advanced Communications Systems

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207423F Advanced Communications Systems

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	38.215	33.372	29.782	57.877	65.220	66.556	67.982	Continuing	TBD
4934	Tactical Air Control Party (TACP)	8.768	13.437	13.253	10.870	11.044	11.332	11.636	Continuing	TBD
5084	C4ISR NODE (AJCN)	0.950	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
5189	C2ISR JTRS Integration	28.497	19.935	16.529	47.007	54.176	55.224	56.346	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Note: BPAC 5084 includes .950 for AJCN(BA04) in FY07.

Tactical Air Control Party (TACP)s deploy with Army maneuver units and provide a Command and Control (C2) link for Close Air Support (CAS), airlift and AF surveillance/reconnaissance missions. TACPs are equipped with various targeting and communications equipment needed to interface with ground maneuver forces, aircraft conducting CAS operations, aerospace C2 aircraft/agencies, and Intelligence, Surveillance and Reconnaissance (ISR) platforms/agencies. The TACP-Modernization (TACP-M) program provides TACP and Air Support Operations Centers (ASOCs) personnel with the capability to precisely locate and target enemy ground forces by integrating various Laser Targeting Devices (LTD) and ultra high frequency satellite communications (UHF SATCOM) for beyond-line-of-sight (BLOS) Air Force Air Request Net operations. The purpose of the TACP-M program is intended to reduce reliance on voice transmission and replace analog equipment with the latest digital, data link and streaming video (i.e. Remote Operations Video Enhanced Receiver (ROVER)) technology. This capability increase supports joint and multinational interoperability, improves battlefield Situational Awareness (SA), increases targeting accuracy, reduces kill chain decision time, improves data flows/information exchange, and reduces potential fratricide. The TACP-M program directly supports the GWOT and significantly increases the mission effectiveness of the TACPs and ASOCs during Operations Enduring and Iraqi Freedom. The TACP-M program continues to be instrumental in providing ground communications for TACPs during federal emergency relief operations and Homeland Defense initiatives.

TACP-M is divided into two segments: Dismounted and mounted. The dismounted TACP provides a modernized/modular capability via a streamlined acquisition using non-developmental, commercial off-the-shelf (COTS) Manpack Radios (MPR) or Handheld Radios (HHR), LTD such as Laser Range Finder (LRF), Military Ruggedized Tablet (MRT) combined with TACP Close Air Support System (CASS) software. The mounted TACP Vehicular Communications System (VCS) is an upgrade of the existing TACP VCS with new advanced radios (COTS and JTRS) and ancillary components, which provides reliable communications for close air support operations. VCS will integrate Internet Protocol-capable, Software Communications Architecture (SCA)-compliant radios for voice & data UHF SATCOM and LOS UHF / VHF communications. TACP-M will continue to develop systems integration software (dismounted and vehicular) for multiple air/ground platforms (i.e. FCS, F-35, MRAP, ASOC Gateway) and will provide interoperability with SADL, Link-16 and other transformational communications capabilities.

The Adaptive Joint Command, Control, Communications and Computing, Intelligence, Surveillance and Reconnaissance Node (AJCN), Advanced Concept Technology Demonstration (ACTD) is developing software programmable Radio Frequency payloads designed to support Information Superiority. AJCN is an open, Commercial-Off-The-Shelf (COTS) based system that can be remotely programmed on the fly to perform a variety of functions simultaneously: air-to-air communications interoperability, Electronic Warfare, Signals Intelligence, and Information Operations. AJCN addresses numerous Mission Needs Statements,

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207423F Advanced Communications Systems

Operational Requirements Documents, and the Combatant Commanders Integrated Priority Lists related to communications, intelligence and information operations.

C2ISR Joint Tactical Radio System (JTRS) Integration funds integration and systems engineering of JTRS radios and upgraded communication systems into Air Force platforms and networking architectures related to the JTRS suite of radios. The JTRS JPEO developed or approved JTRS products will provide a common family of software programmable radios for reliable multi-channel voice, data, imagery, and video communications. JPEO JTRS may also provide gateways, routers or other components to achieve an IP-based networking capability. These JTRS systems will provide unprecedented communication capabilities that will allow multiple platforms to seamlessly exchange voice and data in an IP-based, heterogeneous environment, including service-only, joint, coalition, and allied operations. JTRS along with existing waveforms, radios, and the subsequent JTRS airborne network are required to meet mission and joint interoperability requirements. Legacy and other available upgraded communication products will be utilized until JTRS products are available. Information assurance systems engineering will ensure the data exchange capabilities will meet operational, theater, and national requirements. Systems engineering efforts will support standardized critical network parameters to permit the easy transmission and receipt of time-sensitive data that will give the warfighter transformational communications capabilities. The funding provides integration efforts of JTRS capabilities on various C2ISR platforms including, but not limited to Global Hawk, Predator, Rivet Joint, and JSTARS and associated required systems to ensure maximized networked voice and data over IP throughout the JTRS airborne network.

This program is in budget activity 7, Operational System Development, since it examines appropriate emerging technologies for the continuing spiral development of Commercial-Off-The-Shelf (COTS) equipment, provides software development, and determines and resolves integration issues pertaining to COTS.

Note: AJCN BA 04 FY07 funds were inadvertently loaded into this BA in ABIDES.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	41.928	33.584	27.497
(U)	Current PBR/President's Budget	38.215	33.372	29.782
(U)	Total Adjustments	-3.713	-0.212	
(U)	Congressional Program Reductions	0.000		
	Congressional Rescissions	0.000	-0.212	
	Congressional Increases	0.000		
	Reprogrammings	-3.469		
	SBIR/STTR Transfer	-0.244		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207423F Advanced Communications Systems	PROJECT NUMBER AND TITLE: 4934 Tactical Air Control Party (TACP)	

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4934	Tactical Air Control Party (TACP)	8.768	13.437	13.253	10.870	11.044	11.332	11.636	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 CAS operations, aerospace C2 aircraft/agencies, and Intelligence, Surveillance and Reconnaissance (ISR) platforms/agencies. The TACP-Modernization (TACP-M) program provides TACP and Air Support Operations Centers (ASOCs) personnel with the capability to precisely locate and target enemy ground forces by integrating various Laser Targeting Devices (LTD) and ultra high frequency satellite communications (UHF SATCOM) for beyond-line-of-sight (BLOS) Air Force Air Request Net operations. The purpose of the TACP-M program is to reduce reliance on voice transmission and replace analog equipment with the latest digital, data link and streaming video (i.e. Remote Operations Video Enhanced Receiver (ROVER)) technology. This capability supports joint and multinational interoperability, improves battlefield Situational Awareness (SA), increases targeting accuracy, reduces kill chain decision time, improves data flows/information exchange, and reduces potential fratricide. The TACP-M program supports the GWOT and significantly increased the mission effectiveness of the TACPs and ASOCs during Operations Enduring and Iraqi Freedom. The TACP-M program continues to be instrumental in providing ground communications for TACPs during federal emergency relief operations and Homeland Defense initiatives.

TACP-M is divided into two segments: Dismounted and mounted. The dismounted TACP provides a modernized/modular capability via a streamlined acquisition using non-developmental, commercial off-the-shelf (COTS) Manpack Radios (MPR) or Handheld Radios (HHR), LTD such as Laser Range Finder (LRF), Military Ruggedized Tablet (MRT) combined with TACP Close Air Support System (CASS) software. The mounted TACP Vehicular Communications System (VCS) is an upgrade of the existing TACP VCS with new advanced radios (COTS and JTRS) and ancillary components, which provides reliable communications for CAS operations. VCS will be Internet Protocol (IP)-capable, Software Communications Architecture (SCA)-compliant radios for voice & data UHF SATCOM and LOS UHF / VHF communications. TACP-M funds will continue to develop systems integration software (dismounted and mounted) for multiple air/ground platforms (i.e. FCS, F-35, MRAP, ASOC Gateway) and will provide interoperability with SADL, Link-16 and other transformational communications capabilities.

This program is in budget activity 7, Operational System Development, since it examines appropriate emerging technologies for the continuing spiral development of COTS equipment, provides software development, and determines and resolves integration issues pertaining to COTS.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Continue TACP Vehicular Communication System (VCS) integration of hardware (GFE & COTS) development	0.506	1.048	5.427
(U)	Software development and systems integration	5.553	6.485	4.550
(U)	Operational and interoperability test planning	1.088	1.974	1.380
(U)	Contractor support and systems engineering	1.621	3.930	1.896
(U)	Total Cost	8.768	13.437	13.253

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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)

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Advanced Communications System Other Procurement, AF PE 0207423F	91.717	99.509	139.305	99.550	94.391	73.979	75.441	Continuing	TBD

(U) D. Acquisition Strategy

The TACP-M is executing a spiral development for the dismounted segment (TACP CASS). Systems engineering, design, integration, and fielding support is being provided under a cost plus fixed fee contract. TACP-M will also award a fixed price contract for the Vehicular Communication System (VCS) in FY08 under full and open competition. These contracts will deliver an integrated system (mounted/dismounted) with an emphasis on Reduced Total Ownership Cost (RTOC) over the life cycle of the program.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U)	Product Development												
	ESC Sys Int Software Dev't	CPFF	Rockwell Collins, Cedar Rapids IA		0.006	Apr-07	4.392	Oct-07	4.268	Oct-08	Continuing	TBD	TBD
	VCS (MRC-144 Upgrade)	FFP	TBD		0.500	Oct-06	6.000	Oct-07	4.000	Oct-08	Continuing	TBD	
	Subtotal Product Development			0.000	0.506		10.392		8.268		Continuing	TBD	TBD
	Remarks: Vehicular Communication System (VCS) GFE & COTS hardware integration												
(U)	Support												
	System Engineering/Software Development	C/FFP	Various		5.553	Oct-06	0.000	Oct-07	0.000	Oct-08	Continuing	TBD	TBD
	Subtotal Support			0.000	5.553		0.000		0.000		Continuing	TBD	TBD
	Remarks:												
(U)	Test & Evaluation												
	Test Agency Support	MIPR	Various		1.088	Nov-06	1.526	Nov-07	3.534	Nov-08	Continuing	TBD	TBD
	Subtotal Test & Evaluation			0.000	1.088		1.526		3.534		Continuing	TBD	TBD
	Remarks:												
(U)	Management												
	Support	Various	Various		1.621	Dec-06	1.519	Jan-07	1.451	Mar-08	Continuing	TBD	TBD
	Subtotal Management			0.000	1.621		1.519		1.451		Continuing	TBD	TBD
	Remarks:												
(U)	Total Cost			0.000	8.768		13.437		13.253		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207423F Advanced Communications Systems	PROJECT NUMBER AND TITLE 4934 Tactical Air Control Party (TACP)

TACP-M Program Schedule

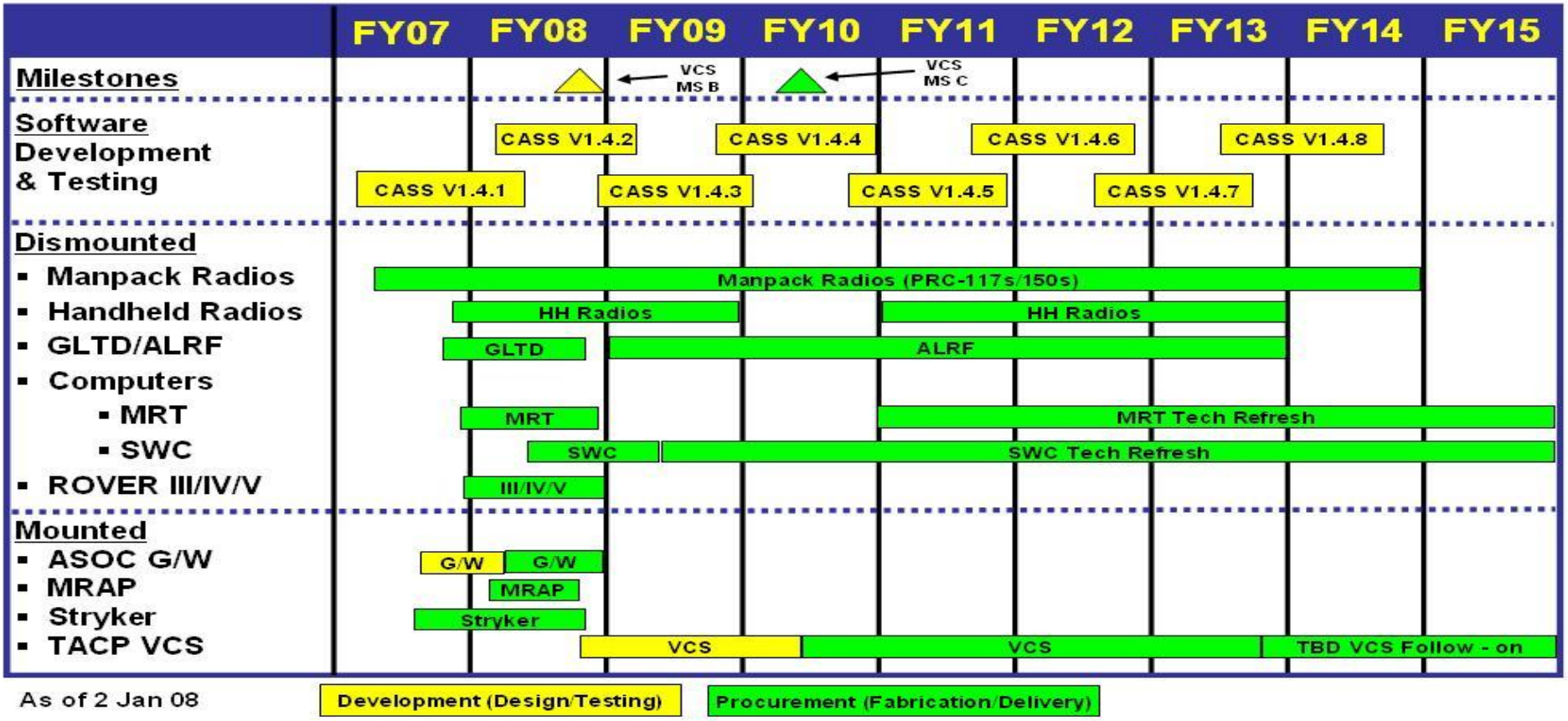

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207423F Advanced Communications Systems**	PROJECT NUMBER AND TITLE **4934 Tactical Air Control Party (TACP)**

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) Milestone (MS) B		3Q	
(U) VCS Contract Award		3Q	
(U) VCS Development		3-4Q	1-4Q
(U) Software Development - TACP-CASS v1.4.1	1-4Q	1-2Q	
(U) Software Development - Future TACP-CASS v1.4.2		1-4Q	1-2Q
(U) Software Development - Future TACP-CASS v1.4.3		4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207423F Advanced Communications Systems

PROJECT NUMBER AND TITLE: 5084 C4ISR NODE (AJCN)

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5084 C4ISR NODE (AJCN)	0.950	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

The Adaptive Joint Command, Control, Communications and Computing, Intelligence, Surveillance and Reconnaissance Node (AJCN), Advanced Concept Technology Demonstration (ACTD) is developing software programmable Radio Frequency payloads designed to support Information Superiority. AJCN is an open, Commercial-Off-The-Shelf (COTS) based system that can be remotely programmed on the fly to perform a variety of functions simultaneously: air-to-air communications interoperability, Electronic Warfare, Signals Intelligence, and Information Operations. AJCN addresses numerous Mission Needs Statements, Operational Requirements Documents, and the Combatant Commanders Integrated Priority Lists related to communications, intelligence and information operations.

This program is in Budget Activity 07, Operational Systems Development, since it examines appropriate emerging technologies for the continuing spiral development of COTS equipment, provides software development, and determines and resolves integration issues pertaining to COTS. Note: AJCN BA04 funds were inadvertently loaded into this BA in ABIDES.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Field Evaluation	0.773		
(U) Security Accredition	0.135		
(U) Aircraft Integration	0.042		
(U) Total Cost	0.950	0.000	0.000

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

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

(U) D. Acquisition Strategy

All major contracts within this Program Element and programs were awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207423F Advanced Communications Systems

PROJECT NUMBER AND TITLE: 5084 C4ISR NODE (AJCN)

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development											0.000	
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000	0.000	0.000
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												
Joint Military Utility Assessments	MIPR	Army Tactical Command & Control Sys, Ft Monmouth, NJ		0.950	Nov-06						0.950	
Subtotal Test & Evaluation			0.000	0.950		0.000		0.000		0.000	0.950	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	0.950		0.000		0.000		0.000	0.950	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207423F Advanced Communications Systems	PROJECT NUMBER AND TITLE 5084 C4ISR NODE (AJCN)

U.S. AIR FORCE

AJCN Schedule

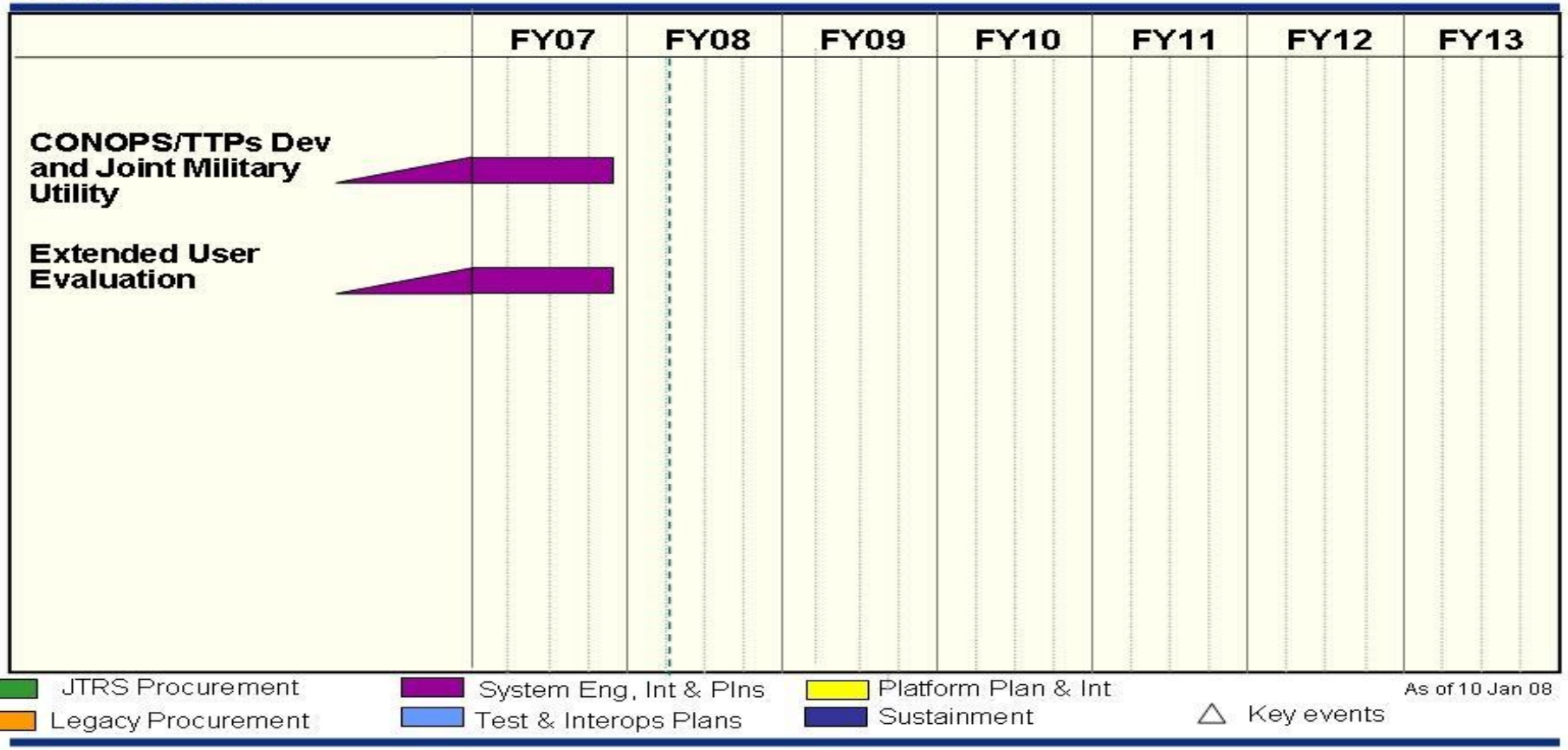

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207423F Advanced Communications Systems**	PROJECT NUMBER AND TITLE **5084 C4ISR NODE (AJCN)**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) CONOPS/TTPs Development and Joint Military Utility Assessments	1-4Q		
(U) Extended User Evaluation	1-4Q		
(U) Follow-On Development, Production, & Fielding	1-4Q		

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5189 C2ISR JTRS Integration	28.497	19.935	16.529	47.007	54.176	55.224	56.346	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 integration and systems engineering of Joint Tactical Radio System (JTRS) products into Air Force platforms and systems engineering of networking architectures specific to the JTRS suite of radios. JTRS developed systems will provide a common family of software programmable radios for reliable multi-channel voice, data, imagery, and video communications, as well as necessary gateways, routers or other associated components to achieve an IP-based networking capability. JTRS radios will be modular, scalable, and network ready. Legacy and other available upgraded communication products will be utilized until JTRS products, developed by the JTRS JPEO or other qualified vendors, are available. The funding provides capabilities on various C2ISR platforms including, but not limited to Global Hawk, Predator, Rivet Joint, and Joint Stars. The capability provided by JTRS 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 communications capabilities. JTRS, in conjunction with upgraded existing communication systems, will provide unprecedented capabilities allowing platforms to seamlessly exchange voice and data in an IP-based, heterogeneous environment, including service-only, joint, coalition, and allied operations. The JTRS airborne network is necessary to support these capabilities and meet mission and joint interoperability requirements.

FY09 systems engineering will ensure voice and data exchange capabilities are realized by the operational commander. Aircraft communication architectures, connectivity, bandwidth compatibility and engineering are required for optimal airborne networking opportunities throughout the JTRS network. AF JTRS PMO will develop and support strategies to ensure waveform integration and interoperability among platforms and systems to ensure unprecedented networked voice and data exchange. Test Plans will be developed in support of the joint operational environment.

C2ISR JTRS program is in Budget Activity 7, Operational System Development, since it supports integration of JTRS products and legacy radios into operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) System Engineering, Planning, and Integration	15.076	13.285	8.482
(U) Platform Planning and Integration	13.421	6.650	5.367
(U) Develop Operational and Interoperability Test Plans	0.000	0.000	2.680
(U) Total Cost	28.497	19.935	16.529

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207423F Advanced Communications Systems	PROJECT NUMBER AND TITLE: 5189 C2ISR JTRS Integration

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Advanced Communication System-Aircraft Procurement, AF PE 0207423F	0.000	21.144	66.863	157.790	198.407	189.287	196.010	Continuing	TBD
(U) Advanced Communication System-Other Procurement, AF PE 0207423F	39.264	44.276	87.548	135.282	190.931	254.406	253.892	Continuing	TBD

(U) D. Acquisition Strategy

Air Force JTRS integration will perform system engineering integration, network development, and fielding support to deliver an interoperable, fully synchronized, deployable JTRS system under various contract awards. This effort will assist various AF platform efforts to acquire and integrate the next generation communications system, to include all key documentation (CONOPS, TTPs, ICDs, TRDs, etc.)

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Systems Engineering, Planning, and Integration	C/FFP	Northrop Grumman, Melbourne, FL	2.300	6.027	Feb-07	1.600	Feb-08	1.900	Feb-09	Continuing	TBD	TBD
Systems Engineering, Planning, and Integration	MIPR	Aeronautical Systems Center, Wright-Patters on AFB, OH	0.850	0.400	Aug-07	2.800	Feb-08	1.570	Feb-09	Continuing	TBD	TBD
Systems Engineering, Planning, and Integration	C/FFP	General Atomics, San Diego, CA	3.700	5.500	Mar-07	3.100	Feb-08	2.150	Feb-09	Continuing	TBD	TBD
Systems Engineering, Planning, and Integration	C/FFP	L3COM IS, Greenville, TX	1.200	1.690	Apr-07	1.500	Feb-08	1.000	Feb-09	Continuing	TBD	TBD
Systems Engineering, Planning, and Integration	MIPR	Various	0.295								0.295	0.295
Systems Engineering, Planning, and Integration	Various	Various		5.109	Feb-07	3.405	Feb-08	2.000	Feb-09	Continuing	TBD	TBD
Subtotal Product Development			8.345	18.726		12.405		8.620		Continuing	TBD	TBD
Remarks:												
(U) Planning and Integration												
	MIPR	ASC/AA (Various),Wrig ht-Patterson AFB, OH	5.790	9.771	Apr-07	7.530	Mar-08	5.229	Mar-09	Continuing	TBD	TBD
Subtotal Planning and Integration			5.790	9.771		7.530		5.229		Continuing	TBD	TBD
Remarks:												
(U) Development operational and interoperability test plans												
	MIPR/TBD	Test Agency Support	2.812	0.000		0.000		2.680	Mar-09	Continuing	TBD	TBD
Subtotal Development operational and interoperability test plans			2.812	0.000		0.000		2.680		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			16.947	28.497		19.935		16.529		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207423F Advanced Communications Systems	PROJECT NUMBER AND TITLE 5189 C2ISR JTRS Integration

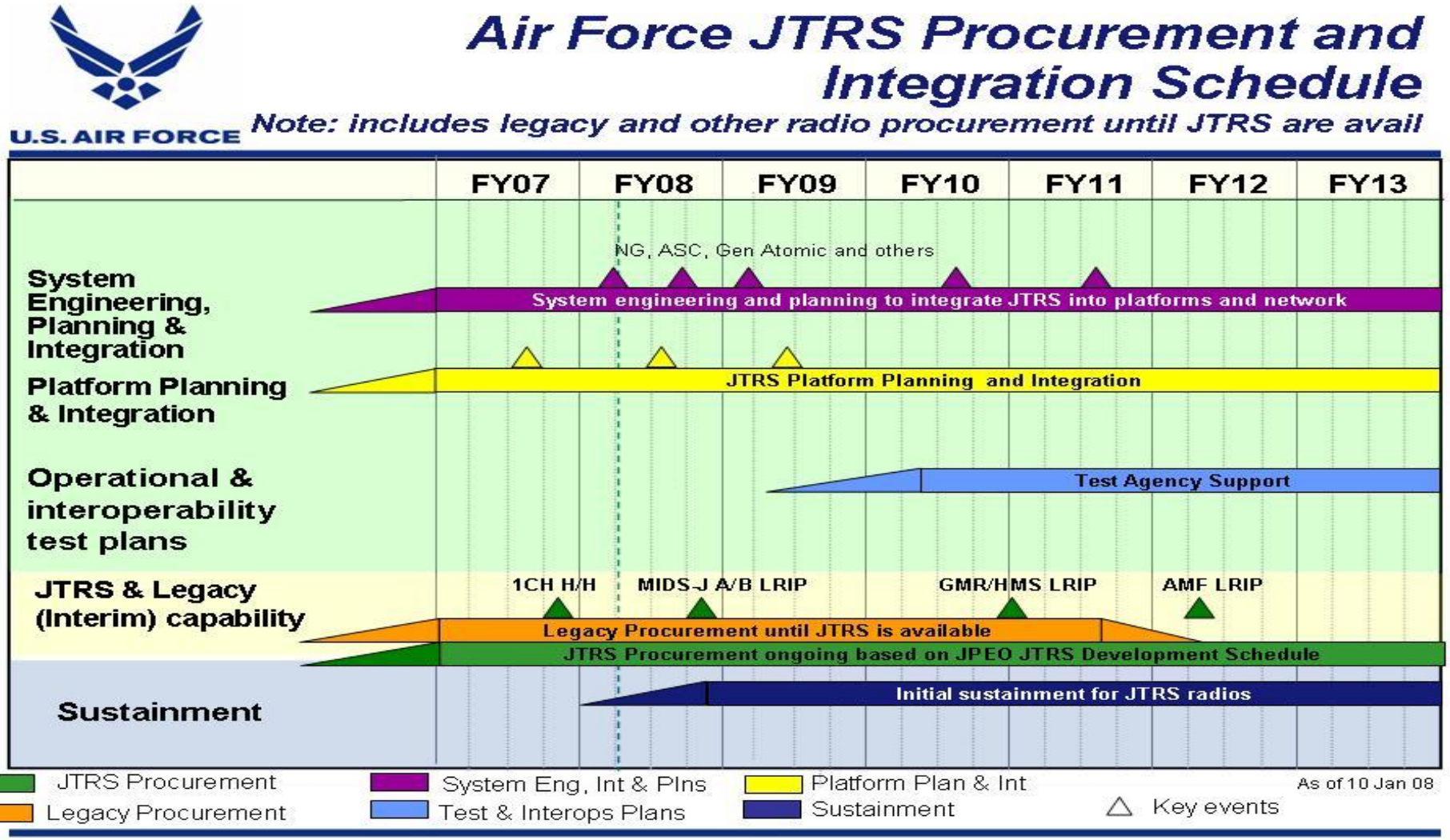

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207423F Advanced Communications Systems**	PROJECT NUMBER AND TITLE **5189 C2ISR JTRS Integration**

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) Systems Engineering	1-4Q	1-4Q	1-4Q
(U) Aircraft Communication Architecture Migration	1-4Q	1-4Q	1-4Q
(U) Reverse Engineering to meet Operational Requirements	1-4Q	1-4Q	1-4Q
(U) Planning and Integration	1-4Q	1-4Q	1-4Q
(U) Bandwidth and Connectivity Integration	1-4Q	1-4Q	1-4Q
(U) Waveform Integration for JTRS Airborne Network	1-4Q	1-4Q	1-4Q
(U) Operational & Interoperability Test Planning			2-4Q
(U) Develop Interoperability & Test Plans in Joint Environment			2-4Q

PE NUMBER: 0207438F
PE TITLE: Theater Battle Management (TBM) C4I

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207438F Theater Battle Management (TBM) C4I

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	35.950	9.898	19.437	19.569	11.815	12.045	12.290	Continuing	TBD
4790	Theater Battle Management Core System (TBMCS)	21.366	0.000	0.000	0.000	0.000	0.000	0.000	0.000	55.013
4802	Deliberate and Crisis Action Planning and Execution Segment (DCAPES)	14.584	9.898	19.437	19.569	11.815	12.045	12.290	Continuing	TBD

Starting in FY08 Project 674790 (Theater Battle Management Core Systems) was transferred to PE 0207410F (Air and Space Operations Center Weapon System), Projects 675218 (Applications Development) and 675220 (Unit Level).

(U) A. Mission Description and Budget Item Justification

The TBM C4I PE includes Deliberate and Crisis Action Planning and Execution Segments (DCAPES), which is being developed as the next-generation AF interface to the Joint Operational Planning and Execution System (JOPES). DCAPES is the Air Force's single system to present, plan, source, mobilize, deploy, account for, sustain, redeploy, and reconstitute forces for contingency and crisis operations. This system provides a real time, two way interchange of personnel, manpower, logistics, and operational data between the Air Force and the warfighting Combatant Commanders. It matches people, cargo, and airframes/weapon systems to the Combatant Commander's warfighting requirements. Acquisition of this system supports the Air Force's expeditionary force concept.

Prior to FY08, the TBMC4I PE included the Theater Battle Management Core Systems (TBMCS) program and the Joint Targeting Toolbox project. TBMCS develops force-level and wing-level command, control, and intelligence systems which utilize DoD's Common Operating Environment (COE). Acquisition of these systems supports the Air Force's expeditionary force concept and will allow the execution of Theater Battle Management (TBM) planning, intelligence, and operational functions of the Joint Forces Air Component Commander (JFACC). Those functions include: generation and dissemination of the air tasking order (ATO) from the Air and Space Operations Center-Weapon System (AOC-WS) down to the wing and unit levels; air and space defense planning and execution; airspace deconfliction; targeting and weaponeering; and many other applications supporting air operations command and control. Joint Targeting Toolbox (JTT) is a joint service development effort that enhances joint targeting functionality.

The TBMCS and DCAPES efforts are post Milestone B and are in Budget Activity 7, Operational Systems Development because both systems incrementally upgrade and develop capabilities for currently operational systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207438F Theater Battle Management (TBM) C4I

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	31.701	9.961	10.190
(U)	Current PBR/President's Budget	35.950	9.898	19.437
(U)	Total Adjustments	4.249	-0.063	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.063	
	Congressional Increases			
	Reprogrammings	5.140		
	SBIR/STTR Transfer	-0.891		

(U) Significant Program Changes:

- FY06 was the last year for JTT RDT&E funding.
- Starting in FY08, TBMCS (Project 674790) funding is transferred to PE 0207410F (AOC WS), projects 675218 (Applications Development) and 675220 (Unit Level).
- The increase in FY09 reflects $9.9M added to BPAC 674802 for DCAPES Service Oriented Architecture (SOA) development activities to keep the crisis planning and deployment system operational to support current and future Combatant Commander requirements.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4790	Theater Battle Management Core System (TBMCS)	21.366	0.000	0.000	0.000	0.000	0.000	0.000	0.000	55.013
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

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

(U) A. Mission Description and Budget Item Justification

The Theater Battle Management Core Systems (TBMCS) develops force-level and wing-level command, control, and intelligence systems. It links planning, intelligence, and operations functions in an integrated battle management system for planning and executing the air war at the theater level. It also evaluates future air and space command and control concepts identified through Global War on Terrorism (GWOT) and incorporates new capability via evolutionary acquisition. Functions supported include: generation and dissemination of the air tasking order in support of the Joint Forces Air Component Commander (JFACC) from the Air and Space Operations Center-Weapon System (AOC WS) down to the wing and unit levels; air and space defense planning and execution; airspace deconfliction; targeting and weaponeering; and many other applications supporting air operations command and control.

Realignment of TBMCS funding into the AOC WS aligns funding with overall weapons system configuration control responsibility.
The TBMCS effort is post Milestone B and is in Budget Activity 7, Operational Systems Development because it incrementally upgrades and develops capabilities for currently operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continue TBMCS baseline Spirals (including Force Level, Unit Ops & Unit Intel Spirals)	3.212	0.000	0.000
(U) Continue C2 Capabilities/Applications/Infrastructure Upgrade Planning/Development, Test and Field	12.818	0.000	0.000
(U) TBMCS System engineering and interoperability with US, NATO, or other coalition systems	4.296	0.000	0.000
(U) TBMCS Test Support for Force Level and Unit Level Spirals	1.040	0.000	0.000
(U) Total Cost	21.366	0.000	0.000

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF, PE 0207438F, WSC 834520	23.467	0.000	0.000	0.000	0.000	0.000	0.000	0.000	TBD
(U) Other Procurement, AF, PE 0207410F, WSC 834520	0.000	22.702	22.677	29.232	27.258	27.845	28.266	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207438F Theater Battle Management (TBM) C4I**	PROJECT NUMBER AND TITLE **4790 Theater Battle Management Core System (TBMCS)**

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0207438F Theater Battle Management (TBM) C4I**	**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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
TBMCS Increment/Spiral development	C/CPAF	LM IS&S, Colorado Springs, CO		14.345	Nov-06					14.703	29.048	TBD
Unit Level Intel	MIPR	Various		0.685	Nov-06					0.685	1.370	TBD
TBMCS Spiral 1.1.4 Core	C/CPFF	ISS, Colorado Springs, CO,		1.000	Oct-06					1.000	2.000	TBD
Subtotal Product Development			0.000	16.030		0.000		0.000		16.388	32.418	TBD
Remarks:												
(U) Support												
TBMCS - System Engineering	C/CPAF	MITRE, Bedford, MA		4.296	Oct-06	0.000		0.000		4.396	8.692	TBD
Subtotal Support			0.000	4.296		0.000		0.000		4.396	8.692	TBD
Remarks:												
(U) Test & Evaluation												
TBMCS Test Support	MIPR	46TS, Eglin AFB, FL		1.040	Nov-06	0.000		0.000		1.283	2.323	TBD
Subtotal Test & Evaluation			0.000	1.040		0.000		0.000		1.283	2.323	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			0.000	21.366		0.000		0.000		22.067	43.433	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207438F Theater Battle Management (TBM) C4I	PROJECT NUMBER AND TITLE: 4790 Theater Battle Management Core System (TBMCS)

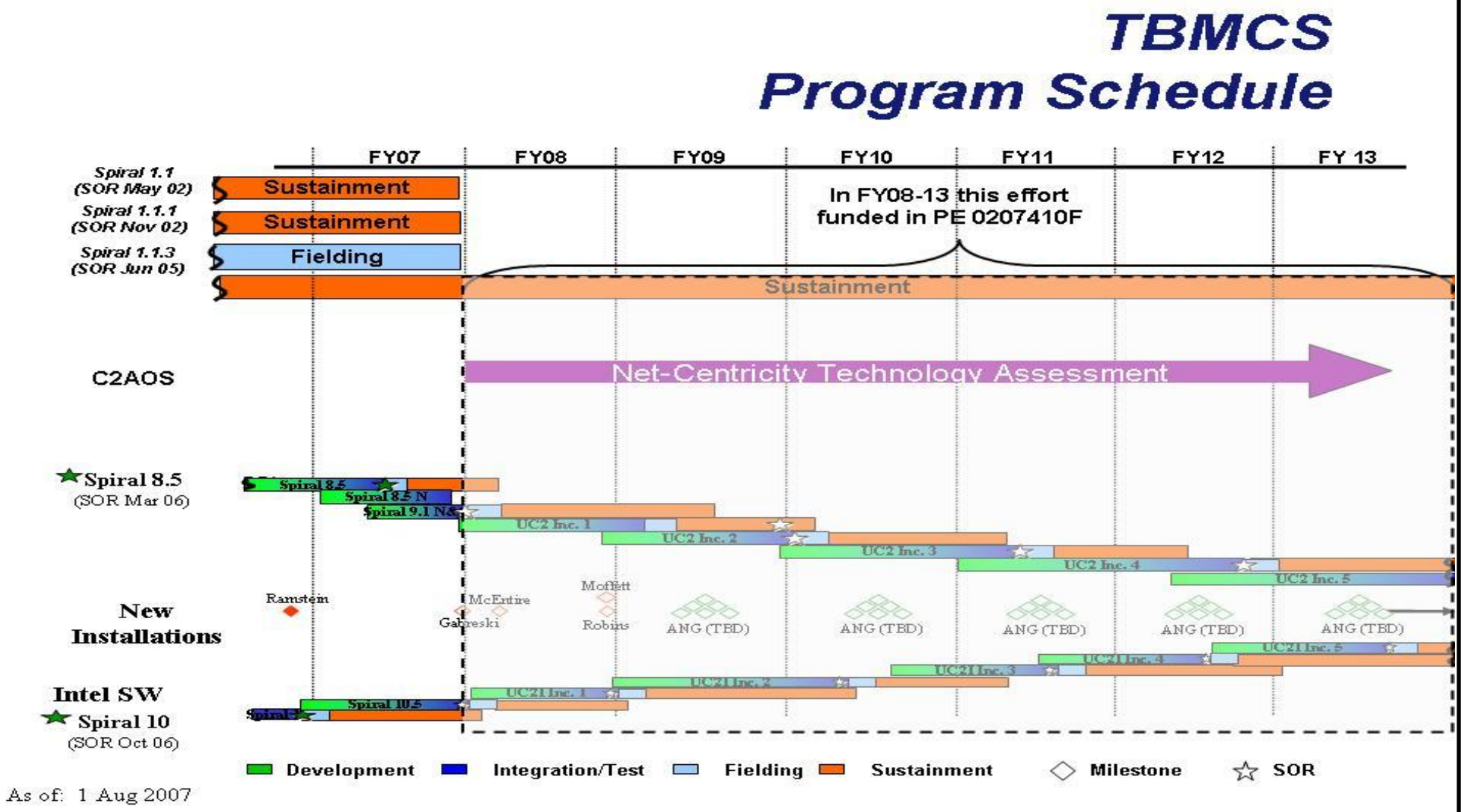

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207438F Theater Battle Management (TBM) C4I	PROJECT NUMBER AND TITLE: 4790 Theater Battle Management Core System (TBMCS)

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Continuing TBMCS Force Level Software Spirals	1-4Q		
(U) Continuing C2 Capabilities/Applications/Infrastructure Upgrade Planning/Development, Test & Field	1-4Q		
(U) Continuing TBMCS Unit Level Ops Spirals	1-4Q		
(U) Continuing TBMCS Unit Level Intel Spirals	1-4Q		

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4802	Deliberate and Crisis Action Planning and Execution Segment (DCAPES)	14.584	9.898	19.437	19.569	11.815	12.045	12.290	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). Development activities may also include Logistics Feasibility Analysis Capability (LOGFAC), Logistics Module/Manpower and Personnel Module-Base (LOGMOD/MANPER B), War and Mobilization Planning (WMP), Enhanced Contingency Rotational AEF Scheduling Tool (ECAST), Web Enablement, and JOPES Modernization Migration. This effort is an evolutionary follow-on to the Contingency Operations Mobility Planning and Execution System (COMPES). DCAPES replaced the operational tasking and priorities functionality of COMPES with modern relational databases, integrated-distributed database, and common and shared data consistent with the Joint vision for integrated Command and Control. DCAPES is intended to provide a command and control capability by exchanging data with a range of planning support systems to provide a more effective force projection capability for a wider range of operational scenarios and will fully support the force provider function of the AF Forces (AFFOR) commander. DCAPES along with numerous other war planning support legacy systems are transitioning into a net-centric Service Oriented Architecture (SOA) environment via a War Planning and Execution System (WPES) management construct. DCAPES provides a real time, two way interchange of personnel, manpower, logistics, and operational data between the Air Force and the warfighting Combatant Commanders. It matches people, cargo, and airframes/weapon systems to the Combatant Commander's warfighting requirements.

This program is in Budget Activity 7, Operational System Development, because it upgrades and develops capabilities for current operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Programs			
(U) Continue DCAPES Increment 2 contractor development, requirements definition, prototyping, coding, and testing, and service oriented architecture development.	11.256	9.269	18.173
(U) Support	1.878	0.367	0.376
(U) Program Management	1.034	0.063	0.226
(U) Test & Evaluation - Continue Government deployment operational testing and interoperability support	0.416	0.199	0.662
(U) Total Cost	14.584	9.898	19.437

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Operations and Maintenance	2.861	4.444	4.766	4.928	5.000	5.094	5.214	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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 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 2008**

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)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
DCAPES Increment 2a	Various	CSC, Falls Church, VA		10.554	Jan-07	8.700	Nov-07			Continuing	TBD	TBD
DCAPES Increment 2a	TBD	TBD						17.587	Jan-09	Continuing	TBD	TBD
Contract Engineering	T&M	Oasis Systems Inc, Lexington MA		0.277	Jan-07	0.210	Apr-08	0.216	Apr-09	Continuing	TBD	TBD
FFRDC	CPAF	Mitre, Bedford, MA		0.425	Jan-07	0.359	Dec-07	0.370	Dec-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	11.256		9.269		18.173		Continuing	TBD	TBD
Remarks:												
(U) Support												
Contract Logistic Functional Support	T&M	AC Technologies, Fairfax, VA		0.338	Jan-07					Continuing	TBD	TBD
Contract Logistic Functional Support	T&M	OASIS Systems, Inc, Lexington MA				0.158	Feb-08	0.161	Feb-09		0.319	
Contract Cost Analysis Support	T&M	Tecolote Research, Inc. Goleta, CA		0.225	Mar-07	0.209	Apr-08	0.215	Apr-09	Continuing	TBD	
Contract Architecture Studies/Modeling & Simulation	FFP	BTAS, Dayton, OH; ICF Fairfax, VA		0.375	Sep-07						0.375	
CJCS-Directed Joint Force Projection ACTD	MIPR	DISA, Arlington, VA		0.940	Apr-07						0.940	
Subtotal Support			0.000	1.878		0.367		0.376		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
46 Test Sqdn	MIPR/Other	Eglin AFB, FL		0.656	Jan-07	0.045	Jan-08	0.330	Jan-09	Continuing	TBD	TBD
605 Test Sqdn	MIPR/Other	Eglin AFB, FL		0.264	Jun-07	0.018	Dec-07	0.215	Dec-08	Continuing	TBD	TBD
DISA JITC	MIPR	Ft Hauchuca, AZ		0.114	Nov-07			0.117	Dec-08		0.231	
Subtotal Test & Evaluation			0.000	1.034		0.063		0.662		Continuing	TBD	TBD
Remarks:												

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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)**

(U) Management												
Program Management Office (PMO) Support	Various	Maxwell-Gunther AFB/ Montgomery, AL		0.089	Dec-06	0.052	Dec-07	0.075	Dec-08	Continuing	TBD	TBD
Contract PMO Support	T&M	DSD, Sudbury, MD		0.327	Jan-07	0.147	Apr-08	0.151	Jan-09	Continuing	TBD	
Subtotal Management			0.000	0.416		0.199		0.226		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	14.584		9.898		19.437		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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)

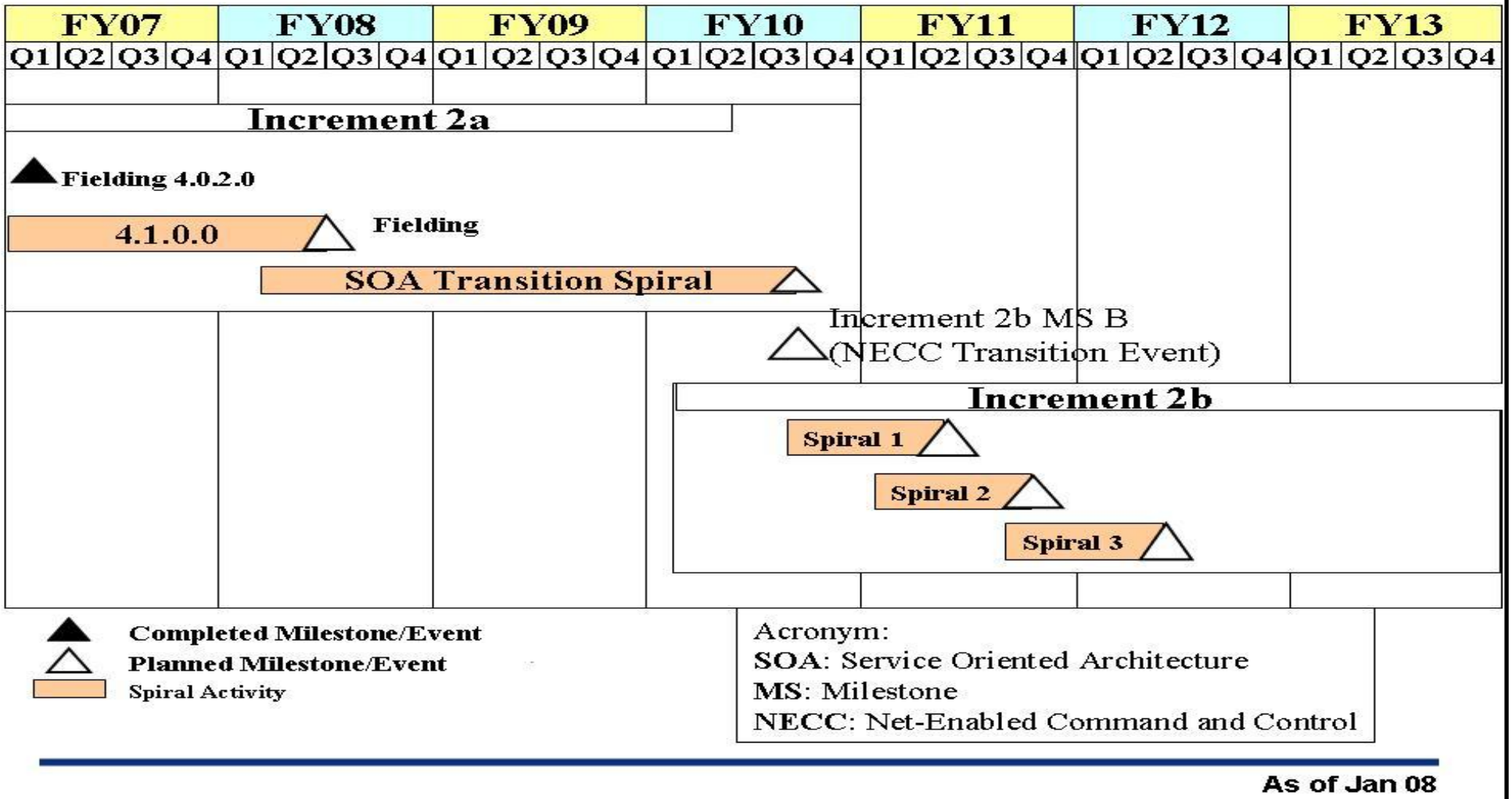

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207438F Theater Battle Management (TBM) C4I	PROJECT NUMBER AND TITLE: 4802 Deliberate and Crisis Action Planning and Execution Segment (DCAPES)

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Increment 2a 4.0.2.0 Fielding	1Q		
(U) Increment 2a 4.1.0.0 Development	1-4Q	1-2Q	
(U) Increment 2a 4.1.0.0 Fielding		3Q	
(U) Service Oriented Architecture Development/Transition Spiral		1-4Q	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 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207445F FIGHTER TACTICAL DATA LINK

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	88.094	38.944	62.788	90.709	0.000	0.000	0.000	135.373	TBD
5043 Fighter Tactical Data Link	88.094	38.944	62.788	90.709	0.000	0.000	0.000	135.373	TBD

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) as a subset of the broader, crucial Airborne Network are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs provide a jam-resistant; secure digital data transfer network capability with a standardized waveform and data format allowing Line of Sight (LOS) and Beyond Line of Sight (BLOS) intra- and inter-flight communications. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link 16, Link 11, Situational Awareness Data Link (SADL), Variable Message Format (VMF), Integrated Broadcast Service (IBS), Intra-Flight Data Link (IFDL), Multifunction Advanced Data Link (MADL), and Tactical Targeting Network Technology (TTNT). DoD has identified TTNT as the initial Joint Tactical Radio System (JTRS) Joint Airborne Network - Tactical Edge (JAN-TE) capability.

This effort provides critical capability and enhancements to the Airborne Network by creating common development, integration and interoperability among all Air Force fighter platforms to include but not limited to, A-10, F-15A-E, F-16 Blocks 30/40/50, F-22A, and F-35 aircraft. Keeps all fighter platforms and datalinked weapons current, interoperable in the network, and compatible with the USAF Global Strike Task Force (GSTF) beyond 2020. Also expands LOS and BLOS data link capabilities. TDLs increase mission effectiveness, provide situational awareness, and provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the datalink to accomplish time critical targeting and other mission update functions. TDL efforts include incorporating changes and additions to the TDL message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs); assisting with AF and Joint interoperability certification testing; future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration; support of data gathering processes; studying and incorporating data link technologies to ensure effectiveness and efficiency of the Global Strike and Global Persistent Attack CONOPS; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

Fighter Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207445F FIGHTER TACTICAL DATA LINK

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	112.755	39.545	74.312
(U)	Current PBR/President's Budget	88.094	38.944	62.788
(U)	Total Adjustments	-24.661		
(U)	Congressional Program Reductions		-0.352	
	Congressional Rescissions		-0.249	
	Congressional Increases			
	Reprogrammings	-21.683		
	SBIR/STTR Transfer	-2.978		

(U) Significant Program Changes:

The FY08 PB added FY09/10 funding for development and integration of F-22A Advanced Tactical Data Link (ATDL) capabilities

In FY09, F-22A was reduced by $11.0M to synchronize the current Advanced TDL development schedule with funding requirements

The FY07-FY09 funding profile reflects fluctuation as a result of AF decision to move from Link 16 to ATDL for the F-22A. The FY07 and FY08 profiles were adjusted to match the revised plan and the FY09 increase reflects ramping up of ATDL development.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5043	Fighter Tactical Data Link	88.094	38.944	62.788	90.709	0.000	0.000	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) as a subset of the broader, crucial Airborne Network are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs provide a jam-resistant; secure digital data transfer network capability with a standardized waveform and data format allowing Line of Sight (LOS) and Beyond Line of Sight (BLOS) intra- and inter-flight communications. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link 16, Link 11, Situational Awareness Data Link (SADL), Variable Message Format (VMF), Integrated Broadcast Service (IBS), Intra-Flight Data Link (IFDL), Multifunction Advanced Data Link (MADL), and Tactical Targeting Network Technology (TTNT). DoD has identified TTNT as the initial Joint Tactical Radio System (JTRS) Joint Airborne Network - Tactical Edge (JAN-TE) capability.

This effort provides critical capability and enhancements to the Airborne Network by creating common development, integration and interoperability among all Air Force fighter platforms to include but not limited to, A-10, F-15A-E, F-16 Blocks 30/40/50, F-22A, and F-35 aircraft. Keeps all fighter platforms and datalinked weapons current, interoperable in the network, and compatible with the USAF Global Strike Task Force (GSTF) beyond 2020. Also expands LOS and BLOS data link capabilities. TDLs increase mission effectiveness, provide situational awareness, and provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the datalink to accomplish time critical targeting and other mission update functions. TDL efforts include incorporating changes and additions to the TDL message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs); assisting with AF and Joint interoperability certification testing; future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration; support of data gathering processes; studying and incorporating data link technologies to ensure effectiveness and efficiency of the Global Strike and Global Persistent Attack CONOPS; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

Fighter Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Accomplishments/Planned Programs			
(U)	Analysis, development and integration of common fighter data link technology and capabilities	16.165	4.844	18.488
(U)	F-22A Advanced Tactical Data Link development, including integration of JAN-TE waveform	45.695	29.620	41.300
(U)	Development and integration of A-10 SADL/Enhanced Precision Location Reporting System (EPLRS) capability	7.485	2.548	0.000
(U)	Development and integration of A-10 Improved Data Modem (IDM) capability	15.121	0.432	0.000

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007	FY 2008	FY 2009
(U)	Fighter Tactical Data Link system engineering, testing, and technical support	3.628	1.500	3.000
(U)	Total Cost	88.094	38.944	62.788

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E									
(U)	0207434F (Link 16 Sup & Sus)	156.169	194.652	186.213	151.735	164.954	175.223	191.891	Continuing	TBD
(U)	0207446F (Bomber TDL)	87.613	36.875	11.702	0.000	0.000	0.000	0.000		136.190
(U)	0207448F (C2ISR TDL)	4.126	1.795	1.727	1.695	1.627	1.659	1.693	Continuing	TBD
(U)	0401839F (Airlift TDL)	6.785	0.000	0.000	0.000	0.000	0.000	0.000		6.785
(U)	Other APPN									
(U)	Procurement (3010)									
(U)	0207434F (Link 16 Sup &Sus)	0.735	0.001	0.008	35.674	88.253	92.337	64.443	Continuing	TBD
(U)	0207445F (Fighter TDL)	51.047	35.434	5.804	9.790	0.778	0.776	0.000		103.629
(U)	0207446F (Bomber TDL)	11.775	4.488	0.000	0.000	0.000	0.000	0.000		16.263
(U)	0401839F (Airlift TDL)	2.000	12.394	12.612	26.284	26.616	27.138	27.679	Continuing	TBD
(U)	O&M (3400)									
(U)	0207434F (Link 16 Sup & Sus)	16.156	12.998	22.364	12.947	14.825	17.383	18.784		TBD
(U)	0207445F (Fighter TDL)	0.000	0.276	0.286	0.284	0.281	0.285	0.291		
(U)	0401839F (Airlift TDL)	4.301	5.468	6.537	11.351	17.311	17.673	18.037	Continuing	TBD
(U)	Other Procurement (3080)									
(U)	0207434F (Link 16 Sup & Sus)	36.886	25.756	16.126	39.612	41.093	22.144	7.110	Continuing	TBD

(U) D. Acquisition Strategy

653rd Electronics Systems Group (ELSG), formerly the Tactical Data Links System Program Office (SPO), provides for common development, integration and interoperability across all Air Force platforms and ensures that Tactical Data Links are procured and maintained as a joint, end-to-end, command and control system. Platform acquisition strategies vary by program, but the majority of development and integration is normally accomplished by the weapon system prime contractors

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
F-22A Advanced Tactical Data Link Development and Integration	MIPR/AF Form 616	Northrop Grumman, Lockheed Martin		45.695	Jan-07	29.620	Jan-08	41.300	Jan-09	Continuing	TBD	TBD
Common Fighter Data Link Development *	MIPR	Various contractors managed by AFRL and ASC, WPAFB OH/SPAWAR, San Diego, CA		16.165	Apr-07	4.844	Apr-08	18.488	Apr-09	Continuing	TBD	TBD
Development and Integration of A-10 SADL/EPLRS Capability	AF Form 616	WPAFB, OH		7.485	Jan-07	2.548	Feb-08	0.000		0.000	10.033	
Development and Integration of A-10 Improved Data Modem Capability	AF Form 616	WPAFB,OH		15.121	Jan-07	0.432	Feb-08	0.000		0.000	15.553	
											0.000	
MITRE	SS/FFP	MITRE, Bedford MA		0.928	Dec-06	1.000	Dec-07	0.836	Dec-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	85.394		38.444		60.624		Continuing	TBD	TBD
Remarks: *MIPR/AF Form 616 funding to Fighter platform program offices for scheduled contract awards and development efforts.												
(U) Test & Evaluation												
46th Development Test Facility and Lockheed Martin for A-10 SADL/EPLRS and IDM Test	MIPR to AFMC	46th Test Wing, Eglin AFB, FL and Lockheed Martin								0.000	0.000	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	TBD
Remarks:												
(U) Management												
Program Office and Contractor Support	C/FFP	Various		2.700	Dec-06	0.500	Dec-07	2.164	Dec-08	Continuing	TBD	TBD
Subtotal Management			0.000	2.700		0.500		2.164		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	88.094		38.944		62.788		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207445F FIGHTER TACTICAL DATA LINK	PROJECT NUMBER AND TITLE 5043 Fighter Tactical Data Link

F-22A ATDL Long Term Schedule
As of 3 January 2008

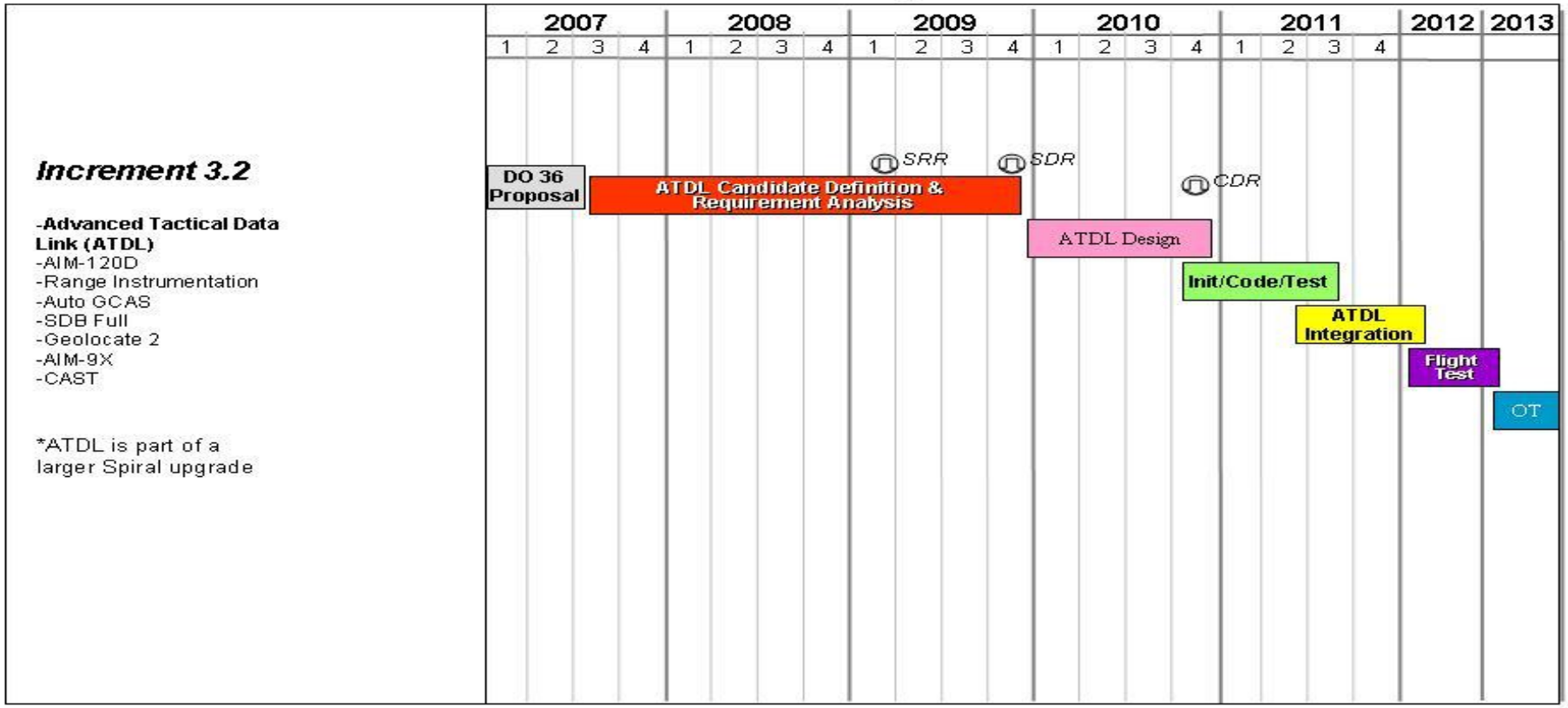


Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207445F FIGHTER TACTICAL DATA LINK	PROJECT NUMBER AND TITLE: 5043 Fighter Tactical Data Link

A-10 Data Link
As of: 3 Jan 08

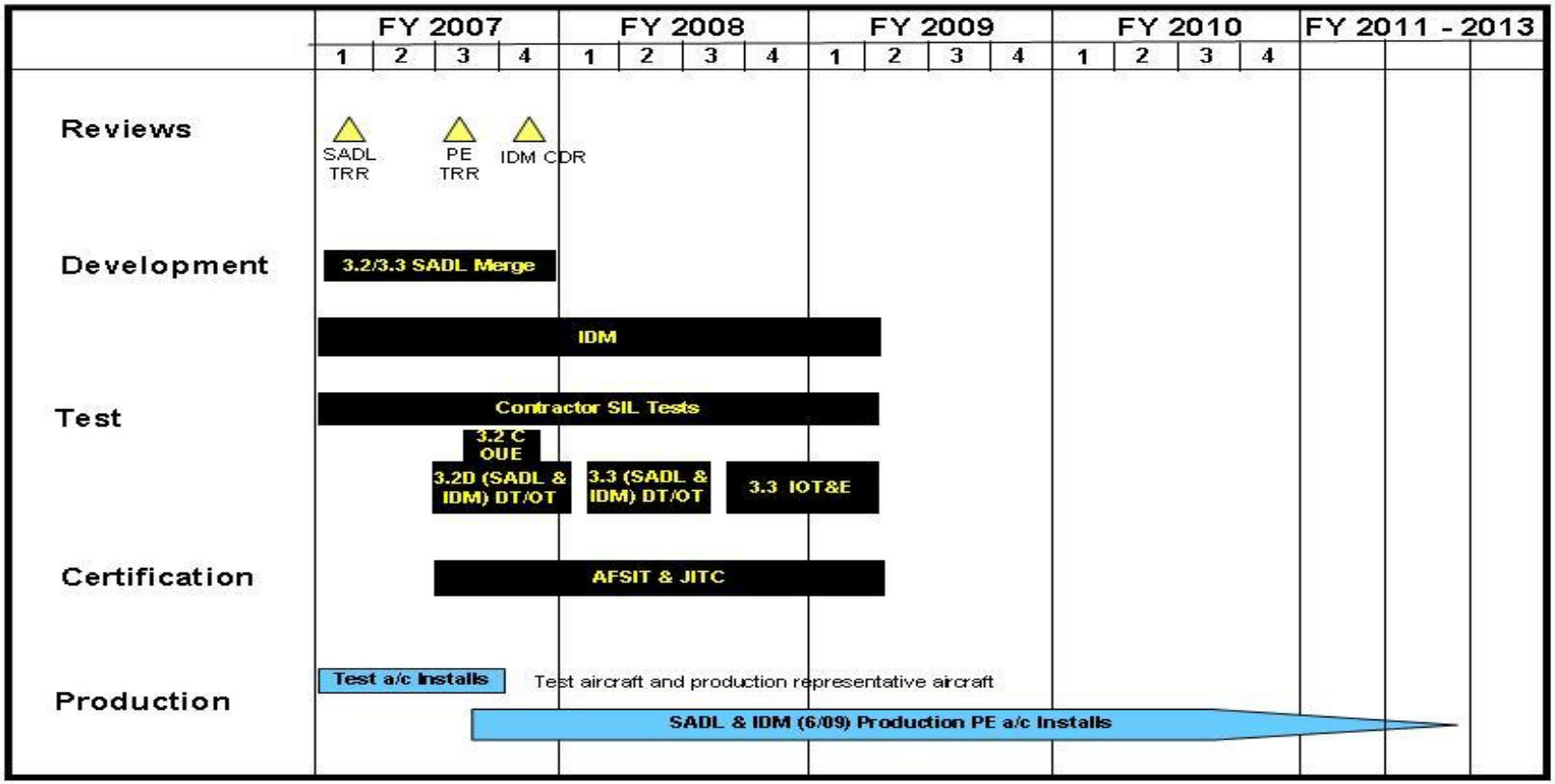


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207445F FIGHTER TACTICAL DATA LINK**	PROJECT NUMBER AND TITLE **5043 Fighter Tactical Data Link**

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) A-10 SADL Development	1Q		
(U) A-10 SADL Test Readiness Review	1Q		
(U) A-10 IDM Development	1-4Q	1-4Q	1-2Q
(U) A-10 IDM Critical Design Review	4Q		
(U) A-10 SADL/IDM Merge	1-4Q		
(U) A-10 Precision Engagement (SADL/IDM) Test Readiness Reviews	3Q		
(U) A-10 SADL/IDM DT/OT/IOT&E	3-4Q	1-4Q	1-2Q
(U) A-10 SADL/IDM AFSIT & JITC Certification Activities	3-4Q	1-4Q	1-2Q
(U) A-10 SADL/IDM Production/Precision Engagement Aircraft Installs*	3-4Q	1-4Q	1-4Q
(U) F-22A ATDL Planning & Proposal Preparation	1-3Q		
(U) F-22A ATDL Definition & Requirements Analysis	3-4Q	1-4Q	1-4Q
(U) F-22A ATDL Systems Requirements Review			2Q
(U) F-22A ATDL Systems Design Review			4Q

* APAF funded (PE 0207445F)

PE NUMBER: 0207446F
PE TITLE: Bomber Tactical Data Link

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207446F Bomber Tactical Data Link

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	87.613	36.875	11.702	0.000	0.000	0.000	0.000	Continuing	TBD
5041 Bomber Tactical Data Link	87.613	36.875	11.702	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL), as a subset of the broader, crucial Airborne Network, are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs provide a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing Line of Sight (LOS) and Beyond Line of Sight (BLOS) intra- and inter-flight communications. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data Link (SADL), Variable Message Format (VMF), Integrated Broadcast Service (IBS), Multifunction Advanced Data Link (MADL), and Tactical Targeting Network Technology (TTNT).

This effort provides critical capability and enhancements to the Airborne Network by creating common development, integration, and interoperability among all Air Force bomber platforms to include, but not limited to B-1B, B-2, and B-52 aircraft. Keeps all bomber platforms and datalinked weapons current, interoperable in the network, and compatible with the USAF Global Strike Task Force (GSTF) concept beyond 2020. Also expands LOS and BLOS data link capabilities. TDLs increase mission effectiveness, provide situational awareness, provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the data link to accomplish time critical targeting and other mission update functions. The BLOS data link capability works with Link 16 to extend the range of local Link 16 networks to other areas/theaters. TDL efforts include incorporating changes and additions to the TDL message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs); assisting with AF and Joint interoperability certification testing; future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration; support of data gathering processes; studying and incorporating data link technologies to ensure effectiveness and efficiency of the Global Strike CONOPS and Global Persistent Attack CONOPS; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

Bomber Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207446F Bomber Tactical Data Link

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	100.744	37.130	0.000
(U)	Current PBR/President's Budget	87.613	36.875	11.702
(U)	Total Adjustments	-13.131		
(U)	Congressional Program Reductions		-0.019	
	Congressional Rescissions		-0.236	
	Congressional Increases			
	Reprogrammings	-10.328		
	SBIR/STTR Transfer	-2.803		

(U) Significant Program Changes:

In FY09, funding was added to complete B-1 Fully Integrated Data Links (FIDL) System Development and Demonstration (SDD) and to align with the aircraft programmed depot maintenance schedule.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5041 Bomber Tactical Data Link	87.613	36.875	11.702	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

Tactical Data Links (TDL), as a subset of the broader, crucial Airborne Network, are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs provide a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing Line of Sight (LOS) and Beyond Line of Sight (BLOS) intra- and inter-flight communications. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data Link (SADL), Variable Message Format (VMF), Integrated Broadcast Service (IBS), Multifunction Advanced Data Link (MADL), and Tactical Targeting Network Technology (TTNT).

This effort provides critical capability and enhancements to the Airborne Network by creating common development, integration, and interoperability among all Air Force bomber platforms to include, but not limited to B-1B, B-2, and B-52 aircraft. Keeps all bomber platforms and datalinked weapons current, interoperable in the network, and compatible with the USAF Global Strike Task Force (GSTF) concept beyond 2020. Also expands LOS and BLOS data link capabilities. TDLs increase mission effectiveness, provide situational awareness, provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the data link to accomplish time critical targeting and other mission update functions. The BLOS data link capability works with Link 16 to extend the range of local Link 16 networks to other areas/theaters. TDL efforts include incorporating changes and additions to the TDL message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs); assisting with AF and Joint interoperability certification testing; future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration; support of data gathering processes; studying and incorporating data link technologies to ensure effectiveness and efficiency of the Global Strike CONOPS and Global Persistent Attack CONOPS; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

Bomber Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Common Bomber Tactical Data Link (TDL) analysis, systems engineering, testing, and technical support	5.036	7.563	0.850
(U) B-1 FIDL System Development and Demonstration (SDD)	52.677	29.312	10.852
(U) B-52 CONECT/Integrated Data Link System Development and Demonstration (SDD)	29.900	0.000	0.000
(U) Total Cost	87.613	36.875	11.702

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E									
(U)	0207434F (Link 16 Sup & Sus)	156.169	194.652	186.213	151.735	164.954	175.223	191.891	Continuing	TBD
(U)	0207445F (Fighter TDL)	88.094	38.944	62.788	90.709	0.000	0.000	0.000		343.735
(U)	0207448F (C2ISR TDL)	4.126	1.795	1.727	1.695	1.627	1.659	1.693	Continuing	TBD
(U)	0401839F (Airlift TDL)	6.785	0.000	0.000	0.000	0.000	0.000	0.000		31.466
(U)	Other APPN									
(U)	Procurement (3010)									
(U)	0207434F (Link 16 Sup & Sus)	0.735	0.001	0.008	35.674	88.253	92.337	64.443	Continuing	TBD
(U)	0207445F (Fighter TDL)	51.047	35.434	5.804	9.790	0.778	0.776	0.000		419.662
(U)	0207446F (Bomber TDL)	11.775	4.488	0.000	0.000	0.000	0.000	0.000		16.263
(U)	0401839F (Airlift TDL)	2.000	12.394	12.612	26.284	26.616	27.138	27.679	Continuing	TBD
(U)	O&M (3400)									
(U)	0207434F (Link 16 Sup & Sus)	16.156	12.998	22.364	12.947	14.825	17.383	18.784	Continuing	TBD
(U)	0207445F (Fighter TDL)	0.000	0.276	0.286	0.284	0.281	0.285	0.291		
(U)	0401839F (Airlift TDL)	4.301	5.468	6.537	11.351	17.311	17.673	18.037	Continuing	TBD
(U)	Other Procurement (3080)									
(U)	0207434F (Link 16 Sup & Sus)	36.886	25.756	16.126	39.612	41.093	22.144	7.110	Continuing	TBD

(U) D. Acquisition Strategy

The 653rd Electronic Systems Group (ELSG), formerly the Tactical Data Links System Program Office, provides for common development, integration and interoperability across the entire Airborne Network and ensures that data links are procured and maintained as a joint, end-to-end, command and control system. Platform acquisition strategies vary by program, but the majority of development and integration is normally accomplished by the weapon system prime contractor.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207446F Bomber Tactical Data Link**

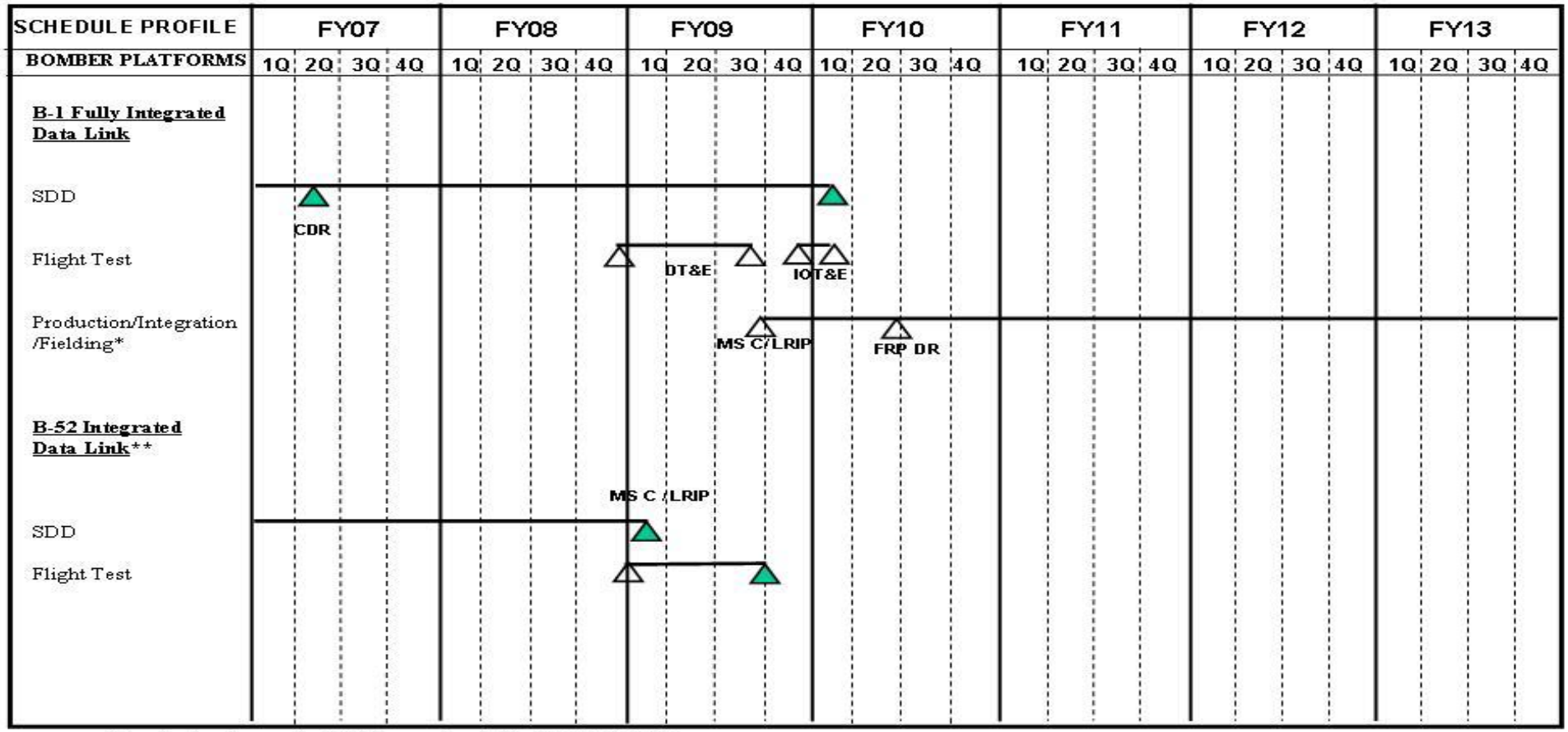
PROJECT NUMBER AND TITLE: **5041 Bomber Tactical Data Link**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
B-1 FIDL System Development and Demonstration (SDD) *	SS/CPIF	Boeing		50.394	Nov-06	29.312	Nov-07	9.452	Nov-08	0.000	89.158	194.234
B-52 System Development and Demonstration (SDD) *	CPFF	Boeing, Wichita, KS		20.700	Nov-06	0.000		0.000		0.000	20.700	
Bomber TDL analysis, systems engineering & technical support/MITRE	Various	Various		0.310	Dec-06	0.550	Nov-07	0.550	Oct-08	Continuing	TBD	TBD
B-1 Training System	C/FPIF	Rockwell Collins		2.141	Mar-07	0.000		0.000		0.000	2.141	
											0.000	
B-52 Training System				9.200	Mar-07	0.000		0.000		0.000	9.200	
Subtotal Product Development			0.000	82.745		29.862		10.002		Continuing	TBD	TBD
Remarks: *MIPR funding to Bomber platform program offices for scheduled contract awards and development efforts.												
(U) Management												
Program Office and Contractor Support	C/FFP	Various		2.161	Dec-06	1.545	Dec-07	0.300	Dec-08	Continuing	TBD	TBD
Subtotal Management			0.000	2.161		1.545		0.300		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
B-1 Lab Development	CPPF	Tinker AFB, OK		0.000		1.590	Dec-07				1.590	
B-1 FIDL Testing	Project Order	AF Flight Test Center, Edwards AFB, CA		2.707	Nov-06	3.878	Jan-08	1.400	Jan-09	0.000	7.985	
Subtotal Test & Evaluation			0.000	2.707		5.468		1.400		0.000	9.575	0.000
Remarks:												
(U) Total Cost			0.000	87.613		36.875		11.702		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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 2 JANUARY 2008)



* Production/Integration/Fielding are funded in JTRS & B-1 PE

** Efforts in FY08 and beyond are funded in the B-52 PE's

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(U) B-1 Fully Integrated Data Link SDD	1-4Q	1-4Q	1-4Q
(U) B-1 Fully Integrated Data Link MS C/LRIP			3Q
(U) B-1 Fully Integrated Data Link Flight Test (DT&E and IOT&E)		4Q	1-4Q
(U) B-1 Fully Integrated Data Link/Production/Integration*			3-4Q
(U) B-52 Integrated Data Link SDD**	1-4Q	1-4Q	1Q
(U) B-52 Integrated Data Link MS C/LRIP **			1Q
(U) B-52 Integrated Data Link Flight Test**			1-3Q

*Production/Integration/Fielding are funded in B-1 PE starting in FY09

** Funded in B-52 PE starting FY08

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PE NUMBER: 0207448F
PE TITLE: C2ISR Tactical Data Link

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207448F C2ISR Tactical Data Link

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	4.126	1.795	1.727	1.695	1.627	1.659	1.693	Continuing	TBD
5045	C2ISR Tactical Data Link	4.126	1.795	1.727	1.695	1.627	1.659	1.693	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL), as a subset of the broader, crucial Airborne Network are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data link (SADL), Variable Message Format (VMF), Integrated Broadcast Service (IBS), and Tactical Targeting Network Technology (TTNT).

This effort provides critical capability and enhancements to the Airborne Network by creating common development, integration and interoperability among ground and C2 platforms including, but not limited to Airborne Warning and Control System (AWACS), Joint Surveillance Target Attack Radar System (JSTARS), the Air and Space Operations Center (AOC), Global Hawk, Predator, Rivet Joint, Combat Sent, and Cobra Ball. 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 Global Cyberspace Integration Center (GCIC) 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 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207448F C2ISR Tactical Data Link

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	4.322	1.809	1.741
(U)	Current PBR/President's Budget	4.126	1.795	1.727
(U)	Total Adjustments	-0.196		
(U)	Congressional Program Reductions		-0.002	
	Congressional Rescissions		-0.012	
	Congressional Increases			
	Reprogrammings	-0.076		
	SBIR/STTR Transfer	-0.120		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5045	C2ISR Tactical Data Link	4.126	1.795	1.727	1.695	1.627	1.659	1.693	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), as a subset of the broader, crucial Airborne Network are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data link (SADL), Variable Message Format (VMF), Integrated Broadcast Service (IBS), and Tactical Targeting Network Technology (TTNT).

This effort provides critical capability and enhancements to the Airborne Network by creating common development, integration and interoperability among ground and C2 platforms including, but not limited to Airborne Warning and Control System (AWACS), Joint Surveillance Target Attack Radar System (JSTARS), the Air and Space Operations Center (AOC), Global Hawk, Predator, Rivet Joint, Combat Sent, and Cobra Ball. 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 Global Cyberspace Integration Center (GCIC) 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 2007	FY 2008	FY 2009
(U)	AWACS 40/45 Data Link Infrastructure (DLI)	0.602		
(U)	AWACS 40/45 Combat ID (CID)	1.725		
(U)	C2ISR data link integration and AWACS Block 30/35 Software Enhancements	1.799	1.795	1.727
(U)	Total Cost	4.126	1.795	1.727

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E									
(U)	0207434F (Link 16 Sup & Sus)	156.169	194.652	186.213	151.735	164.954	175.223	191.891	Continuing	TBD
(U)	0207445F (Fighter TDL)	88.094	38.944	62.788	90.709	0.000	0.000	0.000	Continuing	TBD
(U)	0207446F (Bomber TDL)	87.613	36.875	11.702	0.000	0.000	0.000	0.000	Continuing	TBD
(U)	0401839F (Airlift/Other TDL)	6.785	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U)	Aircraft Procurement, AF (3010)									
(U)	0207434F (Link 16 Sup & Sus)	0.735	0.001	0.008	35.674	88.253	92.337	64.443	Continuing	TBD
(U)	0207445F (Fighter TDL)	51.047	35.434	5.804	9.790	0.778	0.776	0.000	Continuing	TBD
(U)	0207446F (Bomber TDL)	11.775	4.488	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U)	0401839F (Airlift TDL)	2.000	12.394	12.612	26.284	26.616	27.138	27.679	Continuing	TBD
(U)	O&M (3400)									
(U)	0207434F (Link 16 Sup & Sus)	16.156	12.998	22.364	12.947	14.825	17.383	18.784	Continuing	TBD
(U)	0207445F (Fighter TDL)	0.000	0.276	0.286	0.284	0.281	0.285	0.291		
(U)	0401839F (Airlift 3400)	4.301	5.468	6.537	11.351	17.311	17.673	18.037	Continuing	TBD
(U)	Other Procurement, AF (3080)									
(U)	0207434F (Link 16 Sup & Sus)	36.886	25.756	16.126	39.612	41.093	22.144	7.110	Continuing	TBD

(U) D. Acquisition Strategy

The 653rd Electronics Systems Group (ELSG), formerly the Air Force Tactical Data Links Network (TDN) System Program Office (SPO), provides for common development, integration and interoperability across the entire Airborne Network and ensures that Link 16 is procured and maintained as a joint, end-to-end, command and control system. Platform acquisition strategies vary by program, but the majority of development and integration is normally accomplished by the weapon system prime contractor.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Joint STARS	SS/CPAF	Northrop Grumman, Melbourne FL								0.000	0.000	48.504
AWACS	SS/FPIF/CPAF	Boeing, Seattle WA		4.126	Dec-06	1.795	Dec-07	1.727	Dec-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	4.126		1.795		1.727		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: Test requirements are funded by platforms												
(U) Management												
Program Office and Contractor Support										Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	4.126		1.795		1.727		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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 9 Jan 2008)

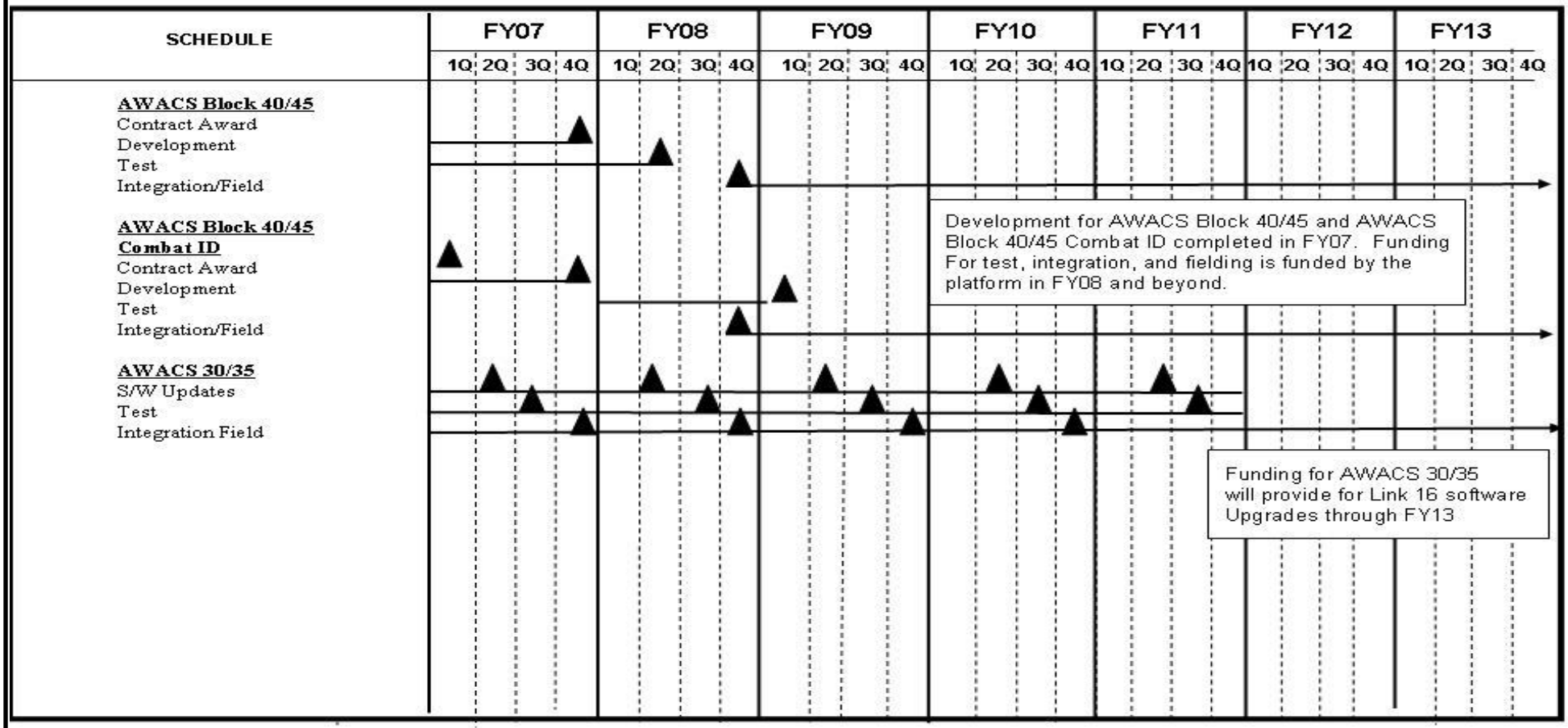

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207448F C2ISR Tactical Data Link**	PROJECT NUMBER AND TITLE **5045 C2ISR Tactical Data Link**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) AWACS Block 40/45 Initiative Development	1-4Q		
(U) AWACS Block 40/45 Combat ID Initiative Contract Award	1Q		
(U) AWACS Block 40/45 Combat ID Initiative Development	1-4Q		
(U) AWACS Block 30/35 Software Updates/Development	1-4Q	1-4Q	1-4Q
(U) AWACS Block 30/35 Test/Integration & Field	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0207449F
PE TITLE: C2 Constellation

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207449F C2 Constellation

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	41.725	44.582	32.151	29.464	29.891	30.468	31.083	Continuing	TBD
5078	Horizontal Integration	10.948	11.730	15.295	12.303	12.559	12.800	13.058	Continuing	TBD
5140	Joint Expeditionary Force Experiments	30.777	32.852	16.856	17.161	17.332	17.668	18.025	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Command and Control Constellation (C2C) efforts provide strategic, operational, and tactical direction for doctrine, organization, training, materiel, leadership/education, personnel and facilities (DOTMLPF) solutions to facilitate the horizontal flow of Warfighter Domain C2ISR information. In-depth development and analyses of C2C operational, systems, and technical architectures are geared to identify capability gaps, identify required "TO BE" information services, evaluate C2ISR program planned improvements and document the results in a capability roadmap. The C2C incorporates rapidly developing technologies to promote common standards, data sharing and information services across Air Force and Joint warfighting applications to support a network-centric, joint enterprise solution.

Project 5078, Horizontal Integration (HI) program conducts DOTMLPF analysis and assessments to guide cross-cutting net-centric, C2ISR sub-enterprise and Cyberspace investment decisions to integrate USAF capabilities into DoD, Joint and Coalition operations. HI identifies, prioritizes, and develops horizontally integrated solution recommendations across the Services to ensure the latest technologies and information services get into the hands of the joint warfighter. HI funds are applied toward identifying the most critical Warfighter Domain capabilities and ensuring they are horizontally integrated into both Air Force and Joint C2ISR programs of record.

Project 5140, Joint Expeditionary Force Experiments (JEFX) finished its last large-scale warfighting experiment in FY08 and transitions in FY09 to a much smaller, quarterly operational assessment profile. Live-fly forces will be combined with simulations into an operationally representative warfighter environment and focus on areas of interest that support the warfighter, to include the C2ISR information that supports the cyberspace domain. These experiments provide a vehicle for experimentation with operational concepts and attendant new technologies to evolve and transform Air Force capabilities. 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 air, space, and cyberspace 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 future capabilities.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207449F C2 Constellation

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	43.686	45.049	46.119
(U)	Current PBR/President's Budget	41.725	44.582	32.151
(U)	Total Adjustments	-1.961	-0.467	
(U)	Congressional Program Reductions		-0.183	
	Congressional Rescissions		-0.284	
	Congressional Increases			
	Reprogrammings	-0.770		
	SBIR/STTR Transfer	-1.191		

(U) Significant Program Changes:

The change between the previous and current FY09 President's Budget is due to the transition of JEFX from a large scale warfighting experiment to a smaller quarterly operation assessment, and the reprogramming of funds for higher AF priorities.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207449F C2 Constellation	PROJECT NUMBER AND TITLE: 5078 Horizontal Integration	

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5078 Horizontal Integration	10.948	11.730	15.295	12.303	12.559	12.800	13.058	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 thrusts: 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, assessed and transitioned to the warfighter as the final step in the C2C systems engineering process. Program specifics are:

1) Operational Requirements documents (e.g., Concept of Employment, Initial Capability Document and C2C Architecture) will be published/revised. A FYDP implementation plan identifying the most significant C2C net-centric integration issues will continue to be developed.

(2) Systems Engineering and Architecture Development is the 'glue' which will hold C2C elements together, and close the seams in the Command, Control Communications Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) architecture. C2C system and technical architectures, cross program requirements allocation, key cost drivers, risk assessments and corresponding risk mitigation strategies will be examined. The C2C architecture provides a framework for conducting analyses to identify capability gaps, compare alternatives for improving Joint warfighting capabilities and to identify associated resource implications. Capability analyses employ the C2C architecture to identify areas where interoperability can be improved within the Air Force, among Joint Services, and among coalition partners. Once capability issues are identified through the architecture analyses, they are prioritized and Capability Roadmaps and pilot initiatives are developed to prioritize and provide solutions to the Warfighter that resolve the capability gaps.

(3) Operational Integration and Systems Engineering Analysis for Net-centric capability across C4ISR programs will continue. The resulting Net-centric Strategic Plan will impact C4ISR program roadmaps and feed directly into the air, space and cyberspace 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) Modeling and Simulation (M&S) and Experimentation will leverage existing government/industry development and simulation sites to allow 'virtual' assessments of the C2 Constellation. The C2C program elements serves as the pathway to Net Enabled Command Capability (NECC) by linking the Global Cyberspace Integration Center's (GCIC) "Hot Bench" environment to explore and mature new innovation concepts, with three JEFX events per year where operational assessments occur for the purpose of Joint exposure and participation in future NECC spirals. The "Cyber Hot Bench" manages a continuous distributed operational environment that supports air, space, and cyberspace C2ISR and Cyberspace rapid acquisition, development, integration, and fielding. C2ISR and Cyberspace initiatives will use the Hot Bench to mature their development status prior to entry into JEFX for final operational assessment

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207449F C2 Constellation	PROJECT NUMBER AND TITLE 5078 Horizontal Integration

(5) C4ISR Joint Interoperability & Program Management: Air Force development standards for net-centricity must be synchronized with the Joint community. Net-Centric Enterprise Solutions for Interoperability (NESI) standards, Technical Integration Architecture (TIA), and Strategic Technical Plan (STP) all provide cross-service guidance on standards and implementation. Interaction/integration with the joint community will occur through HI participation in Joint Forces Command (JFCOM) Board of Directors and the Multi-Service Working Group.

(6) Horizontal Integration Solutions Assessment: The HI program will evaluate initiatives' performance for net-centricity and service oriented architecture (SOA) adherence in addition to providing operational assessments. These initiatives will become integral to weapon system configuration control baselines.

This program is in Budget Activity 7 - Operational System Development because it provides horizontal integration and provides developers, testers and warfighters a way to experiment, analyze, and explore operational concepts and new technologies to enhance operational system developments and improve future capabilities.

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

		FY 2007	FY 2008	FY 2009
(U)	Operational Requirements/Planning documents creation/update	0.990	1.073	1.059
(U)	Architecture Development and Systems Engineering	4.581	4.581	4.698
(U)	Analysis Integration and Systems Engineering	2.671	3.255	3.311
(U)	M&S Infrastructure and Operational Experimentation	1.548	1.442	4.473
(U)	Joint Integration and Program Management	0.158	0.164	0.173
(U)	Horizontal Integration Solutions Assessment	1.000	1.215	1.581
(U)	Total Cost	10.948	11.730	15.295

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

When feasible, this project uses full and open competition for 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 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Capability Based Planning (CBP)	FFRDC	MITRE Corp, ESC, Hanscom AFB, MA		0.335	Nov-06	0.351	Nov-07	0.367	Nov-08	Continuing	TBD	TBD
	C/CPAF	ManTech ITSP, ESC, Hanscom AFB, MA		0.105	Dec-06	0.110	Dec-07	0.115	Dec-08	Continuing	TBD	TBD
Architecture Development	FFRDC	MITRE Corp, ESC, Hanscom AFB, MA		1.040	Nov-06	1.530	Nov-07	1.629	Nov-08	Continuing	TBD	TBD
	C/CPAF	Lockheed Martin, ESC, Hanscom AFB, MA		0.378	Dec-06	0.396	Dec-07	0.414	Dec-08	Continuing	TBD	TBD
	FFRDC	MITRE Corp GCIC Langley AFB VA		1.705	Oct-06	1.705	Oct-08	1.705	Oct-08	Continuing	TBD	TBD
	IDIQ/T&M	Northrop Grumman & EDS, GCIC Hampton, VA		0.950	Jul-07	0.950	Oct-08	0.950	Oct-08	Continuing	TBD	
Capability Roadmaps	C/CPAF	Lockheed Martin, ESC, Hanscom AFB, MA		0.828	Dec-06	0.848	Dec-07	0.907	Dec-08	Continuing	TBD	TBD
	C/CPAF	Lockheed Martin/ESC, Hanscom AFB, MA		0.158	Dec-06	0.165	Dec-07	0.173	Dec-08	Continuing	TBD	TBD
	FFRDC	MITRE, ESC, Hanscom AFB, MA		0.735	Nov-06	0.770	Oct-07	0.805	Nov-08	Continuing	TBD	TBD
	IDIQ/T&M	EDS GCIC 300 Exp.Way Hampton,Va		0.210	Jul-07	0.210	Oct-08	0.210	Dec-08	Continuing	TBD	
Requirements and CONOPS	IDIQ/T&M	Teledyne Brown GCIC 300 Exp Way Hampton, VA		0.705	Jul-07	0.880	Oct-08	1.312	Jan-09	Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207449F C2 Constellation

PROJECT NUMBER AND TITLE: 5078 Horizontal Integration

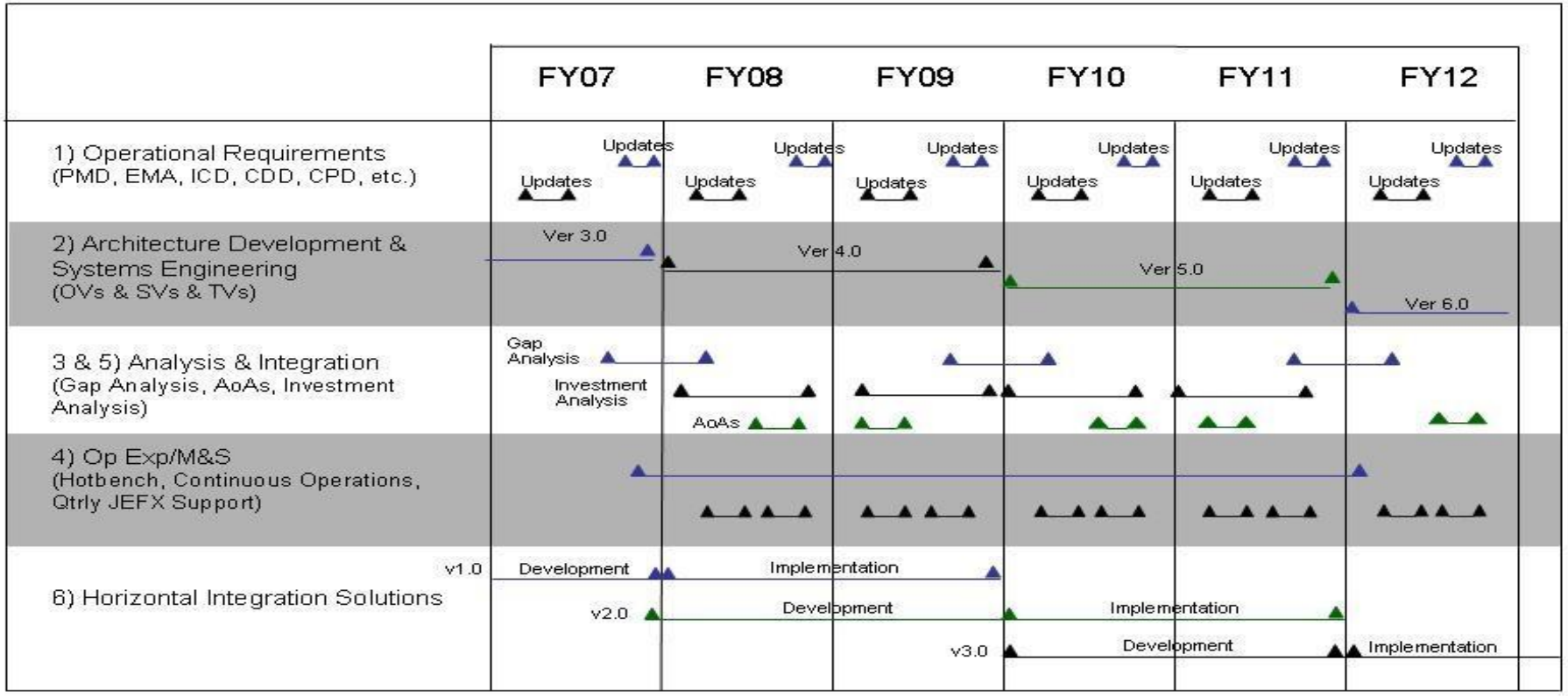
	Modeling and Simulation	IDIQ/T&M	Northrop Grumman GCIC Ryan Ctr Langley AFB VA		1.362	Jul-07	1.442	Jan-08	4.097	Jan-09	Continuing	TBD	
	Subtotal Product Development			0.000	8.511		9.357		12.684		Continuing	TBD	TBD
	Remarks:												
(U)	Support												
	Support	C/CPAF	Quantech PASS,ESC Hanscom AFB MA		1.082	Dec-06	1.071	Dec-07	1.252	Nov-08	Continuing	TBD	TBD
	Subtotal Support			0.000	1.082		1.071		1.252		Continuing	TBD	TBD
	Remarks:												
(U)	Test & Evaluation												
	Engineering Analysis and Assessment	Various	GCIC 300 Exp.Way Hampton,Va		1.198	Nov-06	1.138	Nov-07	1.186	Nov-08	Continuing	TBD	TBD
	Subtotal Test & Evaluation			0.000	1.198		1.138		1.186		Continuing	TBD	TBD
	Remarks:												
(U)	Management												
	Program Management Support	C/CPAF	Quantech PASS,ESC Hanscom AFB MA		0.157	Nov-06	0.164	Nov-07	0.173	Nov-08	Continuing	TBD	TBD
	Subtotal Management			0.000	0.157		0.164		0.173		Continuing	TBD	TBD
	Remarks:												
(U)	Total Cost			0.000	10.948		11.730		15.295		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207449F C2 Constellation	PROJECT NUMBER AND TITLE: 5078 Horizontal Integration

Horizontal Integration

U.S. AIR FORCE

ELECTRONIC SYSTEMS CENTER



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As of: 9 Jan 09

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207449F C2 Constellation**	PROJECT NUMBER AND TITLE **5078 Horizontal Integration**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Operational Requirements Documents	2-4Q	2-4Q	2-4Q
(U) Architecture & Systems Engineering	1-3Q	1-4Q	1-4Q
(U) Analysis and Integration	3-4Q	1-4Q	1-4Q
(U) Operational Experimentation/M&S	4Q	1-4Q	1-4Q
(U) Horizontal Integration Initiatives	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5140	Joint Expeditionary Force Experiments	30.777	32.852	16.856	17.161	17.332	17.668	18.025	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) / Limited Objective Experiments (LOE) are warfighter experiments that address emerging operational challenges and are part of the total Air Force (AF) experimentation effort. JEFX/LOE explores 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/LOE provides a multi-dimensional, multi-national, multi-service environment for an end-to-end process of exploration, assessment, and transition of capabilities that will provide joint and coalition warfighters with solutions to gaps identified in the Capability Review and Risk Assessment (CRRA) process and through lessons learned in recent and current operations. They are part of a broader effort to implement the Joint Vision 2020, demonstrate emerging Air Force capabilities to deploy and employ decisive aerospace power for the Joint Force Commander, and are important enablers of innovation and transformation. The integration of systems and process is the major reason JEFX is an experiment and not simply a demonstration or exercise.

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 air, space, and cyberspace forces.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Spiral develop systems architecture, systems engineering, and integration of initiatives into a cohesive system of systems process	5.906	6.654	3.386
(U)	Plan, design, coordinate, assess and report the JEFX experiments, provide expertise to support initiative selection, acquisition, program management, communications and systems planning	6.762	7.100	3.575
(U)	Develop initiatives to introduce new technologies and operational capabilities into the Aerospace Expeditionary Force (AEF) Concept of Operations (CONOPS)	6.235	6.350	3.064
(U)	Implement architectural configuration, conduct M&S, install and the test the communications infrastructure and execute the experiment	3.318	12.748	1.832
(U)	Transition successful JEFX assessed and CSAF approved warfighting capabilities for fielding into an integrated C2ISR baseline	8.556	0.000	4.999
(U)	Total Cost	30.777	32.852	16.856

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost

(U) Not applicable

(U) D. Acquisition Strategy

JEFX supports evolutionary acquisition of multiple programs by providing a venue to experiment new and emerging technologies to be integrated into other systems-of-record.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Experimentation	FFRDC	MITRE, ESC Hanscom AFB, MA		3.308	Nov-06	3.685	Nov-07	1.643	Nov-08	Continuing	TBD	TBD
Experimentation	C/IDIQ	ACS Defense, ESC, Hanscom AFB, MA		1.807	Nov-06	0.000		0.000		Continuing	TBD	TBD
Experimentation	C/IDIQ	GEMINI, ESC, Hanscom AFB, MA		0.417	Nov-06	0.000		0.000		Continuing	TBD	TBD
Experimentation	C/IDIQ	PTI, ESC, Hanscom AFB, MA		0.412	Nov-06			0.000		Continuing	TBD	TBD
Experimentation	C/IDIQ	Sverdrup, ESC HanscomAFB		0.000		1.324	Mar-08	0.662	Jan-09	Continuing	TBD	TBD
Experimentation	C/IDIQ	Quantech,ESC Hanscom AFB,MA		0.521	Jun-07	0.712	Jan-08	0.356	Jan-09	Continuing	TBD	TBD
Experimentation	C/CPAF	Loackheed Martin, ESC Hanscom AFB, MA		1.350	Nov-06	1.329	Nov-07	0.625	Nov-08	Continuing	TBD	TBD
Experimentation	C/IDIQ	Northrop Grumman, ESC,Hanscom AFB, MA		0.055	Oct-06	0.000		0.000		Continuing	TBD	TBD
Experimentation	Various	ESC, Hanscom AFB, MA		0.130	Oct-06	0.450	Oct-07	0.100	Oct-08	Continuing	TBD	TBD
Experimentation	Various	Various, AFC2ISRC, Langley AFB, VA		5.245	Nov-06	5.802	Nov-07	5.802	Nov-08	Continuing	TBD	TBD
Experimentation	MIPR	L-3Com,505C CW		1.050	Dec-06	1.130	Dec-07	0.000	Dec-08	Continuing	TBD	TBD
Experimentation	C/GSA	Sverdrup, 505CCW		0.175	Oct-06	0.180	Oct-07	0.000	Oct-08	Continuing	TBD	TBD
Experimentation	C/GSA	Northrop Grumman,505 CCW		0.250	Oct-06	0.250	Oct-07	0.000	Oct-08	Continuing	TBD	

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

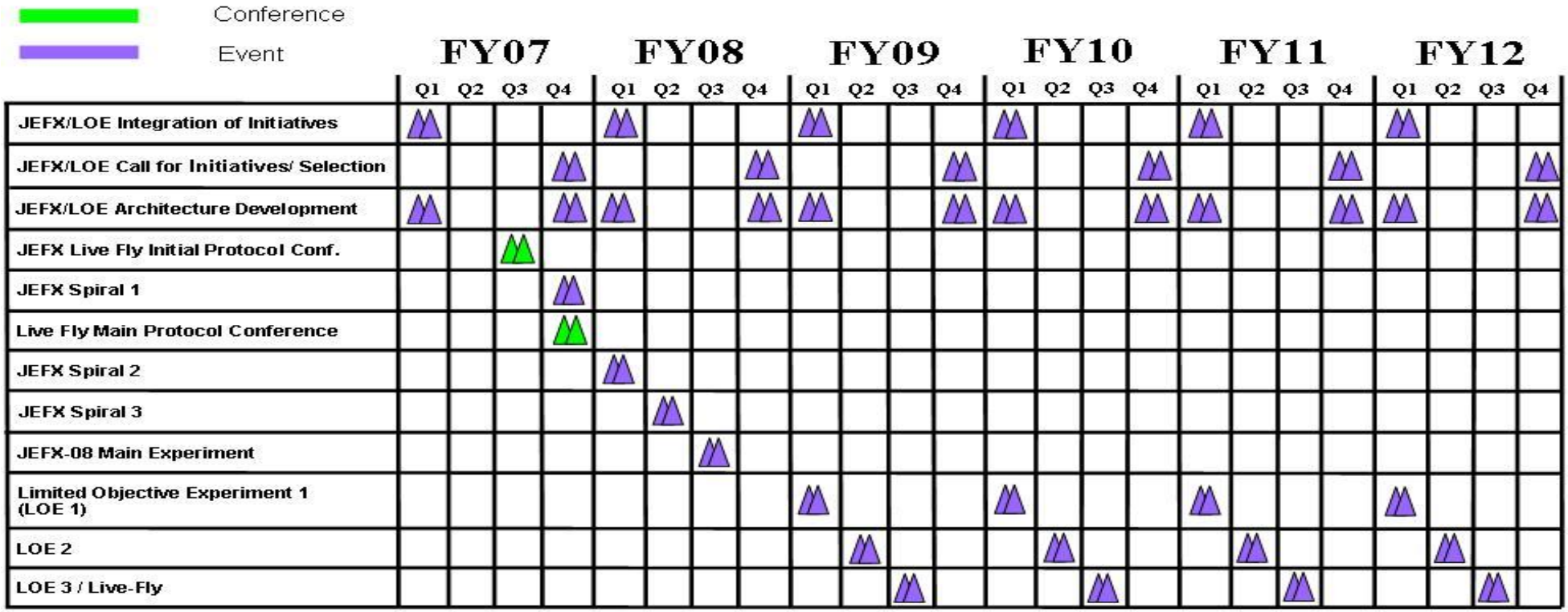
PE NUMBER AND TITLE: **0207449F C2 Constellation**

PROJECT NUMBER AND TITLE: **5140 Joint Expeditionary Force Experiments**

	Experimentation	Various	505CCW				1.831	Jan-08	1.831	Jan-09	Continuing	TBD	
	Experimentation	MIPR	Various		16.057	Jan-07	16.159	Nov-07	5.837	Nov-08	Continuing	TBD	
	Subtotal Product Development			0.000	30.777		32.852		16.856		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)	Total Cost			0.000	30.777		32.852		16.856		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207449F C2 Constellation	PROJECT NUMBER AND TITLE: 5140 Joint Expeditionary Force Experiments

JEFX Timeline



As of: 11 Jan 08

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207449F C2 Constellation	PROJECT NUMBER AND TITLE: 5140 Joint Expeditionary Force Experiments

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Integration of Initiatives	1Q	1Q	1Q
(U) Call for Initiatives/Selection	4Q	4Q	4Q
(U) Architecture Development	4Q	4Q	4Q
(U) JEFX Spirals	4Q	1-2Q	
(U) JEFX Main Experiment		3Q	
(U) Limited Objective Experiment 1 (LOE 1)			1Q
(U) LOE 2			2Q
(U) LOE 3/ Live-Fly			3Q

PE NUMBER: 0207581F
PE TITLE: JOINT STARS

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207581F JOINT STARS

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	171.628	81.978	97.641	105.954	92.463	33.744	33.880	Continuing	TBD
0003 JSTARS	171.628	81.978	97.641	105.954	92.463	33.744	33.880	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

FY2008 funding totals do not include $319.508M of RDT&E funds ($266M for PME DMS, $36M for BLOS, $13.4M for JSuW, and $4.1M for SINCGARS) and $66.3M 3010 funds of FY2008 GWOT Requirements still pending Congressional consideration.

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, interoperability with 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), Synthetic Aperture Radar (SAR)/Enhanced Synthetic Aperture Radar (ESAR), Mode 5/S, Network Centric Collaborative Targeting (NCCT), Interim Capability for Airborne Networking (ICAN), Beyond Line of Sight (BLOS) networking, Enhanced Land/Maritime Mode (ELMM), Blue Force Tracking/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, and aircraft performance improvements. JSTARS - Network Enabled Weapons (J-NEW) which includes the following efforts: participation in the Joint Surface Warfare (JSuW) Joint Capability Technology Demonstration (JCTD) and SDD, and Joint Air to Surface Standoff Missile-Maritime Interdiction (JASSM-MI). J-NEW is a continuation of the Maritime Interdiction capabilities initiated under ELMM and AMSTE. These efforts rely on the test infrastructure provided by the Joint STARS Test Support (JETS). JETS includes a dedicated test aircraft, laboratories, and support facilities used by the Joint STARS Test Force (JTF) to conduct RDT&E activities. Training and support systems development efforts include but are not limited to Weapon Systems Trainer (WST), Navigator Training Station (NTS), and Mission Crew Trainer (MCT). Also included in this program element are programs to address Diminishing Manufacturing Sources (DMS), to include but not limited to Prime Mission Equipment (PME) DMS, formerly known as Communication Computer Netcentric Upgrade (CCNU), Radar DMS, and Avionics DMS which includes CNS/ATM (8.33 kHz VHF) which currently provides a path for growth in Single Channel Ground To Air Radio Set (SINCGARS) voice communication capability. Communications and Networking Upgrade (CNU) Phase I includes but is not limited to Joint Tactical Radio System (JTRS) and Integrated Broadcast Services (IBS). CNU Phase II includes but is not

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207581F JOINT STARS

limited to JTRS and the Family of Advanced Beyond Line of Sight Terminals (FAB-T) integration. The Joint STARS program will coordinate with and participate in projects developing international standards (including NATO standards) to ensure joint, allied, and coalition interoperability such as Attack Support Upgrade (ASU) Link 16 enhancements which evolve JSTARS into a controlling unit with full battle management capabilities.

Re-Engining - Provides the JSTARS E-8 aircraft additional range and time on station, improved fuel economy, time to climb and reliability, and the potential of additional power generation for future systems. Includes non-recurring engineering, flight test, MIL-STD qualification, and flight data analysis.

The result is greater mission capability, higher mission reliability, and maximum weapon system availability in a Joint Net Centric environment.

This program is in Budget Activity 7, Operational Systems Development, due to efforts supporting a post-Milestone III operational weapon system.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	155.615	65.924	71.128
(U)	Current PBR/President's Budget	171.628	81.978	97.641
(U)	Total Adjustments	16.013		
(U)	Congressional Program Reductions		-0.022	
	Congressional Rescissions		-0.704	
	Congressional Increases		16.800	
	Reprogrammings	19.857		
	SBIR/STTR Transfer	-3.844		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207581F JOINT STARS	PROJECT NUMBER AND TITLE: 0003 JSTARS	

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
0003 JSTARS	171.628	81.978	97.641	105.954	92.463	33.744	33.880	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

FY2008 funding totals do not include $319.508M of RDT&E funds ($266M for PME DMS, $36M for BLOS, $13.4M for JSuW, and $4.1M for SINCGARS) and $66.3M 3010 funds of FY2008 GWOT Requirements still pending Congressional consideration.

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, interoperability with 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), Synthetic Aperture Radar (SAR)/Enhanced Synthetic Aperture Radar (ESAR), Mode 5/S, Network Centric Collaborative Targeting (NCCT), Interim Capability for Airborne Networking (ICAN), Beyond Line of Sight (BLOS) networking, Enhanced Land/Maritime Mode (ELMM), Blue Force Tracking/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, and aircraft performance improvements. JSTARS - Network Enabled Weapons (J-NEW) which includes the following efforts: participation in the Joint Surface Warfare (JSuW) Joint Capability Technology Demonstration (JCTD) and SDD, and Joint Air to Surface Standoff Missile-Maritime Interdiction (JASSM-MI). J-NEW is a continuation of the Maritime Interdiction capabilities initiated under ELMM and AMSTE. These efforts rely on the test infrastructure provided by the Joint STARS Test Support (JETS). JETS includes a dedicated test aircraft, laboratories, and support facilities used by the Joint STARS Test Force (JTF) to conduct RDT&E activities. Training and support systems development efforts include but are not limited to Weapon Systems Trainer (WST), Navigator Training Station (NTS), and Mission Crew Trainer (MCT). Also included in this program element are programs to address Diminishing Manufacturing Sources (DMS), to include but not limited to Prime Mission Equipment (PME) DMS, formerly known as Communication Computer Netcentric Upgrade (CCNU), Radar DMS, and Avionics DMS which includes CNS/ATM (8.33 kHz VHF) which currently provides a path for growth in Single Channel Ground To Air Radio Set (SINCGARS) voice communication capability. Communications and Networking Upgrade (CNU) Phase I includes but is not limited to Joint Tactical Radio System (JTRS) and Integrated Broadcast Services (IBS). CNU Phase II includes but is not limited to JTRS and the Family of Advanced Beyond Line of Sight Terminals (FAB-T) integration. The Joint STARS program will coordinate with and participate in projects developing international standards (including NATO standards) to ensure joint, allied, and coalition interoperability such as Attack Support Upgrade (ASU)

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207581F JOINT STARS	PROJECT NUMBER AND TITLE 0003 JSTARS

Link 16 enhancements which evolve JSTARS into a controlling unit with full battle management capabilities.

Re-Engining - Provides the JSTARS E-8 aircraft additional range and time on station, improved fuel economy, time to climb and reliability, and the potential of additional power generation for future systems. Includes non-recurring engineering, flight test, MIL-STD qualification, and flight data analysis.

The result is greater mission capability, higher mission reliability, and maximum weapon system availability in a Joint Net Centric environment.

This program is in Budget Activity 7, Operational Systems Development, due to efforts supporting a post-Milestone III operational weapon system.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2007	FY 2008	FY 2009
(U)	Spiral Development, Kill Chain and Integration/Analysis, Interoperability (including but not limited to Weapons Guidance, Wide Area Tracker, Aided Target Recognition, NCCT, ICAN, BLOS, FBCB2, AFMTT, CCNU, Find-Fix-Target-Track-Engage-Assess (F2T2EA), International, Inverse Synthetic Aperture ISAR), JSuW JCTD and SDD, SINCGARS, etc.)	38.011	3.744	3.010
(U)	PME DMS			36.119
(U)	Communications & Network Upgrade (CNU)(Joint Tactical Radio System (JTRS)		6.588	8.912
(U)	Enhanced Land/Maritime Mode (ELMM)/Affordable Moving Surface Target Engagement (AMSTE)	26.847	4.943	4.000
(U)	Communication, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) formerly Global Air Traffic Mgmt (GATM) (i.e.; TCAS, Mode S, 8.33kHz VHF, etc.)	20.982	8.001	
(U)	Link 16 ASU support, connectivity efforts, etc.	10.924		
(U)	Test and Infrastructure Effort (including but not limited to Joint Test Force, JSTARS Extended Test Support contract, Information Assurance, range support, PL-2 security, support of T-3 test aircraft, test labs, etc.)	38.610	39.932	31.162
(U)	Re-Engining	36.254	1.970	14.438
(U)	Senior Year Electro-optical Reconnaissance System (SYERS) Demonstration		16.800	
(U)	Total Cost	171.628	81.978	97.641

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Modifications, BP11 (PE 0207581F)	100.520	79.150	30.657	229.287	210.219	140.729	30.540	Continuing	TBD
(U)	Spares, BP16 (PE 0207581F)	4.616	1.231	8.934	21.281	1.479	1.510	1.540	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 2008

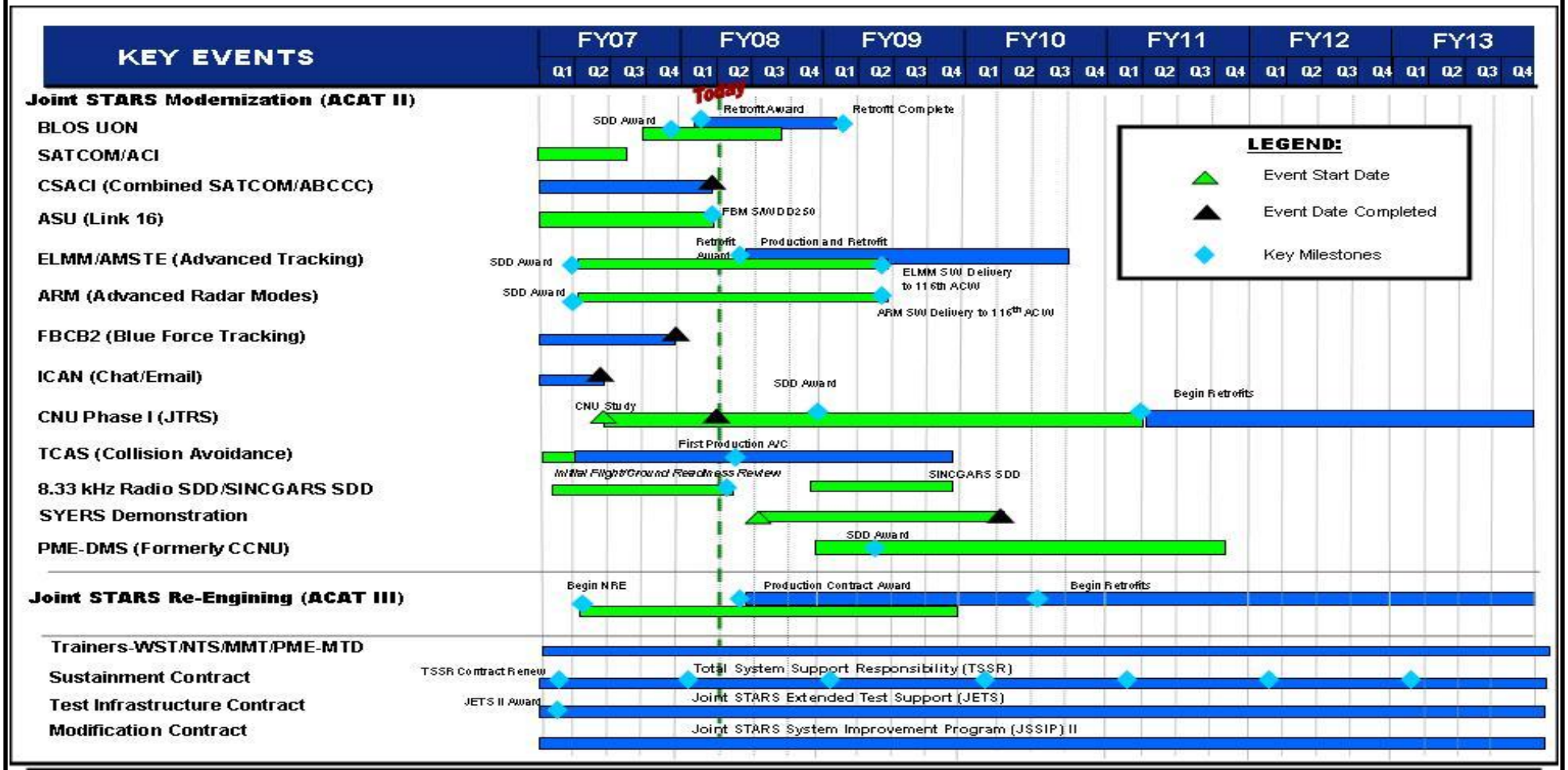
BUDGET ACTIVITY: 07 Operational System Development

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
ASU	SS/CPAF	HAFB, MA		10.924	Nov-06						10.924	TBD
CNS/ATM (GATM)/8.33 k Hz VHF Radio/SINCGARS	Various	HAFB, MA		20.982	Nov-06	8.001	Mar-08				28.983	TBD
Spiral Development	Various	Various		38.011	Nov-06	3.744	Nov-07	3.010	Nov-08	Continuing	TBD	TBD
Communications & Network Upgrade (CNU)(Joint Tactical Radio System (JTRS))	TBD	TBD				6.588	Mar-08	8.912	Oct-08	Continuing	TBD	TBD
ELMM/AMSTE	Various	Various		26.847	Dec-06	4.943	Oct-07	4.000	Oct-08		35.790	TBD
PME DMS	TBD	TBD						36.119	Feb-09	Continuing	TBD	TBD
SYERS Demonstration	TBD	TBD				16.800	Jul-08				16.800	TBD
Subtotal Product Development			0.000	96.764		40.076		52.041		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		0.000	Oct-06	0.000	Oct-07	0.000	Oct-08	Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.000		0.000		Continuing	TBD	TBD
Remarks: Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.												
(U) Test & Evaluation												
E-8C JSTARS Ext. Test Spt (JETS)	Various	Various		30.875	Nov-06	28.456	Nov-07	21.141	Nov-08	Continuing	TBD	TBD
JTF Test Ops/Support	Various	Various		5.935	Nov-06	9.276	Nov-07	7.721	Nov-08	Continuing	TBD	TBD
PL-2	Various	Various		1.800	Nov-06	2.200	Nov-07	2.300	Nov-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	38.610		39.932		31.162		Continuing	TBD	TBD
Remarks: Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.												
(U) Management												
Integration & Analysis				0.000	Oct-06	0.000	Oct-07	0.000	Oct-08	Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Re-Engining												
Re-Engining	TBD	TBD		36.254	Aug-07	1.970	Nov-07	14.438	Jan-09	Continuing	TBD	TBD
Subtotal Re-Engining			0.000	36.254		1.970		14.438		Continuing	TBD	TBD
Remarks: Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.												
(U) Total Cost			0.000	171.628		81.978		97.641		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207581F JOINT STARS	PROJECT NUMBER AND TITLE: 0003 JSTARS



ACRONYM KEY:

BLOS: Beyond Line of Site -UON
AMSTE: Affordable Moving Surface Target Engagement
ARM: Advanced Radar Modes
ASU: Attack Support Upgrade
CCNU: Communication Computer Net-Centric Update (JABM)
CNS/ATM: Communications, Navigation, Surveillance, and Air Traffic Management
CNU: Communications & Network Upgrade (JTRS,FAB-T, MP-CDL)
CSACI: Combined SATCOM/ABCCC Capability Integration (ACI)
ELMM: Enhanced Land-Maritime Mode
FBCB2: Force Battle Command Brigade & Below
FBM: Full Battle Mgmt
ICAN: Interim Capability for Airborne Networking
JASSM-MI: Joint air to surface Standoff Missile-Maritime Interdiction
MMT: Mission Maintenance Trainer
NTS: Navigator Training Station
PME-DMS: Primary Mission Equipment-Diminishing Manufacturing Sources
PME-MTD: Primary Mission Equipment-Maintenance Training Device
TCAS: Traffic Alert & Collision Avoidance System
WST: Weapon System Trainer

Development/Demo Phase
Retrofit Phase

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207581F JOINT STARS	PROJECT NUMBER AND TITLE 0003 JSTARS

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) CSACI Retrofit Complete		1Q	
(U) ASU Full Battle Management, S/W DD250		1Q	
(U) PME DMS SDD Contract Award			2Q
(U) ELMM/AMSTE SDD Contract Award	1Q		
(U) ELMM/AMSTE Initial Retrofit Contract Award		2Q	
(U) ELMM/AMSTE Follow-On Retrofit Contract Award			1Q
(U) ARM/ELMM/AMSTE S/W Release to TSSR			2Q
(U) ARM Contract Award	1Q		
(U) FBCB2 Complete	4Q		
(U) ICAN Complete	2Q		
(U) CNU Phase I SDD Award		4Q	
(U) TCAS First A/C Retrofit		2Q	
(U) CNS/ATM (8.33 kHz VHF SDD) Initial Flight/Ground Readiness Review		2Q	
(U) Re-engining Begin NRE	2Q		
(U) Re-engining Production Award		2Q	
(U) BLOS Urgent Operational Need (UON) Pre-SDD Risk Reduction Contract Award	3Q		
(U) BLOS UON SDD Contract Award	4Q		
(U) BLOS Retrofit Contract Award		1Q	
(U) Begin SYERS Demonstration preparation		3Q	

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PE NUMBER: 0207590F
PE TITLE: Seek Eagle

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207590F Seek Eagle

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	16.299	22.823	21.645	24.521	23.675	23.210	23.601	Continuing	TBD
4037 SEEK EAGLE Certifications	16.299	22.823	21.645	24.521	23.675	23.210	23.601	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Air Force operates a variety of combat aircraft that carry numerous and varied stores (munitions, missiles, fuel tanks, targeting pods, range pods, electronic countermeasures pods, etc.). Stores are carried in countless different loading combinations determined by operational and training scenarios, missions, and tactics. Aircraft stores combinations change as operational plans and tactics change and as new stores are developed and fielded. Before operational or training 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 certification recommendations through any combination of engineering analysis, wind tunnel testing, modeling and simulation, and ground and flight test and evaluation. The program recommends over 1000 aircraft/store combinations for flight each year, and depending upon the complexity, analysis and testing in support of certification may take from weeks to years. The program is also responsible for inserting 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 for combat aircrew weapon delivery planning problems are developed and provided to combat forces via Combat Weapons Delivery Software (CWDS). Planning and capability development efforts are in progress for future certifications of weapons on F-22A, F-35, and the MQ-9 (Reaper).

SEEK EAGLE funds are currently budgeted to support certification testing and analysis for new weapons programs (and all new variants) including (but not limited to): Small Diameter Bomb I/II (SDB), Laser Joint Direct Attack Munitions (JDAM), Joint Air-to-Surface Standoff Missile (JASSM), AIM-9X, AIM-120 (AMRAAM), Miniature Air-Launched Decoy (MALD), BRU-57 (Smart Bomb Racks), low collateral damage warheads for Precision Guided Munitions, Sniper Targeting Pod with video data link, LITENING Targeting Pod with video data link, GBU-51, GBU-54, Airborne Installation System (AIS) pods, and many other inventory stores on inventory aircraft. Procurement funding to obtain munitions in support of SEEK EAGLE testing is included within a particular munitions' procurement documentation (see R-2A section C for additional details).

The RDT&E Budget Activity is 07, Operational System Development, because the program supports fielded systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207590F Seek Eagle

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	16.364	22.969	21.900
(U)	Current PBR/President's Budget	16.299	22.823	21.645
(U)	Total Adjustments	-0.065	-0.146	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.146	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.065		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification	DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4037 SEEK EAGLE Certifications	16.299	22.823	21.645	24.521	23.675	23.210	23.601	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 operates a variety of combat aircraft that carry numerous and varied stores (munitions, missiles, fuel tanks, targeting pods, range pods, electronic countermeasures pods, etc.). Stores are carried in countless different loading combinations determined by operational and training scenarios, missions, and tactics. Aircraft stores combinations change as operational plans and tactics change and as new stores are developed and fielded. Before operational or training 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 certification recommendations through any combination of engineering analysis, wind tunnel testing, modeling and simulation, and ground and flight test and evaluation. The program recommends over 1000 aircraft/store combinations for flight each year, and depending upon the complexity, analysis and testing in support of certification may take from weeks to years. The program is also responsible for inserting 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 for combat aircrew weapon delivery planning problems are developed and provided to combat forces via Combat Weapons Delivery Software (CWDS). Planning and capability development efforts are in progress for future certifications of weapons on F-22A, F-35, and the MQ-9 (Reaper).

SEEK EAGLE funds are currently budgeted to support certification testing and analysis for new weapons programs (and all new variants) including (but not limited to): Small Diameter Bomb I/II (SDB), Laser Joint Direct Attack Munitions (JDAM), Joint Air-to-Surface Standoff Missile (JASSM), AIM-9X, AIM-120 (AMRAAM), Miniature Air-Launched Decoy (MALD), BRU-57 (Smart Bomb Racks), low collateral damage warheads for Precision Guided Munitions, Sniper Targeting Pod with video data link, LITENING Targeting Pod with video data link, GBU-51, GBU-54, Airborne Installation System (AIS) pods, and many other inventory stores on inventory aircraft. Procurement funding to obtain munitions in support of SEEK EAGLE testing is included within a particular munitions' procurement documentation (see R-2A section C for additional details).

The RDT&E Budget Activity is 07, Operational System Development, because the program supports fielded systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continue development of F-22A data and engineering models to use for follow-on F-22A weapons certification and follow-on technical support from the contractor.	0.500	3.500	1.800
(U) Develop mission planning software including CWDS	2.800	3.300	3.500
(U) Continue/complete various technology/ process improvement projects such as store separation prediction capabilities using ACFD (Applied Computational Fluid Dynamics).	2.600	2.700	2.900
(U) Conduct various aircraft-store certifications on USAf fighter, bomber, and USA aircraft.	10.399	13.323	13.445
(U) Total Cost	16.299	22.823	21.645

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207590F Seek Eagle	PROJECT NUMBER AND TITLE: 4037 SEEK EAGLE Certifications

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E									
(U)	Other APPN									
(U)	Proc of Ammunition, AF*									
(U)	- JDAM (PE 0207583F)	0.107	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U)	Missile Procurement, AF*									
(U)	- JASSM (PE 0207325F)	2.962	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

* Note: The SEEK EAGLE procurement dollars shown above are appropriated in each weapon's P-1 line.

(U) D. Acquisition Strategy

Budget authorization for procurement funds are given directly to the weapon system program offices, who then procure the required certification test articles through the weapon production contract.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Lockheed Martin	C/CPFF	Marietta, GA	4.825	0.375		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			5.768	0.375		0.500		0.500		Continuing	TBD	0.000
Remarks:												
(U) Support												
Mission Support	PO/REO	Eglin AFB, FL	15.154	0.900		5.000		3.500		Continuing	TBD	
Subtotal Support			15.154	0.900		5.000		3.500		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
46th Test Wing	PO/REO	Eglin AFB, FL	164.472	11.485		11.100		10.900		Continuing	TBD	
AEDC	PO/REO	Arnold Engineering Dev Center TN	19.166	1.375		1.500		1.000		Continuing	TBD	
Various	PO/REO/MIPR	Multiple other for T&E Support	81.156	2.164		4.723		5.745		Continuing	TBD	
Subtotal Test & Evaluation			264.794	15.024		17.323		17.645		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			285.716	16.299		22.823		21.645		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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 2008
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 2007	FY 2008	FY 2009
(U) JDAM	1-4Q	1-4Q	1-4Q
(U) JASSM	1-4Q	1-4Q	1-2Q
(U) SDB	1-4Q	1-4Q	1-4Q
(U) AIM-9X	1-4Q	1-4Q	1-4Q
(U) AIM-120	1-4Q	1-4Q	1-4Q
(U) WCMD	1-4Q	1-4Q	1-4Q
(U) MALD	1-4Q	1-4Q	1-4Q
(U) SNIPER VDL	1-4Q	1-4Q	1-4Q
(U) LITENING GEN 4	1-4Q	1-4Q	1-4Q

Note: The SEEK EAGLE program does not execute in accordance with established acquisition program milestones. Each aircraft-store configuration requested by the user goes through the SEEK EAGLE process by the designated user priority.

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PE NUMBER: 0207601F
PE TITLE: USAF Modeling and Simulation

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	22.609	22.814	28.981	27.712	30.505	31.096	31.726	Continuing	TBD
4567	M&S Foundations	4.278	6.256	6.298	6.377	6.399	6.523	6.655	Continuing	TBD
4991	Accelerated Acquisitions	4.272	5.107	5.113	5.234	5.315	5.419	5.528	Continuing	TBD
5004	New and Emerging Capabilities	0.969	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5135	Warfighter Readiness	13.090	11.451	17.570	16.101	18.791	19.154	19.543	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The four United States Air Force (USAF) Modeling & Simulation (M&S) thrusts areas (Modeling and Simulation Foundations, Accelerated Acquisition, New and Emerging Warfighting Capabilities, and Warfighter Readiness) provide RDT&E funding for corporate M&S training, mission rehearsal, and system development. These thrusts support Department of Defense (DoD) training transformation & acquisition reform initiatives. The USAF M&S Program Element (PE) provides the capability that immerses warfighters in distributed, simulated environments to execute the Global War on Terror (GWOT) during joint mission rehearsal, training, and experimentation.

In support of the DoD Training Transformation initiative, USAF M&S develops and modernizes models and simulations that are the constructive backbone of USAF Distributed Mission Operations (DMO) -- Live, Virtual, Constructive (LVC) environment. DMO enables the joint, coalition, and interagency training required to prepare forces for combat by generating the air and space picture for the Joint Force Commander in combat exercises; training over 19,000 personnel per year in exercises (e.g., Ulchi-Focus Lens, Red & Blue Flags, Unified Endeavor, etc). DMO also provides the current operational environment that allows warfighters to interact with other tactical cockpit simulators as well as the High Demand/Low Density platforms, often unavailable for live training due to real-world operations. USAF M&S is also integral to inter-agency Homeland Defense exercises chartered to train combat units tasked to protect the Homeland, including the National Capital Region (exercise Amalgam Arrow); generates equipment and manpower efficiencies by using simulations which reduce fuel consumption, aircraft wear and tear, and manpower costs.

In support of DoD acquisition reform, the Air Force Integrated Collaborative Environment (AF-ICE) provides systems-of-systems test capability that will shorten the acquisition lifecycle, reduce developmental costs, and minimize risks associated with interoperability of new technology. AF-ICE enhances the acquisition process from concept development through test and evaluation using M&S to speed delivery of net-enabled warfighting capabilities.

This program is in Budget Activity 7 - Operational System Development because it provides RDT&E funding for major USAF Modeling and Simulation efforts.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207601F USAF Modeling and Simulation

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	23.670	23.044	29.223
(U)	Current PBR/President's Budget	22.609	22.814	28.981
(U)	Total Adjustments	-1.061	-0.230	
(U)	Congressional Program Reductions		-0.065	
	Congressional Rescissions		-0.165	
	Congressional Increases			
	Reprogrammings	-0.416		
	SBIR/STTR Transfer	-0.645		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4567 M&S Foundations	4.278	6.256	6.298	6.377	6.399	6.523	6.655	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 provides tools, standards and interfaces to be used by model developers and users to ensure efficiencies and model reuse. MSF provides the capability to rapidly and efficiently create realistic and accurate synthetic operational battlespaces to support the full spectrum of activities associated with mission preparation and acquisition of warfighting capabilities by providing appropriate authoritative data and component representations. With the capability generated via MSF, users will readily access available repositories of reusable, validated, and integrated synthetic components. Synthetic components 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 is based on a durable common architecture framework and common standards. MSF capability also supports efficient, cost-effective Verification, Validation and Accreditation activity across the training, test, experimentation, acquisition, planning and analysis communities.

Air Force Director of Weather (AF/A3O-W) is designated as the DoD Air and Space Natural Environment Modeling and Simulation Executive Agent (ASNE MSEA). ASNE MSEA coordinates all aspects of DoD M&S related to representations of the air and space natural environment, ensuring air and space weather is properly represented in joint and service models, simulations, war games, and experiments. The ASNE MSEA part of this project primarily funds the following: Environmental Scenario Generator, Environmental Hypercube (pre-runtime physics-based weather effects), and Space Weather Analysis as required to support joint M&S program offices and activities like OSD Program, Analysis, and Evaluation; Air Force Studies and Analyses Agency; Joint Analysis System; Joint National Training Capability; Distributed Mission Operations & Training; One Semi-Automated Force; Navy Probability of Raid Annihilation Assessment; Terminal Fury; Unified Engagement; Hazard Prediction and Assessment Capability; and Joint Expeditionary Force Experiment. Primary customers are combatant commanders, service components, and various DoD organizations conducting simulations and exercises involving air, ground, sea, and space assets. ASNE MSEA develops authoritative natural environment scenarios necessary for robust "What-if" mission planning and rehearsal and for realistic training, analysis, and acquisition models and simulations. ASNE MSEA leads the development and execution of the DoD Integrated Natural Environment Authoritative Representation Process (INEARP) Concept of Operations.

This program is in Budget Activity 7 - Operational System Development because it provides RDT&E funding for major USAF Modeling and Simulation efforts.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE: 4567 M&S Foundations

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	MSF Concept exploration/model development/model transition	3.303	5.258	5.298
(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	0.975	0.998	1.000
(U)	Total Cost	4.278	6.256	6.298

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

OAS, Kirtland AFB, NM manages 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 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Concept Exploration and Technology Support	Various	Office of Aerospace Studies, Kirtland, NM; ASC, Wright Patterson AFB, OH		3.303	Oct-06	5.258	Oct-07	5.298	Oct-08	Continuing	TBD	TBD
ASNE	Various	Various		0.975	Oct-06	0.998	Oct-07	1.000	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	4.278		6.256		6.298		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)												
											0.000	
Subtotal			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	4.278		6.256		6.298		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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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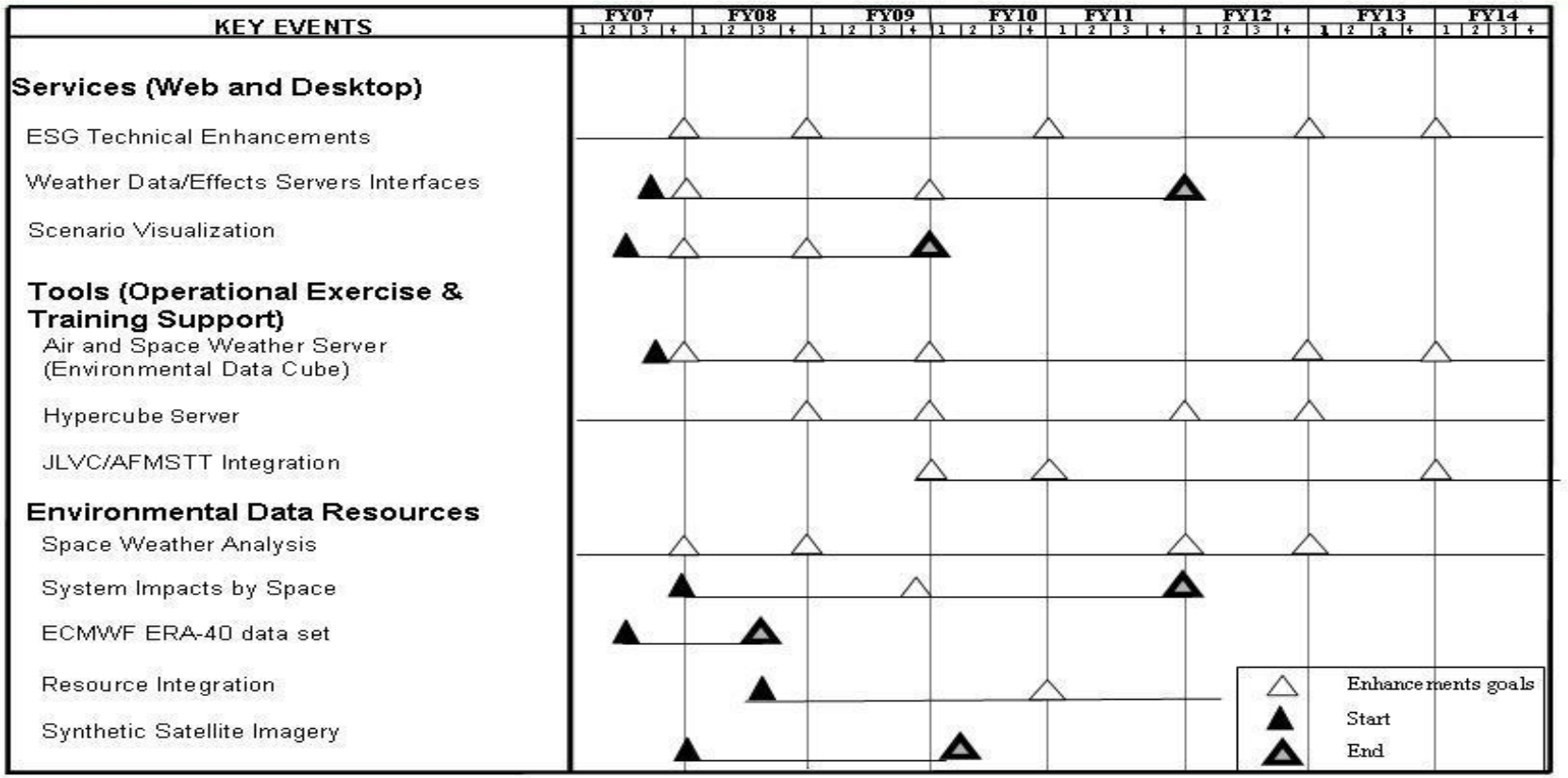
U.S. AIR FORCE

ASNE MSEA Schedule



As of: 10 Jan 08

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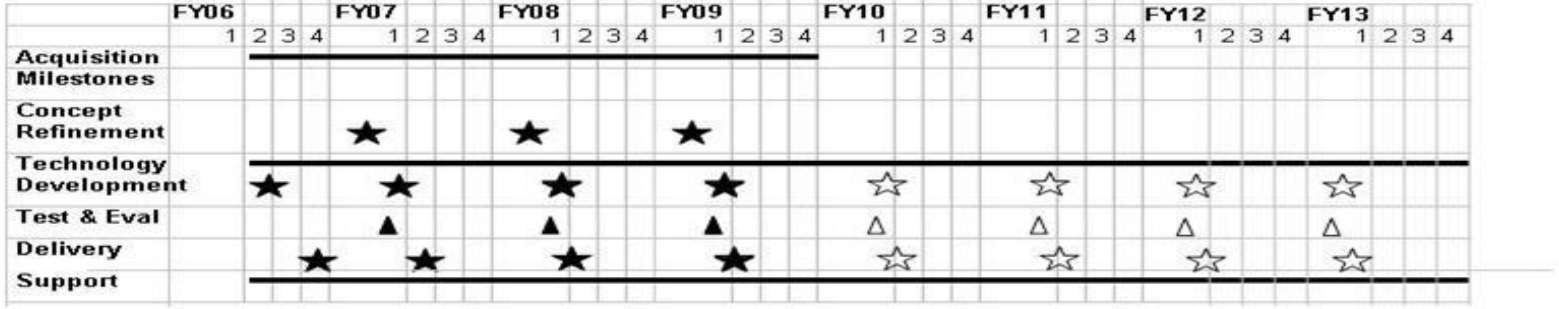
Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207601F USAF Modeling and Simulation**	PROJECT NUMBER AND TITLE **4567 M&S Foundations**

Exhibit R-4: M&S Foundations (MSF)



As of: 9 Jan 08

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(U) MSF concept refinement	1Q	1Q	1Q
(U) MSF development	1-4Q	1-4Q	1-4Q
(U) ASNE Services/Support (Web and Desktop)	1-4Q	1-4Q	1-4Q
(U) Tools (Operational exercise & Training support)	1-4Q	1-4Q	1-4Q
(U) Environmental Data Resources	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4991 Accelerated Acquisitions	4.272	5.107	5.113	5.234	5.315	5.419	5.528	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Accelerated Acquisition (AA) focuses on reducing the time and resources required to provide material solutions to the Warfighter. Examples include more efficient and coordinated processes for design, development, test and evaluation, maintainability and sustainment.

AA's objective is to improve interoperability of weapon systems and platforms through more rigorous interoperability evaluation in a replicated battlefield environment. The AA thrust area includes the Air Force-Integrated Collaborative Environment (AF-ICE) which connects combat system engineering sites and replicates Joint Force Combat Systems to create a network testbed to assess network centric systems and Command, Control, Communication, Computers and Intelligence (C4I).

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.

In addition, 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 2007	FY 2008	FY 2009
(U) Continue communications architectures, links and operations support Air Force-Integrated Collaborative Environment (AF-ICE) activities	1.336	1.950	2.000
(U) Continue to expand existing Infrastructure to support AF-ICE activities to include the management, operations and test support along with contracted personnel to assist in DT/OT activities	1.447	1.700	1.758
(U) Provide event analysis support to product centers	0.589	0.750	0.850
(U) Develop and execute various simulations/stimulation environments for test events	0.900	0.707	0.505
(U) Total Cost	4.272	5.107	5.113

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost

(U) Not applicable

(U) D. Acquisition Strategy

SAF/XC will provide oversight and GCIC 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 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
AF-ICE Core Development	Various	GCIC, Langley AFB, VA		1.336	Nov-06	1.950	Nov-07	2.000	Nov-08	Continuing	TBD	TBD
AF-ICE Architecture Infrastructure	Various	GCIC, Langley AFB, VA		1.780	Nov-06	1.700	Nov-07	1.758	Nov-08	Continuing	TBD	TBD
HLD Testbed/AF-ICE Activities Support	Various	GCIC, Langley AFB, VA				0.750	Nov-07	0.850	Nov-08	Continuing	TBD	TBD
AF-ICE Simulator/Stimulator Dev/Analysis/Support	Various	GCIC, Langley AFB, VA		1.156	Jan-07	0.707	Jan-08	0.505	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	4.272		5.107		5.113		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	4.272		5.107		5.113		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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

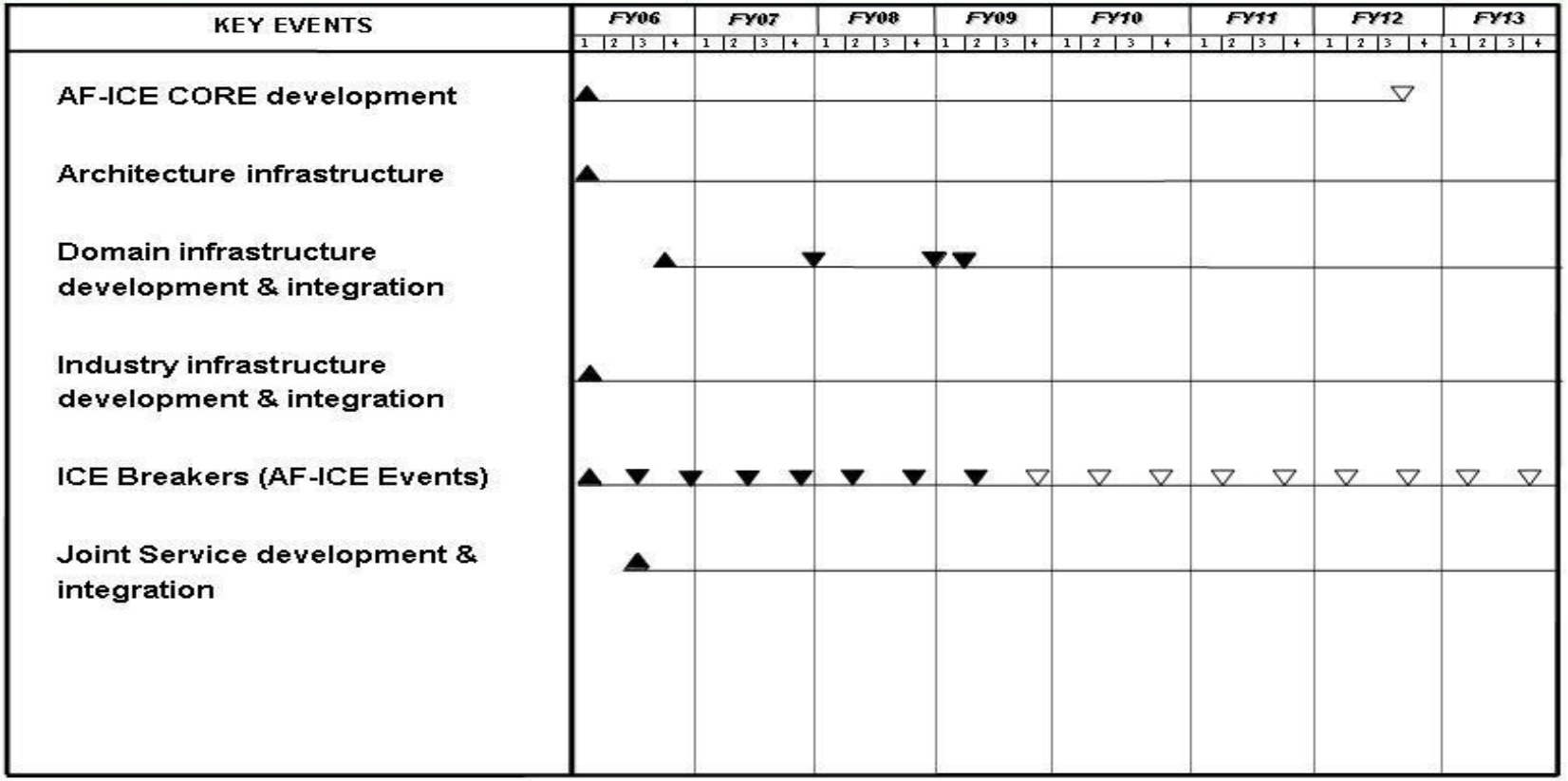

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207601F USAF Modeling and Simulation**	PROJECT NUMBER AND TITLE **4991 Accelerated Acquisitions**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) AF-ICE CORE development	1-4Q	1-4Q	1-4Q
(U) Event planning, development, integration, and infrastructure support	1-4Q	1-4Q	1-4Q
(U) AF-ICE events	1-4Q	1-4Q	1-4Q
(U) Joint Service development & integration	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation

PROJECT NUMBER AND TITLE: 5004 New and Emerging Capabilities

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5004	New and Emerging Capabilities	0.969	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

New and Emerging Warfighting Capabilities (NEWC) focuses on future capabilities and force structure. Examples include Science & Technology, analysis, concept exploration and futures wargaming.

In FY07, this Program Element (PE) contained the Congressional add that enabled the development of Synthetic Theater Operations Research Model (STORM). STORM will replace the current Air Force theater level campaign model, THUNDER, with enhanced capability to feed aerospace representations in the joint analysis effects and support Quadrennial Defense Reviews.

This program is in Budget Activity 7 - Operational System Development, Research Category because it provides RDT&E funding for major USAF Modeling and Simulation efforts.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) STORM development	0.969	0.000	0.000
(U) Total Cost	0.969	0.000	0.000

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not Applicable									

(U) D. Acquisition Strategy

All major contracts for model development were awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
STORM Development	T&M	AFSAA, Rosslyn, VA		0.969	Feb-07	0.000				Continuing	TBD	TBD
Subtotal Product Development			0.000	0.969		0.000		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	0.969		0.000		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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	FY10	FY11	FY12	FY13
Storm Development		▬						

As of: 9 Jan 07

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
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 2007	FY 2008	FY 2009
(U) STORM Development	1-4Q		

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5135 Warfighter Readiness	13.090	11.451	17.570	16.101	18.791	19.154	19.543	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). DMO is the Air Force's contribution to the Joint National Training Concept (JNTC). WR's capabilities provided within the environment are the AF's contribution to the Joint Training Confederation's battle staff training environment used to support Combatant Commanders, Joint Task Force, and Component Commander staff readiness training. The capabilities support Joint/Service exercises including, but not limited to: Joint National Training Concept (JNTC), Yama Sakura, Reception, Staging, Onward-movement & Integration (RSO&I), Ulchi Focus Lens, Roving Sands, Austere Challenge, Flexible Leader, Blue Flag, Joint Expeditionary Force Experiment, and Red/Virtual Flag.

Other capabilities will provide for Intelligence, Surveillance, and Reconnaissance (ISR) training and exercise supported by using a virtual ISR system for command and staff level training. The simulation provides commanders, staffs and operators with a common training system for the employment, tasking, exploitation and dissemination of imagery. The environment also provides models simulating electronic combat, electronic warfare, targeting, ISR representation, and intelligence integral to the Air and Space Operations Center training.

WR also includes the Air Force Modeling & Simulation Training Toolkit (AFMSTT) modernization. AFMSTT provides: the Air Warfare Simulation System (AWSIM) which interfaces to Command, Control, Communications, Computers, and Intelligence (C4I) to Theater Battle Management Core System (TBMCS) and the Graphical Input Aggregate Control (GIAC), the Logistics Simulation (LOGSIM), the Intelligence Management Controller Node (IMCN), the AWSIM Analysis Tool (AAT), and the Air Force Synthetic Environment for Reconnaissance and Surveillance (AFSERS). AFMSTT's capabilities require modernization to support Air Force Title X requirements.

In addition, project 5135 supports the Requirements Integration (RI) (formerly known as Joint Model Transition) which supports the development and upgrade of models selected through a board process. The selection process allows the board to influence the direction of model development and integration for the modeling and simulation community. Emphasis is placed on standardization, integration, capabilities improvement, joint applicability and acceptance.

This program is in Budget Activity 7 - Operational System Development because it provides RDT&E funding for major USAF Modeling and Simulation efforts.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007	FY 2008	FY 2009
(U) AFMSTT Modernization	8.044	8.003	11.089
(U) Distributed Mission Operations Integration (DMOI)	4.546	3.000	6.000
(U) Perform RI cost-benefit analysis, develop and integrate models, simulations and interface standards	0.500	0.448	0.481
(U) Total Cost	13.090	11.451	17.570

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

Electronic Systems Center (ESC) at Hanscom AFB, MA will manage full and open acquisition and model development process for all WR activities.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

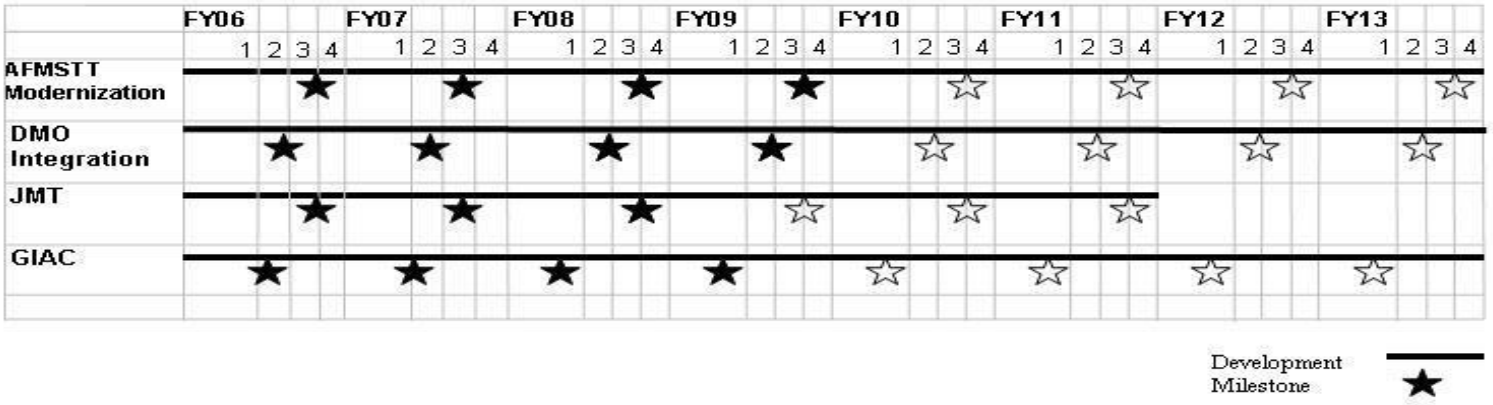
PE NUMBER AND TITLE: **0207601F USAF Modeling and Simulation**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
AFMSTT	Various	ESC, Hanscom AFB, MA		8.044	Dec-06	8.003	Dec-07	11.089	Dec-08	Continuing	TBD	TBD
DMOI	Various	ESC, Hanscom AFB, MA		4.546	Dec-06	3.000	Dec-07	6.000	Dec-08	Continuing	TBD	TBD
RI	Various	General Services Administration (GSA)and Office of Aerospace Studies (OAS), Kirtland AFB, NM		0.500	Dec-06	0.448	Dec-07	0.481	Dec-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	13.090		11.451		17.570		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	13.090		11.451		17.570		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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)



As of: 9 Jan 08

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
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 2007	FY 2008	FY 2009
(U) AFMSTT Modernization	1-4Q	1-4Q	1-4Q
(U) DMOI Development	1-4Q	1-4Q	1-4Q
(U) JMT/GIAC/RI - perform cost-benefit analysis, develop and integrate models, simulations and interface standards according to Modeling & Simulation Strategic Plan (MSSP) and architecture	1-4Q	1-4Q	1-4Q

PE NUMBER: 0207605F
PE TITLE: Wargaming and Simulation Centers

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207605F Wargaming and Simulation Centers

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	6.270	6.421	3.870	7.138	7.240	7.381	7.530	Continuing	TBD
2888	Distributed Mission Operations Center (DMOC)	6.270	6.421	3.870	7.138	7.240	7.381	7.530	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: development and integration of 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, DMOC is the lead agency for VIRTUAL FLAG (VF) exercises, the DMO Multi-Level Security (MLS) testbed, and Cross-Domain Solution (CDS) 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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	6.570	6.490	3.902
(U)	Current PBR/President's Budget	6.270	6.421	3.870
(U)	Total Adjustments	-0.300	-0.069	
(U)	Congressional Program Reductions		-0.028	
	Congressional Rescissions		-0.041	
	Congressional Increases			
	Reprogrammings	-0.115		
	SBIR/STTR Transfer	-0.185		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2888	Distributed Mission Operations Center (DMOC)	6.270	6.421	3.870	7.138	7.240	7.381	7.530	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: development and integration of 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, DMOC is the lead agency for VIRTUAL FLAG (VF) exercises, the DMO Multi-Level Security (MLS) testbed, and Cross-Domain Solution (CDS) testbed.

This program is categorized as Budget Activity (BA) 7 because it provides for development of technology in support of Distributed Mission Operations.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Continue to maintain core structure to support users conducting RDT&E, mission rehearsal, and concepts of operation development	4.636	4.105	2.711
(U)	Continue to support requirements definition, test support, scenario development, analysis, systems engineering support, and Verification, Validation, and Accreditation (VV&A) of core systems	1.097	1.393	0.500
(U)	Communications connectivity between DMOC and various other operational and modeling & simulation (M&S) facilities	0.212	0.349	0.200
(U)	Program Management Office support	0.325	0.574	0.459
(U)	Total Cost	6.270	6.421	3.870

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

The Distributed Mission Operations Center supports AF DMO and the JNTC by awarding full and open contracts that manage the acquisition, development, testing, and integration of DMO standards, training, model and simulation, multi-level security testbed, and exercises on the DMO Networks (DMON).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Mission Rehearsals/Concept of Operations (Brief/Debrief and Mission Replay tools, Rapid Scenario Generation, Next Generation Threat System Dev, DMO "Flag" events)	CPFF	Lockheed Martin / 705 Combat Training Squadron (CTS), Kirtland AFB, NM		4.636	Oct-06	4.105	Oct-06	2.711	Oct-06	Continuing	TBD	TBD
Verify, Validate, and Accredit Core Systems (Common Battlespace Architecture, DMO Standards, CDS)	CPFF	Lockheed Martin / 705 CTS, Kirtland AFB, NM		0.685	Oct-06	0.655	Oct-06	0.000	Oct-06	Continuing	TBD	TBD
Communications Connectivity (DMO Architecture, JNTC Warfighter Capability, LVC and IO Range Integration)	CPFF	Lockheed Martin / 705 CTS, Kirtland AFB, NM		0.212	Oct-06	0.349	Oct-06	0.200	Oct-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	5.533		5.109		2.911		Continuing	TBD	TBD
Remarks:												
(U) Support												
Technical support for systems engineering and exercise operations	CPAF	Scientific Research / 705 CTS, Kirtland AFB, NM		0.412	Apr-05	0.738	Apr-05	0.500	Apr-05	Continuing	TBD	TBD
Subtotal Support			0.000	0.412		0.738		0.500		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000 0.000	0.000
Remarks:												
(U) Management												
Program Management Office Support	ITSP	705 CTS, Kirtland AFB, NM		0.325	Oct-06	0.574	Oct-07	0.459	Oct-08	Continuing	TBD	TBD
Subtotal Management			0.000	0.325		0.574		0.459		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	6.270		6.421		3.870		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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)

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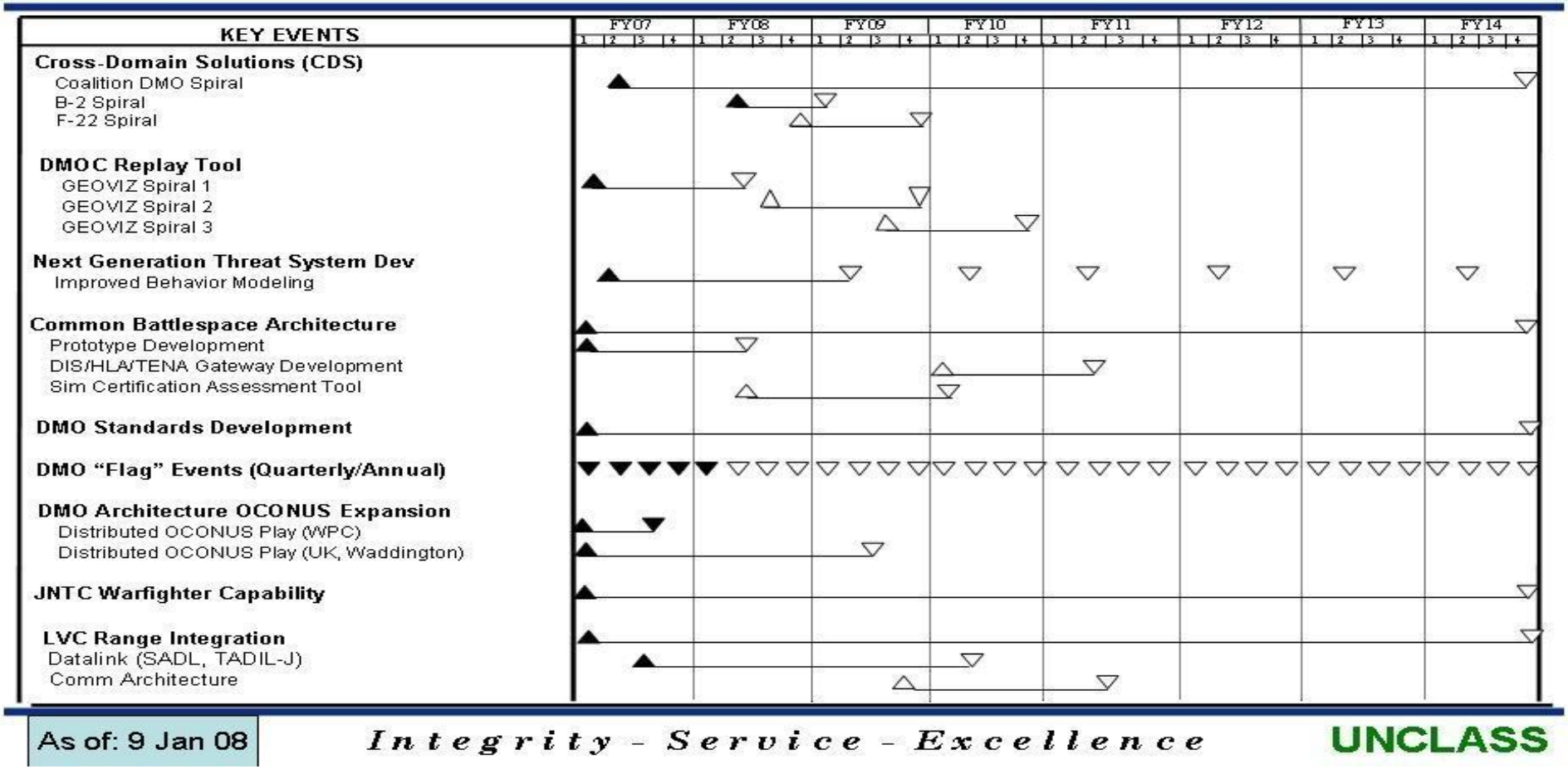
U.S. AIR FORCE

Capabilities Schedule



As of: 9 Jan 08

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(U) Cross-Domain Solutions (CDS)	2-4Q	1-4Q	1-4Q
(U) DMOC Replay Tool	1-4Q	1-4Q	1-4Q
(U) Next Generation Threat System Dev	1-4Q	1-4Q	1-2Q
(U) Common Battlespace Architecture	1-4Q	1-4Q	1-4Q
(U) DMO Standards Development	1-4Q	1-4Q	1-4Q
(U) DMO "Flag" Events	1-4Q	1-4Q	1-4Q
(U) DMO Architecture OCONUS Expansion	1-4Q	1-4Q	1-3Q
(U) JNTC Warfighter Capability	1-4Q	1-4Q	1-4Q
(U) LVC Range Integration	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 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207697F Distributed Training and Exercises

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	5.943	7.474	7.137	7.056	7.009	7.140	7.213	0.000	0.000
5190 JFCOM Wargaming	5.943	7.474	7.137	7.056	7.009	7.140	7.213	0.000	0.000

(U) A. Mission Description and Budget Item Justification

In September 03 the AF/CV directed the establishment of an 11-person AF Liaison Office (LNO) at USJFCOM with representatives from across the AF to increase participation in joint transformation activities including joint concept development and experimentation and joint Doctrine, Organization, Training, Material, Leadership & Education, Personnel & Facilities (DOTMLPF) recommendations. Air Force A5XS ensures accurate representation of air and space capabilities in joint activities, through modeling and simulation and wargaming activities.

This program is categorized in Budget Activity (BA) 7 because it supports the development efforts of operational systems.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	6.115	7.522	7.569
(U)	Current PBR/President's Budget	5.943	7.474	7.137
(U)	Total Adjustments	-0.172		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.172		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207697F Distributed Training and Exercises

PROJECT NUMBER AND TITLE: 5190 JFCOM Wargaming

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5190 JFCOM Wargaming	5.943	7.474	7.137	7.056	7.009	7.140	7.213	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. Air Force A5XS ensures accurate representation of air and space capabilities in joint activities, through modeling and simulation and wargaming activities.

This program is categorized in Budget Activity (BA) 7 because it supports the development efforts of operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Develops air and space wargaming specific functionality in existing simulation and analysis tools (e.g., JWARS, THUNDER/STORM)	1.585	1.692	1.710
(U) Provides for capabilities, Requirements, and Risk Assessment (CRRA)	1.580	1.730	1.840
(U) Enables entity-level simulation tools and effects-based modeling for Joint Concept Development and Experimentation	1.230	1.740	1.790
(U) Supplies platforms for software in operational environments and for programmed replacement costs	1.548	2.312	1.797
(U) Total Cost	5.943	7.474	7.137

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

All contracts will be awarded based on full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Various	TBD	TBD		5.943		7.474		7.137		Continuing	TBD	TBD
Subtotal Product Development			0.000	5.943		7.474		7.137		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	5.943		7.474		7.137		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 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207697F Distributed Training and Exercises	PROJECT NUMBER AND TITLE: 5190 JFCOM Wargaming

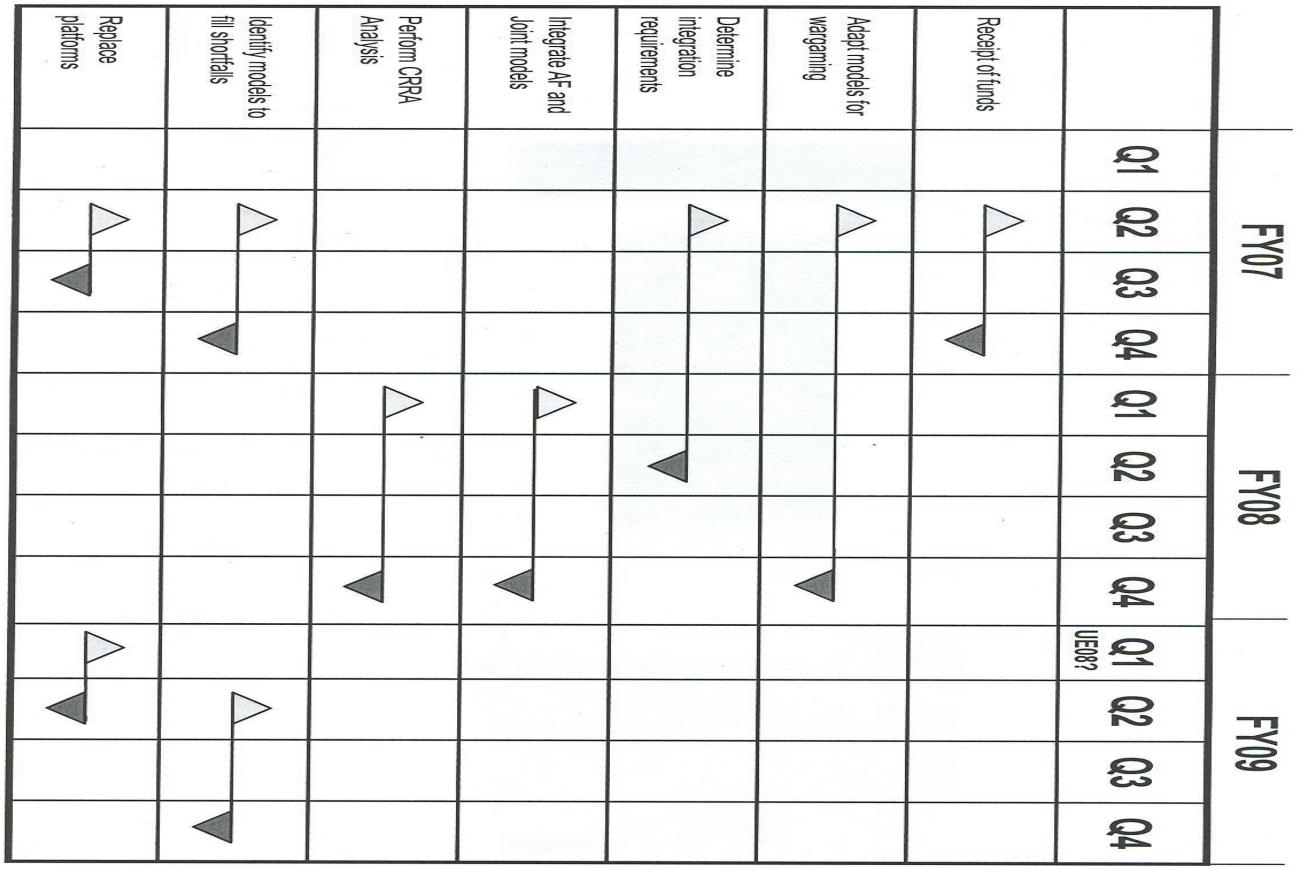

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207697F Distributed Training and Exercises	PROJECT NUMBER AND TITLE: 5190 JFCOM Wargaming

AF Liaison Office (LNO) to USJFCOM

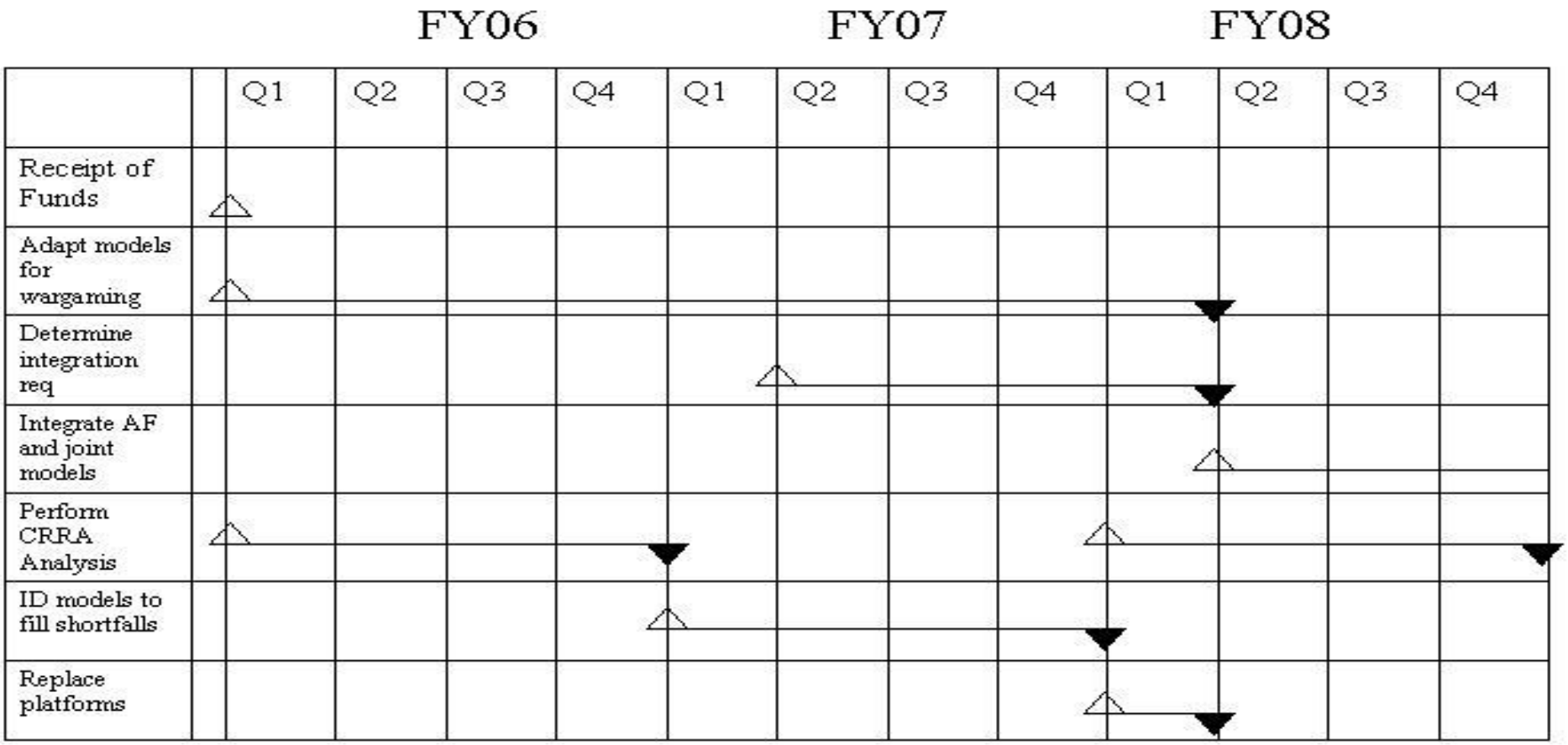

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207697F Distributed Training and Exercises**	PROJECT NUMBER AND TITLE **5190 JFCOM Wargaming**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Adapt STORM/THUNDER and JWARS for wargaming	1-4Q	1-4Q	1-4Q
(U) Determine other model integration/adaptation requirements	2-3Q	2-3Q	2-3Q
(U) Perform CRRA analysis biannually, integratin wargaming/CRAA processes.		1-4Q	
(U) Joint Concept Development and Implementation	3-4Q	3-4Q	3-4Q

PE NUMBER: 0208006F
PE TITLE: Mission Planning Systems

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0208006F Mission Planning Systems

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	139.217	104.575	97.560	98.574	99.261	101.224	101.635	Continuing	TBD
3858 Mission Planning Systems (MPS)	139.217	104.575	97.560	98.574	99.261	101.224	101.635	Continuing	TBD

FY2007 funding total includes $13.3M in GWOT supplemental.

(U) A. Mission Description and Budget Item Justification

Mission planning involves the creation of a flight plan based on threats, targets, terrain, weather, aircraft performance capability, and configuration. It is an essential task that must be completed prior to any fixed or rotary wing aircraft sortie. The planner must have the ability to plan weapon, cargo, passenger, and/or fuel delivery, calculate fuel requirements, and assess the route based on known enemy threat location and type. Mission planners must be able to optimize and de-conflict flight routes with other aircraft; review, print, and brief the mission plan; and download pertinent flight information to on-board aircraft avionics.

The Mission Planning Systems (MPS) program is a collaborative program with the Army and Navy to leverage technical solutions and business practices for all Department of Defense (DoD) platforms. It provides automated mission-planning tools and support for fixed and rotary wing aircraft and guided munitions. It will replace two closed architecture legacy mission planning systems (Unix-based MPS (Unix-MPS) and the PC-based Portable Flight Planning Software (PFPS)), with a single multi-service open architecture system more commonly referred to as the Joint Mission Planning System (JMPS). JMPS will enable the mission planning cycle to be compressed by providing an improved integrated planning environment, reducing the time required to respond to changing situations and urgent needs such as striking time sensitive/critical targets and conducting combat search and rescue. The JMPS development program will migrate a variety of Air Force aircraft, weapons, and airdrop payload systems from legacy mission planners to MPS. These systems include the A-10, B-1B, C-5, C-17, C-130, E-3, E-8, F-16, F-15, F-22A, KC-10, KC-135, RC-135, HH-60, and their associated weapons (e.g. Small Diameter Bomb (SDB), Joint Direct Attack Munitions (JDAM), Joint Stand Off Weapon (JSOW), Wind Corrected Munitions Dispenser (WCMD), Joint Air-to-Surface, Standoff Munitions (JASSM), etc…) and airdrop payloads. In addition, basic JMPS products have the potential to support all DoD fixed-wing and rotary-wing aircraft and will be shared with other AF programs as well as the Army and Navy. Additionally, elements of mission planning will be utilized to continue development of a Joint Precision Airdrop System (JPADS) in conjunction with the Army. JMPS will significantly benefit command and control performance by enhancing information superiority for the warfighter and by providing unique capabilities in support of both precision engagement and dominant maneuver.

JMPS uses an evolutionary acquisition approach, which emphasizes spiral development and the use of Increments (increment content is described below) to provide capabilities to individual AF platforms. Additionally, the JMPS architecture enables common components to be utilized by multiple service platforms and weapons systems where appropriate, thereby reducing duplicative software development efforts and increasing interoperability between services. Furthermore, JMPS is developed using a net centric strategy. The JMPS framework and common components will require continuous upgrades to: 1) reduce timelines for route planning; 2) transmit near real-time intelligence data to the platforms; 3) increase the accuracy of the mapping products; 4) provide a Windows-based, COTS-based, user friendly product; and 5) retain compatibility with platform changes to avionics and operational flight programs. Mission Planning increments and modernization efforts are as follows:

a. Increment II - completed the migration of the F-15 from the legacy Unix-MPS system with the fielding of the F-15 Suite 5 Mission Planning Environment (MPE) in November 2007. It also provided an initial JMPS product for the RC-135.

b. Increment III - continues the initial migration of additional aircraft platforms (F-22A, F-16, B-1B, A-10, and RC-135) and weapons (e.g. JASSM) to JMPS. It also upgrades the framework and develops new common components (e.g. Weather, Electronic Warfare, Airdrop, and Precision Guided Munitions) and unique platform capabilities for selected aircraft and weapons. Additionally, engineering studies will be conducted to plan and support the migration of future platforms to JMPS.

c. Increment IV - continues the JMPS migration effort by migrating Tanker Airlift Special Mission (TASM) aircraft [e.g. C-5, C-17, C-130, KC-10, KC-135, E-3, E-8], Mobility Air Forces (MAF) centralized planning systems, and the HH-60. It also upgrades the framework and several Common Components capabilities (e.g. Enhanced Air Refueling, Precision Guided Munitions Planning Software (PGMPS). In addition, Increment IV updates platforms that previously transitioned to JMPS (F-15, F-16, A-10, B-1B, and F-22A) to enable use of new capabilities inherent in aircraft Operational Flight Programs (OFPs). It will also continue to develop new unique platform capabilities while also conducting engineering studies to plan and support future MPS modernization efforts.

d. MPS Modernization - will develop new and improved mission planning capabilities for migrated platforms. It will also complete a variety of studies and analyses, including evaluating new Information Technology (IT) infrastructure technologies, in support of future system upgrades. In addition, the MPS modernization program will meet individual platform OFP requirements as specified by the Air Force. It will also develop and implement necessary enhancements to existing legacy systems to allow them to function effectively until they are replaced by JMPS.

The Mission Planning Systems program is in Budget Activity 7 because it provides for development of technologies and capabilities to support and ultimately replace the currently fielded PFPS and Unix-MPS systems.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	129.259	105.371	99.028
(U)	Current PBR/President's Budget	139.217	104.575	97.560
(U)	Total Adjustments	9.958		
(U)	Congressional Program Reductions		-0.129	
	Congressional Rescissions		-0.667	
	Congressional Increases	13.300		
	Reprogrammings			
	SBIR/STTR Transfer	-3.342		

(U) Significant Program Changes:

FY2007 funding total includes $13.3M in GWOT funds supplemental for Airdrop/Joint Precision Airdrop System (JPADS)

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3858	Mission Planning Systems (MPS)	139.217	104.575	97.560	98.574	99.261	101.224	101.635	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Mission planning involves the creation of a flight plan based on threats, targets, terrain, weather, aircraft performance capability, and configuration. It is an essential task that must be completed prior to any fixed or rotary wing aircraft sortie. The planner must have the ability to plan weapon, cargo, passenger, and/or fuel delivery, calculate fuel requirements, and assess the route based on known enemy threat location and type. Mission planners must be able to optimize and de-conflict flight routes with other aircraft; review, print, and brief the mission plan; and download pertinent flight information to on-board aircraft avionics.

The Mission Planning Systems (MPS) program is a collaborative program with the Army and Navy to leverage technical solutions and business practices for all Department of Defense (DoD) platforms. It provides automated mission-planning tools and support for fixed and rotary wing aircraft and guided munitions. It will replace two closed architecture legacy mission planning systems (Unix-based MPS (Unix-MPS) and the PC-based Portable Flight Planning Software (PFPS)), with a single multi-service open architecture system more commonly referred to as the Joint Mission Planning System (JMPS). JMPS will enable the mission planning cycle to be compressed by providing an improved integrated planning environment, reducing the time required to respond to changing situations and urgent needs such as striking time sensitive/critical targets and conducting combat search and rescue. The JMPS development program will migrate a variety of Air Force aircraft, weapons, and airdrop payload systems from legacy mission planners to MPS. These systems include the A-10, B-1B, C-5, C-17, C-130, E-3, E-8, F-16, F-15, F-22A, KC-10, KC-135, RC-135, HH-60, and their associated weapons (e.g. Small Diameter Bomb (SDB), Joint Direct Attack Munitions (JDAM), Joint Stand Off Weapon (JSOW), Wind Corrected Munitions Dispenser (WCMD), Joint Air-to-Surface, Standoff Munitions (JASSM), etc…) and airdrop payloads. In addition, basic JMPS products have the potential to support all DoD fixed-wing and rotary-wing aircraft and will be shared with other AF programs as well as the Army and Navy. Additionally, elements of mission planning will be utilized to continue development of a Joint Precision Airdrop System (JPADS) in conjunction with the Army. JMPS will significantly benefit command and control performance by enhancing information superiority for the warfighter and by providing unique capabilities in support of both precision engagement and dominant maneuver.

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in November 2007. It also provided an initial JMPS product for the RC-135.

b. Increment III - continues the initial migration of additional aircraft platforms (F-22A, F-16, B-1B, A-10, and RC-135) and weapons (e.g. JASSM) to JMPS. It also upgrades the framework and develops new common components (e.g. Weather, Electronic Warfare, Airdrop, and Precision Guided Munitions) and unique platform capabilities for selected aircraft and weapons. Additionally, engineering studies will be conducted to plan and support the migration of future platforms to JMPS.

c. Increment IV - continues the JMPS migration effort by migrating Tanker Airlift Special Mission (TASM) aircraft [e.g. C-5, C-17, C-130, KC-10, KC-135, E-3, E-8], Mobility Air Forces (MAF) centralized planning systems, and the HH-60. It also upgrades the framework and several Common Components capabilities (e.g. Enhanced Air Refueling, Precision Guided Munitions Planning Software (PGMPS). In addition, Increment IV updates platforms that previously transitioned to JMPS (F-15, F-16, A-10, B-1B, and F-22A) to enable use of new capabilities inherent in aircraft Operational Flight Programs (OFPs). It will also continue to develop new unique platform capabilities while also conducting engineering studies to plan and support future MPS modernization efforts.

d. MPS Modernization - will develop new and improved mission planning capabilities for migrated platforms. It will also complete a variety of studies and analyses, including evaluating new Information Technology (IT) infrastructure technologies, in support of future system upgrades. In addition, the MPS modernization program will meet individual platform OFP requirements as specified by the Air Force. It will also develop and implement necessary enhancements to existing legacy systems to allow them to function effectively until they are replaced by JMPS.

The Mission Planning Systems program is in Budget Activity 7 because it provides for development of technologies and capabilities to support and ultimately replace the currently fielded PFPS and Unix-MPS systems.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Increment III - Continues the migration of mission planning capability to JMPS	72.122	24.815	4.393
(U)	Increment III - Test, Training, and Certification	5.790	2.165	0.303
(U)	Increment III - FFRDC (Mitre)	3.788	1.770	0.214
(U)	Increment III - Program Office Support	7.155	3.119	0.428
(U)	Increment IV - Continues the migration of Mission Planning capability to JMPS	30.093	56.248	61.324
(U)	Increment IV - Test, Training, and Certification	2.411	5.051	8.539
(U)	Increment IV - FFRDC (Mitre)	1.578	4.130	6.038
(U)	Increment IV - Program Office Support	2.980	7.277	11.580
(U)	MPS Modernization			4.741
(U)	JPADS GWOT	13.300		
(U)	Total Cost	139.217	104.575	97.560

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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)

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Appn									
(U) OPAF PE 0208006F (Other Procurement Air Force, WSC 833040, Theater Air Control System Improvement)	28.855	16.870	24.902	32.285	25.720	25.267	23.896	Continuing	TBD

(U) D. Acquisition Strategy

Mission Planning Systems utilizes an evolutionary acquisition approach to develop and deliver an interoperable, network-centric, mission planning system tailored for numerous Air Force platforms using competition and multiple contract vehicles.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0208006F Mission Planning Systems**

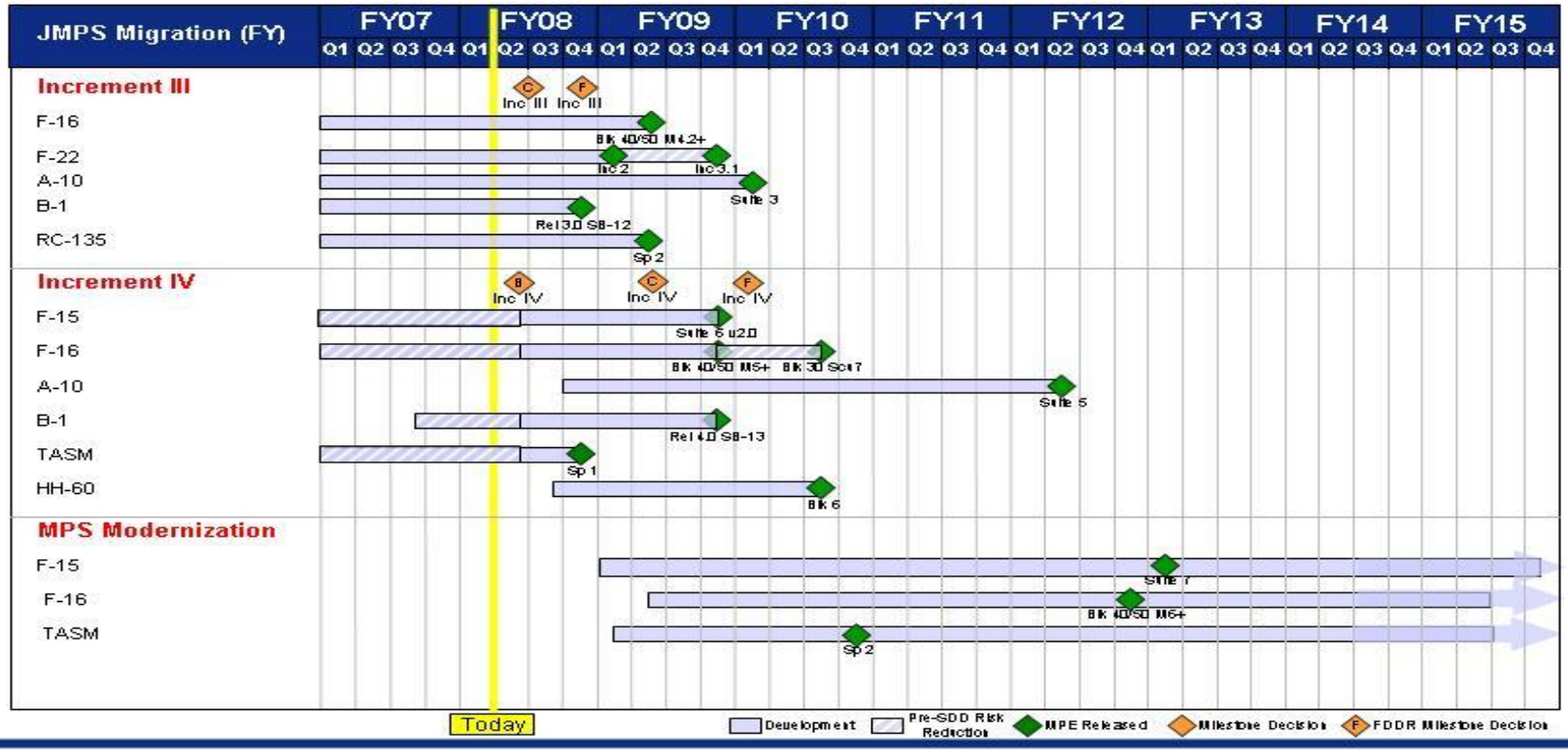
PROJECT NUMBER AND TITLE: **3858 Mission Planning Systems (MPS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Mission Planning Enterprise Contract	C/Various	Various	90.066	89.102	Nov-06	67.172	Nov-07	55.372	Nov-08	Continuing	TBD	TBD
Systems Engineering and Integration	C/Various	Various	34.494	13.810	Nov-06	13.890	Nov-07	9.845	Nov-08	Continuing	TBD	TBD
MPS Modernization	C/Various	Various						4.741	Nov-08		4.741	
JPADS GWOT	C/Various	Various	13.300	13.300	Jan-08					Continuing	TBD	
Subtotal Product Development			137.860	116.212		81.062		69.958		Continuing	TBD	TBD
Remarks:												
(U) Support												
Software Engineering Institute (SEI)	C/T&M	Pittsburgh, PA	0.957	0.478	Nov-06	0.325	Nov-07	0.456	Nov-08	Continuing	TBD	TBD
Tecolote	C/T&M	Bedford, MA	2.136	0.756	Nov-06	0.757	Nov-07	0.787	Nov-08	Continuing	TBD	TBD
Subtotal Support			3.093	1.234		1.082		1.243		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
46TW	PO	Eglin AFB, FL	16.831	6.188	Nov-06	5.738	Nov-07	7.114	Nov-08	Continuing	TBD	TBD
JITC	FFP/CPAF	Indian Head, MO		0.030	Jan-07	0.055	Jan-08	0.059	Jan-09	Continuing	TBD	TBD
Type I Training	FPAF	Hill AFB, UT	1.208	1.290	Nov-06	1.223	Nov-07	1.669	Nov-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			18.039	7.508		7.016		8.842		Continuing	TBD	TBD
Remarks:												
(U) Management												
FFRDC (MITRE)	SS/T&M	Bedford, MA	21.880	5.366	Nov-06	5.900	Nov-07	6.252	Nov-08	Continuing	TBD	TBD
Program Office Support	C/T&M	Various	30.048	8.897	Nov-06	9.515	Nov-07	11.265	Nov-08	Continuing	TBD	TBD
Subtotal Management			51.928	14.263		15.415		17.517		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			210.920	139.217		104.575		97.560		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0208006F Mission Planning Systems	PROJECT NUMBER AND TITLE: 3858 Mission Planning Systems (MPS)

JMPS Migration Plan

Delivering what we promised when we promised — *War-winning Capabilities…On Time, On Cost*



as of: 9 Jan 2008

Integrity - Service - Excellence

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(U) F-15A-E Suite 5 Fielding	3Q		
(U) FDDR for Increment II	3Q		
(U) A-10 Suite 3 Fielding			4Q
(U) F-16 (Block 40, M4.2+ and Block 50, M4.2+) MPE Release			2Q
(U) B-1 SB-12 MPE Release		4Q	
(U) Milestone C for Increment III		3Q	
(U) Milestone B for Increment IV		2Q	
(U) F-15 Suite 6 MPE Release			4Q
(U) TASM Spiral I MPE Release		4Q	
(U) Milestone C for Increment IV			2Q

PE NUMBER: 0208021F
PE TITLE: Information Warfare Support

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0208021F Information Warfare Support

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	28.028	11.965	12.220	12.482	12.664	14.734	15.036	Continuing	TBD
0374	Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt	16.031	11.965	12.220	12.482	12.664	14.734	15.036	Continuing	TBD
4871	Information Operations Technology	11.997	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

Funding for the Information Operations Planning Capability Joint (IOPC-J) BPAC 674871 transferred to JFCOM's PE 0303166D beginning in FY08.

(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 Counterspace 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 strategic courses of action for the Joint Forces Air Component Commander (JFACC) and create Air Operations Directives, Joint Air Operations Plans, Master Air Attack Plan and the Joint Integrated Prioritized Target List (JIPTL). AF specific IO and strategy planning functions may continue under requirements being explored by Air Combat Command during JEFX-08 that will include kinetic and IO effects.

CCS provides ground-based deployable capabilities for denying satellite communications to our adversaries.

RAIDRS provides a family of ground-based systems that rapidly detect, locate, characterize, identify and report attacks against DoD-used space assets.

The Counterspace effort provides 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 and continued research to identify existing military and commercial efforts which can satisfy unfulfilled operational requirements for IO planning and integration.

This program is in Budget Activity 7, Operational System Development, because it studies, develops, and fields IO tools.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208021F Information Warfare Support

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	24.649	12.111	12.322
(U)	Current PBR/President's Budget	28.028	11.965	12.220
(U)	Total Adjustments	3.379	-0.146	
(U)	Congressional Program Reductions	0.000	-0.069	
	Congressional Rescissions	0.000	-0.077	
	Congressional Increases			
	Reprogrammings	4.051		
	SBIR/STTR Transfer	-0.672		

(U) Significant Program Changes:

In FY07 the program received additional funding as a SECAF directed effort to provide required electronic support and intelligence capabilities in support of counterspace operations and Information Operations development activities.

Funding decreased in FY08 - 13 as a result of the Information Operations Planning Capability Joint (IOPC-J) BPAC 674871 transfer to JFCOM's PE 0303166D beginning in FY08.

FY08 - 13 funding decrease in BPAC 670374 as a result of realignment of IW Support to JFCOM's PE 0303166D.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
0374	Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt	16.031	11.965	12.220	12.482	12.664	14.734	15.036	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

FY08 - 13 funding decrease in BPAC 670374 as a result of alignment and correction of IW Support to JFCOM's PE 0303166D.

(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 strategic courses of action for the Joint Forces Air Component Commander (JFACC); create Air Operations Directives (AOPs) and Joint Air Operator Plans (JAOPs); 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 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 growth as the virtual world grows and cyber operations change. 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.

IWPC will complete development, testing and fielding in FY07-FY08 concluding with version 4.2. Following final acceptance, AF sites will receive a technical refresh of all previously fielded versions of software to version 4.2. Combatant Comand (COCOM) IWPC sites will utilize FY07 funds provided by OSD to upgrade to version 4.2. Until agreements are finalized with JFCOM only AF sites will be sustained after FY07. Sustainment of IWPC will continue through FY12 with recurring technology refreshes being fielded.

The Counterspace effort will provide Electronic Support (ES) for key find, fix, track, target, engage, and assess (F2T2EA) requirements supporting counterspace activities and also performs developmental intelligence collection to support new capability acquisition and development. This project funds transportable intelligence collection and analysis capabilities that are modular (plug-and-play), and can keep pace with technological advances and emerging threats. It also supports phased threat system analysis and studies (A&S), test support, lab equipment, and Material Acquisition and Exploitation (MAE) for system development and vulnerability/susceptibility assessments to support tactics, techniques and procedures (TTP) development, and future threat technology studies necessary for mission area success and achievement of space superiority.

This project is in Budget Activity 7, Operational System Development, because it studies, develops, and demonstrates IO prototypes. It identifies existing military and commercial research and development efforts which can satisfy unfulfilled operational requirements for an IO planning and integration tool.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007	FY 2008	FY 2009
(U)	IWPC Specialty Engineering Support	5.158	0.706	0.699
(U)	IWPC Software Testing and Evaluation	0.539	0.310	0.316
(U)	Advisory & Assistance Service (A&AS)	0.675	0.680	0.702
(U)	IWPC MITRE Support	0.528	0.530	0.535
(U)	Program Office Costs	0.116	0.135	0.137
(U)	Counterspace Electronic Support/Intelligence	9.015	9.604	9.831
(U)	Total Cost	16.031	11.965	12.220

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	IWPC Operations & Maintenance, AF (3400) PE 0208021	1.154	0.885	0.900	0.900	0.900	0.900	0.900	Continuing	TBD
(U)	Counterspace Electronic Support and Intelligence Operations and Maintenance (3400) PE 0208021F	12.330	12.603	12.739	12.954	13.173			Continuing	TBD

(U) D. Acquisition Strategy

IWPC will use an evolutionary acquisition strategy using contracts awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
A&AS	Various	Lackland AFB TX		0.675	Oct-06	0.680	Oct-07	0.702	Oct-08	Continuing	TBD	TBD
IWPC Development Contract	Various	General Dynamics, Lackland AFB TX/Santa Clara CA; FY08 TBD		5.158	Oct-06	0.706	Oct-07	0.699	Oct-08	Continuing	TBD	TBD
IWPC MITRE Support	Various	MITRE, Lackland AFB TX		0.528	Oct-06	0.530	Oct-07	0.535	Oct-08	Continuing	TBD	TBD
Counterspace Electronic Support Intel R&D	TBD	TBD		9.015	Nov-06	9.604	Nov-07	9.831	Nov-08	Continuing	TBD	TBD
Program Office Costs	Various	Lackland AFB TX		0.116	Oct-06	0.135	Oct-07	0.137	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	15.492		11.655		11.904		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
IWPC Development Test	T&M	46th Test Squadron, Eglin AFB FL		0.539	Nov-06	0.310	Nov-07	0.316	Nov-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.539		0.310		0.316		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	16.031		11.965		12.220		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208021F Information Warfare Support	PROJECT NUMBER AND TITLE 0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt

CS ES & Intel Program Schedule

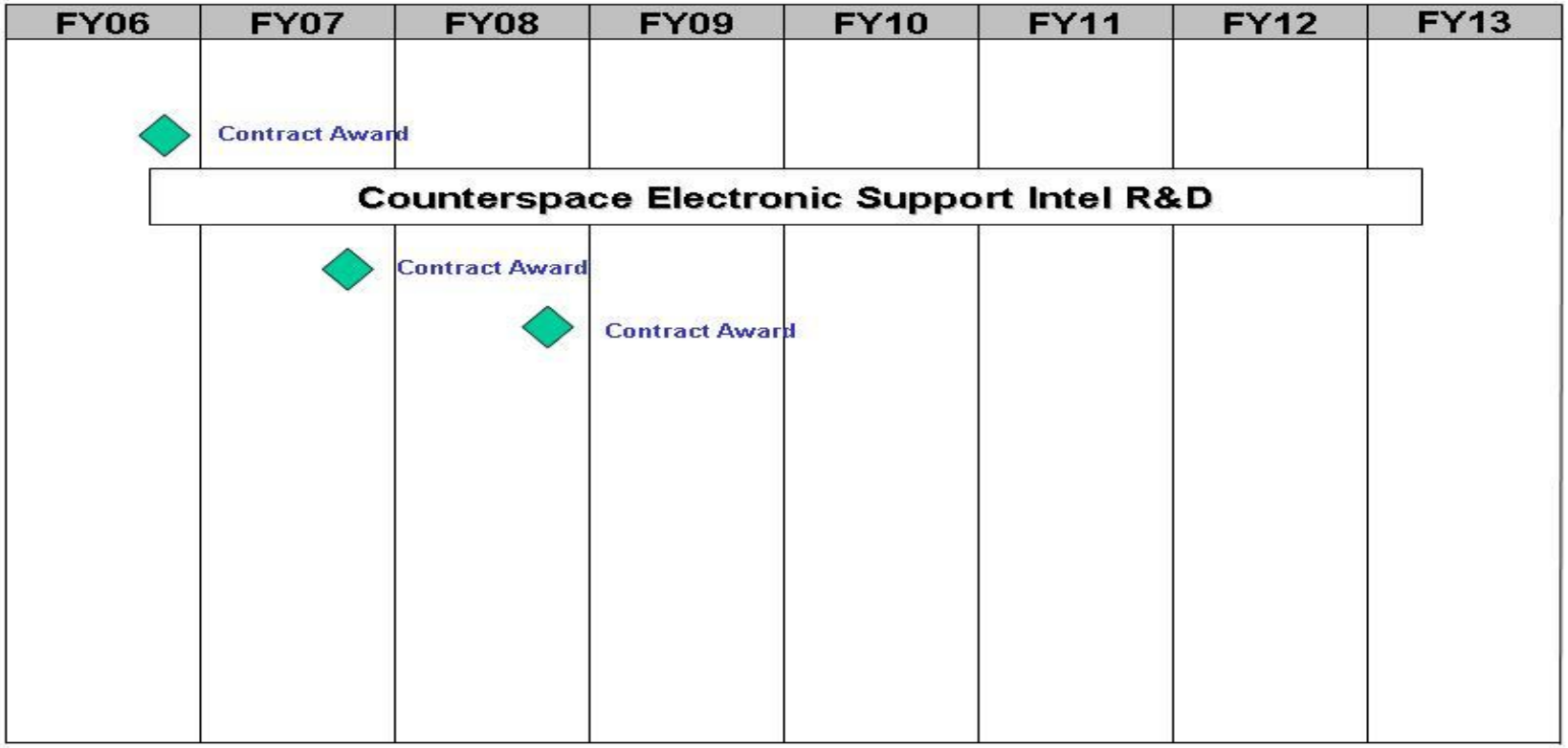

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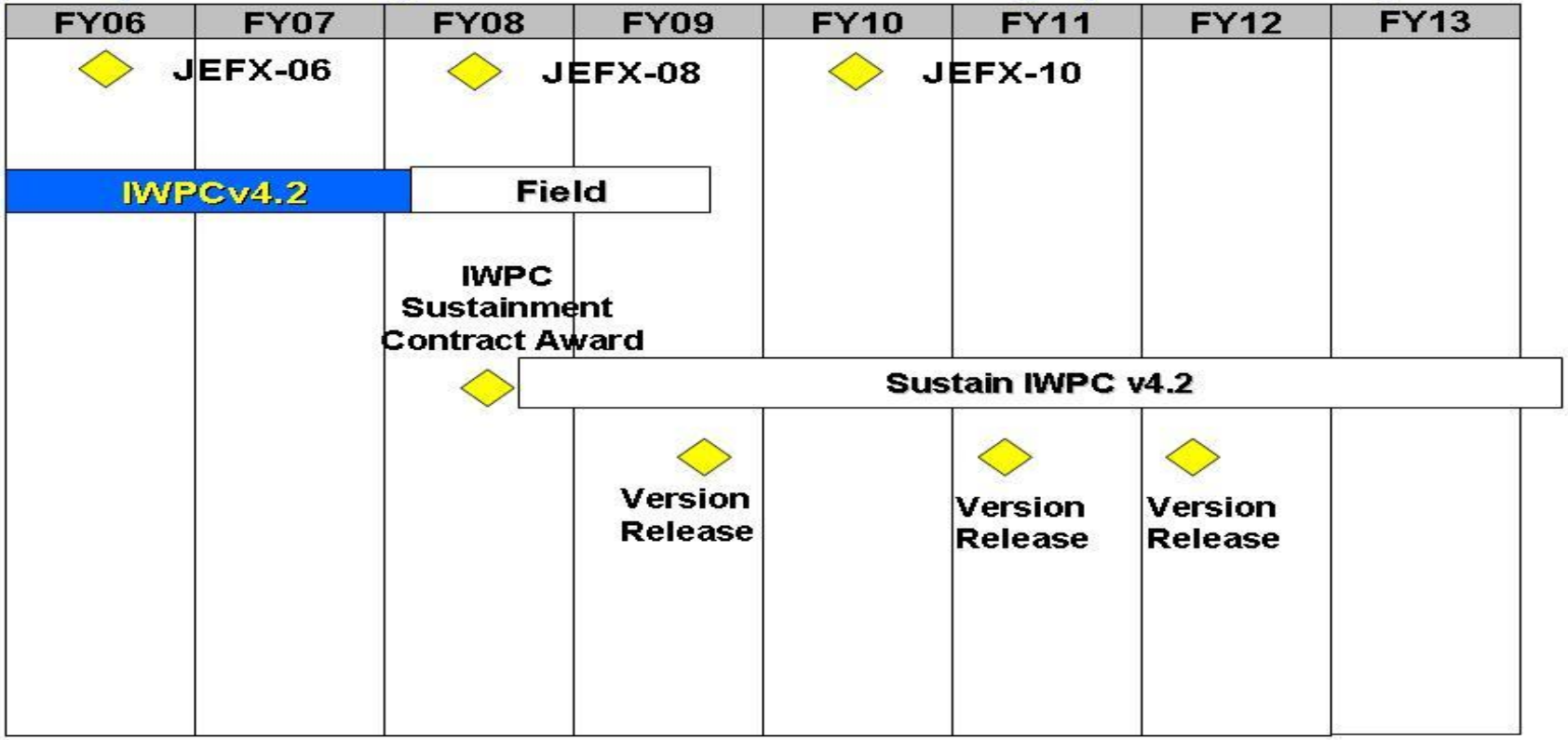
Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208021F Information Warfare Support	PROJECT NUMBER AND TITLE 0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt

IWPC Program Schedule

Delivering what we promised when we promised — *War-winning Capabilities…On Time, On Cost*



Integrity - Service - Excellence

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(U) IWPC v4.2 Development, Test & Integration	1-4Q	1-2Q	
(U) IWPC v4.2 Fielding		2-4Q	1-3Q
(U) JEFX 08		2Q	
(U) IWPC 4.0 Sustainment Contract Award	2Q		
(U) IWPC v4.0 and v4.2 Sustainment	2-4Q	1-4Q	1-4Q
(U) Counter Space Electronic Support (CS ES) & Intel Program	1Q	1Q	1Q
(U) Intel Support and R&D	1-4Q	1-4Q	1-4Q
(U) Contract Award	4Q		
(U) Contract Award		4Q	

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0208021F Information Warfare Support

PROJECT NUMBER AND TITLE: 4871 Information Operations Technology

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4871 Information Operations Technology	11.997	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		

Funding for the Information Operations Planning Capability Joint (IOPC-J) BPAC 674871 transferred to JFCOM's PE 0303166D beginning in FY08.

(U) A. Mission Description and Budget Item Justification

The Information Operations Planning Capability (IOPC-J) is a suite of tools developed to a joint integrated baseline. It leverages existing capabilities but also requires system and software development activities. The suite is 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 have already been completed that accommodate joint IO applications and are a possible follow-on to the AF's Information Warfare Planning Capability 4.X. The Information Warfare Planning Capability (IWPC) v4.2 serves as an initial joint capability, and an incremental pathfinder for the first developmental version of IOPC-J's baseline capabilities containing the complete AOC strategy to task planning.

This project funds development 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 2007	FY 2008	FY 2009
(U) IOPC-J Software Development and Integration	6.261	0.000	0.000
(U) Site Integration	0.985	0.000	0.000
(U) IOPC-J Software Testing and Evaluation	0.700	0.000	0.000
(U) Project Suter	4.051	0.000	0.000
(U) Total Cost	11.997	0.000	0.000

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) IW Supt Operations and maintenance, AF 3400 and PE 0208021	2.177	0.823	0.755	0.788	0.732	0.721	0.709	Continuing	TBD

(U) D. Acquisition Strategy

All major contracts will be awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
IOPC-J Software Development	Various	General Dynamics, Lackland AFB, TX/Santa Clara CA	6.477	1.395	May-07	0.000	N/A	0.000		Continuing	TBD	TBD
Site Integration	Various	General Dynamics, Lackland AFB, TX/Santa Clara CA	0.000	0.985	May-07	0.000	N/A				0.985	
Project Suter Development	Various	Wright-Patterson AFB, OH	0.000	4.051	Aug-07	0.000	N/A				4.051	
Subtotal Product Development			6.477	6.431		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Support												
Program Management/Technical Support	A&AS	Various, LAFB, TX	0.294	0.869	Feb-07	0.000	N/A			Continuing	TBD	TBD
Engineering Support	FFRDC	MITRE, Lackland, TX	0.311	0.287	Mar-07	0.000	N/A				0.598	
JFCOM	Various	JFCOM/J7, Suffolk, VA	0.000	3.626		0.000					3.626	
Subtotal Support			0.605	4.782		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Software Testing & Evaluation and Exercise Support	Various	Various	0.000	0.700						Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.700		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Management												
Operating Costs		OL-AA 950 ELSG, Lackland AFB, TX	0.026	0.084						Continuing	TBD	TBD
Subtotal Management			0.026	0.084		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			7.109	11.997		0.000		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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

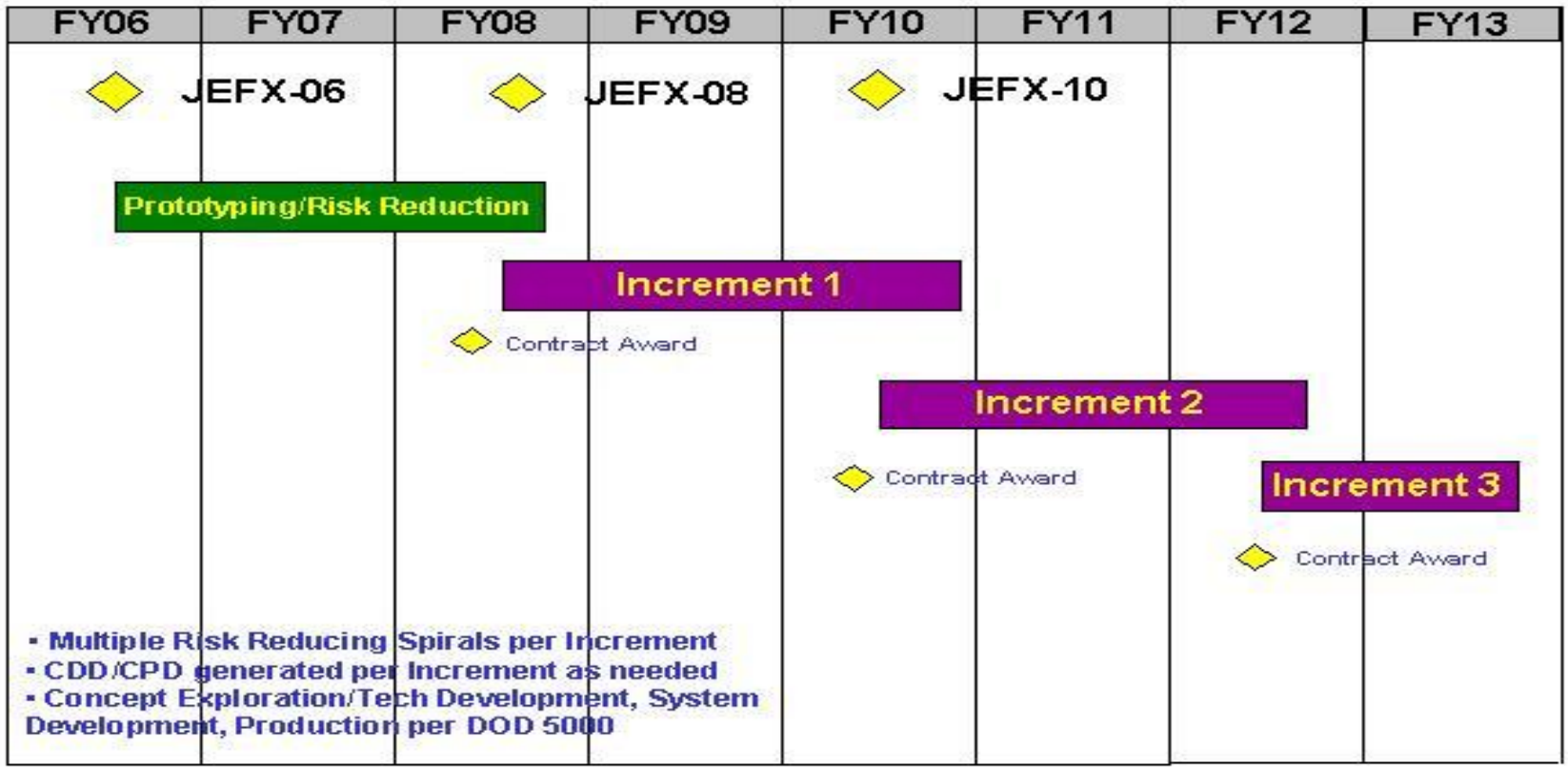


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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0208021F Information Warfare Support	PROJECT NUMBER AND TITLE: 4871 Information Operations Technology

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Prototyping/Risk Reduction	1-4Q	1-3Q	
(U) JEFX 08		3Q	
(U) Increment 1 Contract Award		2Q	
(U) IOPC-J Software Increment 1		3-4Q	1-4Q

PE NUMBER: 0302015F
PE TITLE: E-4B NATIONAL AIRBORNE OPERATIONS CENTER

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	2.728	19.406	4.069	11.554	4.622	1.846	5.983	0.000	210.293
4777 E-4B Aircraft Modernization	2.728	19.406	4.069	11.554	4.622	1.846	5.983	0.000	210.293

(U) A. Mission Description and Budget Item Justification

The E-4B National Airborne Operations Center (NAOC) modernization program upgrades the fleet of highly modified Boeing 747-200 aircraft to add new capabilities and improve reliability for its primary missions. The E-4B NAOC fleet satisfies the military need for an airborne operations center with communications capabilities that permit military and civilian leadership to monitor and control military and civil national assets during all phases of nuclear and non-nuclear conflict or natural disaster. The E-4B NAOC fleet also satisfies the military requirement to provide a highly survivable alternate operations center to the National Military Command Center (NMCC). 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 mission.

Developmental modifications currently underway or planned for accomplishment under this program include:

- The E-4B NAOC Aircraft Replacement Analysis of Alternatives (AoA) will analyze the cost, effectiveness, risk and affordability of various airframes mated with a mission package for replacement of the E-4B to support NAOC missions in 2020 and beyond as directed by the Deputy Secretary of Defense.

- The STU III Replacement project will replace the current Secure Telephone Units III (STU III) on board the E-4B with a more reliable secure voice system. The National Security Agency (NSA) has set a sunset date for the STU IIIR driving the need for a secure voice system that is certified for aircraft use. This modification will integrate a secure voice system that is certified for aircraft use into the E-4B.

- The C3 UHF Digitization upgrade will replace the analog Ultra High Frequency (UHF) link with a digital link to provide Internet Protocol (IP) based connectivity to unclassified and SECRET Internet as well as provide video teleconference (VTC) and Voice Over Internet Protocol (VOIP) capabilities. This modification is required for digital operation over the Northstar Ground Entry Point Network, which provides more flexibility and utility that the current UHF/Frequency Division Modulation (UHF/FDM) system. This modification will replace existing analog modems, routers, and High Assurance IP Encryptor (HAIPE) devices with digital modems, routers, and HAIPE devices.

The E-4B program is categorized as a Budget Activity 7 - Operational System Development, because it develops modifications for a fielded system.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.282	19.406	4.105
(U)	Current PBR/President's Budget	2.728	19.406	4.069
(U)	Total Adjustments	2.446		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings	2.446		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

$2.446M was added to the program for the E-4B NAOC Aircraft Replacement Analysis of Alternatives (AoA).

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4777 E-4B Aircraft Modernization	2.728	19.406	4.069	11.554	4.622	1.846	5.983	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 highly modified Boeing 747-200 aircraft to add new capabilities and improve reliability for its primary missions. The E-4B NAOC fleet satisfies the military need for an airborne operations center with communications capabilities that permit military and civilian leadership to monitor and control military and civil national assets during all phases of nuclear and non-nuclear conflict or natural disaster. The E-4B NAOC fleet also satisfies the military requirement to provide a highly survivable alternate operations center to the National Military Command Center (NMCC). 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 mission.

Developmental modifications currently underway or planned for accomplishment under this program include:

- The E-4B NAOC Aircraft Replacement Analysis of Alternatives (AoA) will analyze the cost, effectiveness, risk and affordability of various airframes mated with a mission package for replacement of the E-4B to support NAOC missions in 2020 and beyond as directed by the Deputy Secretary of Defense.

- The STU III Replacement project will replace the current Secure Telephone Units III (STU III) on board the E-4B with a more reliable secure voice system. The National Security Agency (NSA) has set a sunset date for the STU IIIR driving the need for a secure voice system that is certified for aircraft use. This modification will integrate a secure voice system that is certified for aircraft use into the E-4B.

- The C3 UHF Digitization upgrade will replace the analog Ultra High Frequency (UHF) link with a digital link to provide Internet Protocol (IP) based connectivity to unclassified and SECRET Internet as well as provide video teleconference (VTC) and Voice Over Internet Protocol (VOIP) capabilities. This modification is required for digital operation over the Northstar Ground Entry Point Network, which provides more flexibility and utility that the current UHF/Frequency Division Modulation (UHF/FDM) system. This modification will replace existing analog modems, routers, and High Assurance IP Encryptor (HAIPE) devices with digital modems, routers, and HAIPE devices.

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 2007	FY 2008	FY 2009
(U) E-4B NAOC Aircraft Replacement Analysis of Alternatives (AoA)	2.728		
(U) C-3 UHF - Prototype design, kit manufacturing, install, and test		2.891	3.734
(U) STU III - Prototype design, kit manufacturing, install, and test		15.157	
(U) Test plan development and test execution			0.050

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	SPO support (A&AS) and travel		1.358	0.285
(U)	Total Cost	2.728	19.406	4.069

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Aircraft Procurement AF, Budget Activity 5, Weapon System Code E00400, PE 0302015F; Mod 4389 C-3 UHF Digitization			2.470	2.354					
(U) Aircraft Procurement AF, Budget Activity 5, Weapon System Code E00400, PE 0302015F; Mod 4393 STU III Replacement			12.662						

(U) D. Acquisition Strategy

Implementation of modifications will be contracted under the sole source Product Support Integration (PSI) with Boeing - Wichita.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

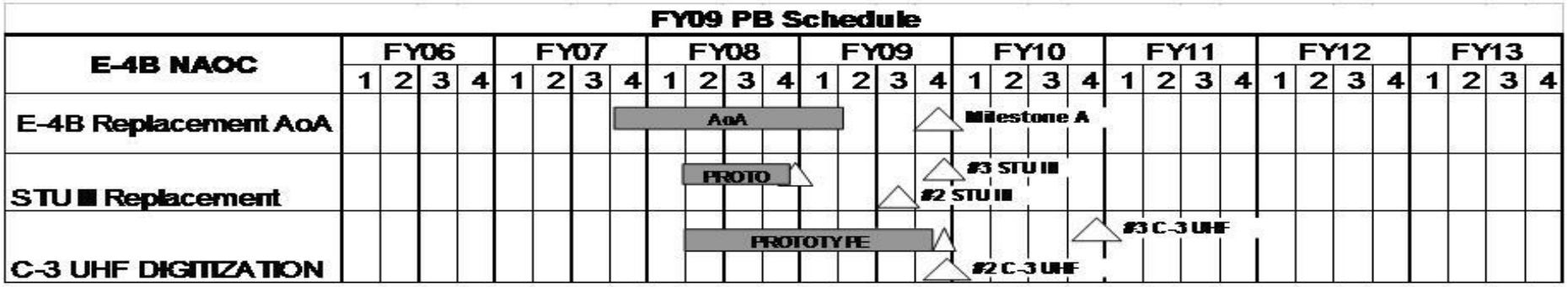
BUDGET ACTIVITY: 07 Operational System Development

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
STU III replacement integration and testing	CPIF	Boeing, Wichita Development & Modification Center, Wichita, KS				15.157	Feb-08	3.734	Jan-09		18.891	18.891
C-3 UHF Digitization integration and testing	CPIF	Boeing, Wichita Development & Modification Center, Wichita, KS				2.891	Feb-08				2.891	2.891
Subtotal Product Development			0.000	0.000		18.048		3.734		0.000	21.782	21.782
Remarks:												
(U) Support												
Management and analysis support for AoA	MIPR to DISA	Booz Allen Hamilton, McLean, VA		2.728	Jul-07						2.728	2.728
Subtotal Support			0.000	2.728		0.000		0.000		0.000	2.728	2.728
Remarks:												
(U) Test and Evaluation												
Modification test plan development and test execution	MIPR to DISA	DISA						0.050			0.050	0.500
Subtotal Test and Evaluation			0.000	0.000		0.000		0.050		0.000	0.050	0.500
Remarks:												
(U) Management												
E-4B Program Office contractor support	Small Business T&M	Chickasaw Nation Industries, Inc., Oklahoma City, OK				1.358	Jan-08	0.285	Jan-09	Continuing	TBD	TBD
Subtotal Management			0.000	0.000		1.358		0.285		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	2.728		19.406		4.069		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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



AoA: Analysis of Alternatives
STU: Secure Telephone Units
C-3: Command, Control, and Communications
UHF: Ultra High Frequency

Planned Activity(s)
Completed Activity
Completed Event
Planned Event

As of: 11 Jan 08

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
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 2007	FY 2008	FY 2009
(U) E-4B NAOC Aircraft Replacement AoA	4Q	1-4Q	1Q
(U) Milestone A for E-4B NAOC Aircraft Replacement			4Q
(U) C-3 UHF Digitization Prototype dev begins (design & kit)		2-4Q	
(U) -- C-3 UHF Digitization Prototype dev continues & install			1-4Q
(U) STU III protoype development		2-4Q	

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PE NUMBER: 0303112F
PE TITLE: AIR FORCE COMMUNICATIONS

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303112F AIR FORCE COMMUNICATIONS

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	2.009	0.000	0.014	0.004	0.004	0.000	0.000	0.000
4787 Information Systems	0.000	2.009	0.000	0.014	0.004	0.004	0.000	0.000	0.000

(U) A. Mission Description and Budget Item Justification

Air Force Communications Agency's Airborne Networking Integration effort horizontally synchronizes existing and future airborne networking (AN) projects with mission priorities to deliver enhanced combat capability and transform to net-centric warfare. This project is in Budget Activity 07, Operational System Development, because it addresses integration and transition of airborne networking capabilities to a network-centric environment.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.000	0.000	0.000
(U)	Current PBR/President's Budget	0.000	2.009	0.000
(U)	Total Adjustments	0.000		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303112F AIR FORCE COMMUNICATIONS

PROJECT NUMBER AND TITLE: 4787 Information Systems

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4787 Information Systems	0.000	2.009	0.000	0.014	0.004	0.004	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

Air Force Communications Agency's Airborne Networking Integration effort horizontally synchronizes existing and future airborne networking (AN) projects with mission priorities to deliver enhanced combat capability and transform to net-centric warfare. This project is in Budget Activity 07, Operational System Development, because it addresses integration and transition of airborne networking capabilities to a network-centric environment.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Intiate/continue capabilities-based end-to-end enterprise services and network management analysis	0.000	1.000	
(U) Initiate/continue modeling & simulation of airborne networking capabilites		1.009	
(U)			
(U) Total Cost	0.000	2.009	0.000

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

The Airborne Networking Integration effort will use a mixture of fixed-price and cost-reimbursement contracts for enterprise services and network management anaylsis. Fee-for-service entities such as Air Force Integrated Collaborative Environment will provide modeling, simulation and analysis support.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303112F AIR FORCE COMMUNICATIONS**

PROJECT NUMBER AND TITLE: **4787 Information Systems**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
											0.000	
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Support												
Enterprise Services and Network Management Analysis	TBD	ESC Hanscom AFB, MA				1.000	Oct-07			Continuing	TBD	TBD
Subtotal Support			0.000	0.000		1.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Airborne Networking Modeling/Simulation	MIPR	AFMC WPAFB, OH				1.009	Dec-07			Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		1.009		0.000		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	0.000		2.009		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303112F AIR FORCE COMMUNICATIONS	PROJECT NUMBER AND TITLE 4787 Information Systems

Exhibit R-4 BPAC 4787 Airborne Networking Integration

ID	Task Name
1	**Mission Thread Analysis**
2	Analyze Global Strike Missions
3	Analyze Global Mobility Missions
4	
5	**Mission Thread Model and Simulation**
6	M&S of Global strike Missions
7	M&S of Global Mobility Missions

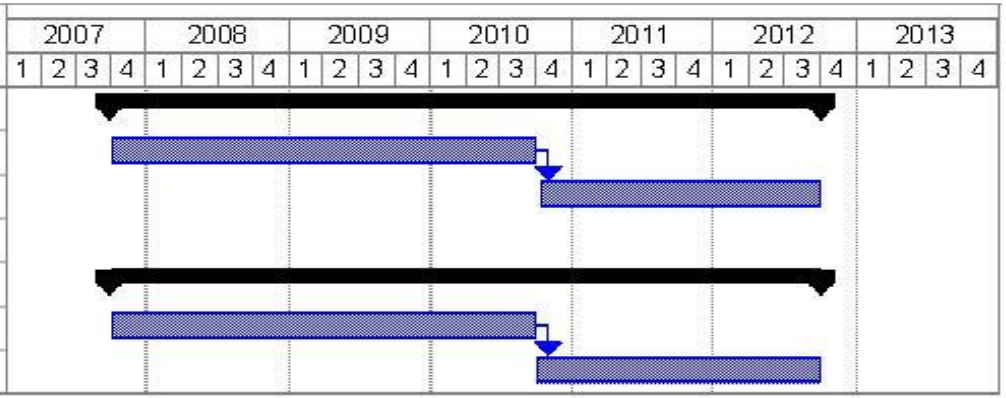

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303112F AIR FORCE COMMUNICATIONS**	PROJECT NUMBER AND TITLE **4787 Information Systems**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Enterprise Services and Network Management Analysis		1-4Q	

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PE NUMBER: 0303131F
PE TITLE: Minimum Essential Emergency Communications Network (MEECN)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303131F Minimum Essential Emergency Communications Network (MEECN)

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	64.556	88.224	70.995	9.762	9.839	7.859	4.623	Continuing	TBD
2832	MEECN System Improvements	2.873	2.308	2.223	2.991	2.515	2.562	2.616	Continuing	TBD
4610	Minuteman MEECN Program (MMP)	18.716	27.383	29.887	6.771	0.002	0.002	0.002	0.000	TBD
5047	Ground Element MEECN System (GEMS)	42.967	58.533	38.885	0.000	7.322	5.295	2.005	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. There are three on-going MEECN activities working to modernize strategic forces' communication networks.

- MEECN Systems Improvements (MSI) is a long-range planning process with Users (Air Combat Command (ACC), Air Force Space Command (AFSPC), and the Navy) to develop positions for current and future requirements/issues based on available technology.
- Minuteman MEECN Program (MMP) is the combination of Minuteman ICBM Launch Control Center (LCC) Very Low Frequency/Low Frequency (VLF/LF) upgrade efforts along with a new Minuteman ICBM LCC Extremely High Frequency (EHF) communications capability. The MMP system will be upgraded to provide a capability for the Missile Combat Crew Members to have operator control of the terminal in the LCC to switch among various EHF/AEHF satellite constallations and be compatible with Advanced EHF (AEHF). AEHF is an Extended Data Rate (XDR) waveform that provides more secure transmit/receive at frequencies above 20 GHz.
- Ground Element MEECN Systems (GEMS) provides a secure, survivable inter-site and intra-site and mobile VLF and EHF communication to bomber, tanker, reconnaissance units and other communications facilities with strategic responsibilities. GEMS replaces existing mission-deficient systems. GEMS will also be upgraded to AEHF with the XDR waveform.

This program is Budget Activity 07, Operational System Development, because it supports work on currently fielded weapon systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	63.765	103.846	32.818
(U)	Current PBR/President's Budget	64.556	88.224	70.995
(U)	Total Adjustments	0.791		
(U)	Congressional Program Reductions		-15.622	
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings	2.487		
	SBIR/STTR Transfer	-1.696		

(U) Significant Program Changes:

FY 08: Restructure of GEMS Program due to $15.622M congressional reduction.

FY 09: Restructure of GEMS Program due to late delivery of security software/hardware.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0303131F Minimum Essential Emergency Communications Network (MEECN)	2832 MEECN System Improvements

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2832 MEECN System Improvements	2.873	2.308	2.223	2.991	2.515	2.562	2.616	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.
- Trade-off analysis is performed to identify benefits and drawbacks of maintaining current systems. Studies are conducted to monitor communications system technology and potential integration complexities into current and future capabilities. The MEECN architecture is currently evaluating/planning modernization of the VLF/LF cryptographic capability and the application of using Defense Injection Reception Emergency Action Message (EAM) Command and Control (C2) Terminal (DIRECT) in mobile configurations and the Distributed Ground Network command and control nodes.
- MSI provides pro-active support to the Nuclear and National C2 community:
  -- Supports the ASD/NII study on a Distributed Ground Network for New Triad Missions
  -- Develops an Air Force National Command and Control (NC2) Roadmap for FY10 POM budget inputs
  -- Provides support for JCS Vol VII Emergency Action Message (EAM) updates
- This program is in Budget Activity 07, Operational System Development, because it supports work on currently fielded weapon systems.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	CEP Analysis	0.250		
(U)	Nuclear Command & Control Performance Study (NC2 Roadmap) & simulator for testing of communication architectures	1.728	0.903	0.800
(U)	Vol VII EAM format updates	0.300	0.550	0.550
(U)	Analytical Support	0.595	0.855	0.873
(U)	Total Cost	2.873	2.308	2.223

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) None									

(U) D. Acquisition Strategy

Johns Hopkins University (JHU) Applied Physics Lab (APL) is on contract to provide an NC2 Roadmap in terms of the New Triad. An AEHF satellite simulator (test equipment) was acquired through MIT Lincoln Labs.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
CEP Analysis	MIPR	JHU APL, Laurel, MD	0.555	0.250	Oct-06					Continuing	TBD	
NC2 Roadmap	MIPR	JHU APL, Laurel, MD	0.730	0.755	Dec-06	0.903	Dec-07	0.800	Dec-07	Continuing	TBD	
Simulation/Modeling Equipment	MIPR	Lincoln Labs, Bedford, MA	1.251	0.973	Nov-06						2.224	
Vol VII EAM Format Updates		GDCS, Needham, MA		0.300		0.550	Jun-08	0.550	Jun-09		1.400	
Subtotal Product Development			2.536	2.278		1.453		1.350		Continuing	TBD	0.000
Remarks:												
(U) Support												
SE/TA Integrated Technical Support Program (ITSP)	Various	Various	6.480	0.595	Dec-06	0.855	Dec-07	0.873	Dec-08	Continuing	TBD	
MITRE	LOE	Bedford, MA	0.633								0.633	
											0.000	
Subtotal Support			7.113	0.595		0.855		0.873		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	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			9.649	2.873		2.308		2.223		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **2832 MEECN System Improvements**

MSI Schedule

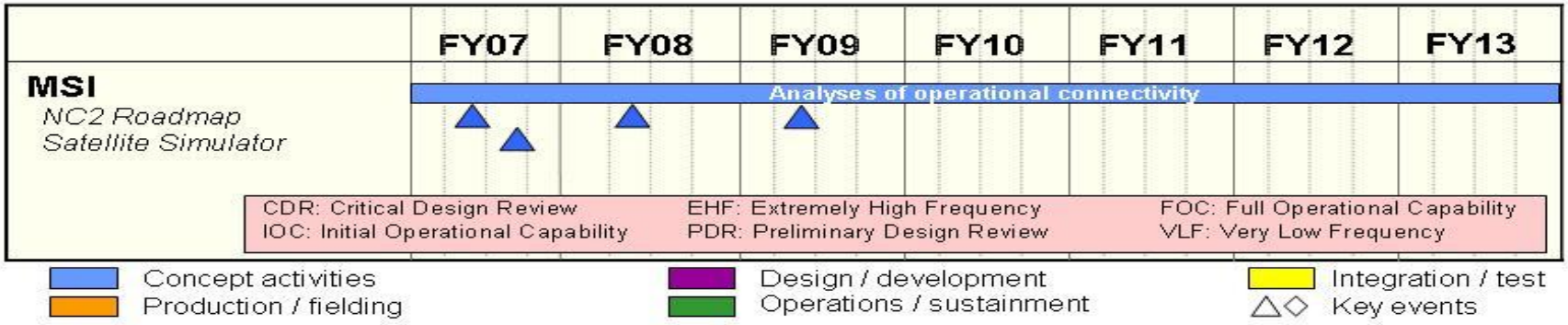


Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303131F Minimum Essential Emergency Communications Network (MEECN)	PROJECT NUMBER AND TITLE: 2832 MEECN System Improvements

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) NC2 Roadmap Outbriefs	2Q	2Q	2Q
(U) AEHF Satellite Simulator	3Q		

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303131F Minimum Essential Emergency Communications Network (MEECN)	PROJECT NUMBER AND TITLE: 4610 Minuteman MEECN Program (MMP)

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4610 Minuteman MEECN Program (MMP)	18.716	27.383	29.887	6.771	0.002	0.002	0.002	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 MMP effort replaces the Ultra High Frequency (UHF) satellite link with a MILSTAR EHF link and adds a High Data Rate (HIDAR) capability for VLF/LF.

The MMP system will be upgraded to provide a capability for Missile Combat Crew Members to have operator control of the terminal in the Launch Control Center to switch among various EHF/AEHF satellite constellations 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.

The terminal operator control modification will allow missile combat crews to transition between MILSTAR, UFO/E and UFO/EE satellite constallations without dispatch of a maintenance team. These modifications comply with USSTRATCOM requirement for MMP terminals to communicate at higher data rates.

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 2007	FY 2008	FY 2009
(U) MMP Upgrade Technology Development	15.797		
(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).	0.541	24.324	25.831
(U) Analytical Support	2.378	3.059	4.056
(U) Total Cost	18.716	27.383	29.887

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) MPAF, Missile Modifications (MEECN, PE 0303131F, BA 03, P-012)					32.870	24.614	10.407		67.891

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **4610 Minuteman MEECN Program (MMP)**

(U) D. Acquisition Strategy

The ICBM Prime Integrating Contract (through OO-ALC, Hill AFB, UT) was used as a contracting vehicle for the Minuteman MEECN Program (MMP) and will continue to be used to provide an advisory role for integration support for the MMP Upgrade program.

Two Concept and Technology Demonstration (C&TD) contracts were awarded to separate vendors following full and open competition. The MMP Upgrade System Development Demonstration (SDD) effort is a full and open competition and currently in source selection.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
MMP Development	SS/CPAF	Northrup Grumman	46.069								46.069	
MMP Upgrade Technology Development	FFP	Rockwell Collins & Raytheon	1.381	15.185	Oct-06						16.566	
MMP Upgrade Program Integrator (Advisor)	FFP	Northrup Grumman		0.612	Oct-06	2.000	Oct-07	2.000	Oct-08		4.612	
MMP Upgrade System Development and Demonstration (SDD)	Open Competition	TBD		0.541	Sep-07	22.324	Nov-07	23.831	Nov-08	Continuing	TBD	
Subtotal Product Development			47.450	16.338		24.324		25.831		Continuing	TBD	0.000
Remarks:												
(U) Support												
SETA	LOE	Various	2.898	1.127	Dec-06	1.246	Dec-07	1.100	Dec-08	Continuing	TBD	
MITRE			0.984	0.957	Nov-06	1.363	Nov-07	0.850	Nov-08		4.154	
PMA			0.105	0.132		0.250		0.202			0.689	
Subtotal Support			3.987	2.216		2.859		2.152		Continuing	TBD	0.000
Remarks: Various Award Dates												
(U) Test & Evaluation												
Various	Various	Various	0.006	0.162		0.200		1.904			2.272	
Subtotal Test & Evaluation			0.006	0.162		0.200		1.904		0.000	2.272	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			51.443	18.716		27.383		29.887		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **4610 Minuteman MEECN Program (MMP)**

MMP Upgrade Schedule

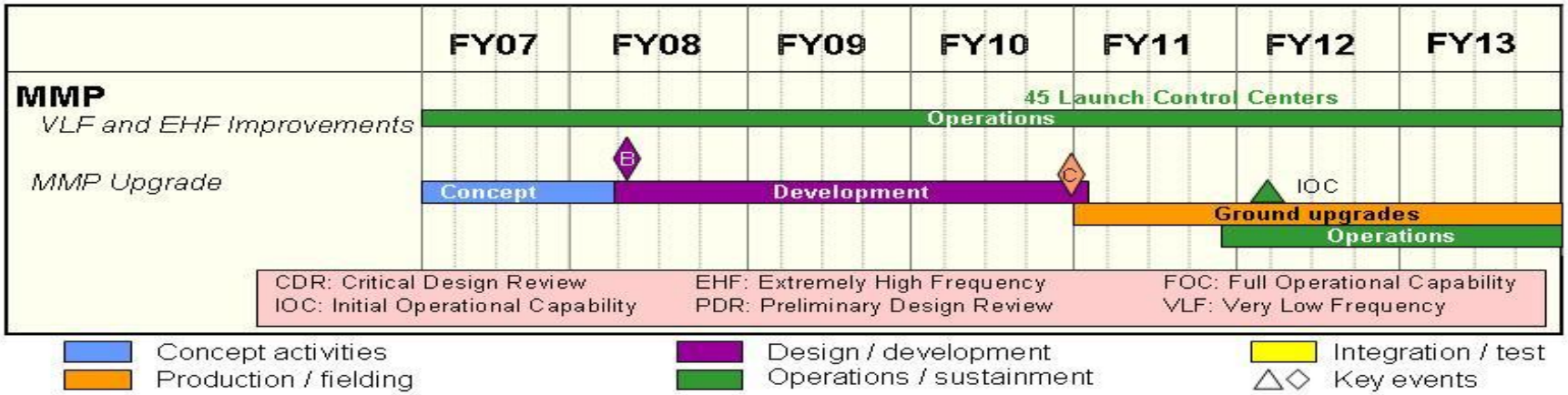


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **4610 Minuteman MEECN Program (MMP)**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Award MMP Upgrade Program System Development & Demonstration (SDD)		2Q	
(U) Continue SDD		2-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303131F Minimum Essential Emergency Communications Network (MEECN)	PROJECT NUMBER AND TITLE: 5047 Ground Element MEECN System (GEMS)	

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5047	Ground Element MEECN System (GEMS)	42.967	58.533	38.885	0.000	7.322	5.295	2.005	0.000	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Ground Element MEECN Systems (GEMS) will be comprised of EHF/AEHF, VLF/LF, HF, UHF and Aircrew Alerting components and will provide secure, survivable inter-site, intra-site and mobile communications to bomber, tanker, reconnaissance and other communications facilities with strategic responsibilities. GEMS terminals will be developed and fielded to replace strategic mobile and fixed-site Single Channel Anti-jam Man-Portable (SCAMP) terminals. GEMS will also replace the Aircraft Alerting Communications Electromagnetic Pulse System/Electromagnetic Pulse Hardened Dispersal Communications (AACE/EHDC) systems.

- GEMS' primary mission is to provide strategic Wing Command Posts and mobile support teams survivable communication paths to receive EAMs and Force Management messages from Nuclear Command and Control (NC2) nodes and disseminate them to bomber, tanker, and recce aircrews, as specified by OPLAN 8044.

- GEMS will provide solution to existing capability shortfalls for NC2 and has significant potential to provide distributed and transportable command and control capabilities beyond the traditional NC2 mission - it is the last line of operational comm when all other peacetime links fail.

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 2007	FY 2008	FY 2009
(U) System Development and Demonstration (SDD) contract to include: EHF, VLF, HF and UHF terminal integration; EHF, VLF, HF and UHF modem design; cryptographic upgrade; weapon system hardness analysis; EHF, VLF, HF and UHF hardware development; EHF, VLF, HF and UHF software development; analysis of power and cooling requirements, antenna integration, analysis of Software Compliant Architecture (SCA); and pager/klaxon system development.	36.664	50.061	32.976
(U) Analytical Support	6.303	8.472	5.909
(U) Total Cost	42.967	58.533	38.885

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement - AF, (MEECN, PE0303131F, BA-03, P-053)				72.775	21.569	36.306	31.971	0.000	162.621

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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) D. Acquisition Strategy

Two Concept and Technology Demonstration (C&TD) contracts were awarded to separate vendors following full and open competition. Rockwell Collins of Cedar Rapids, IA was awarded the SDD (CPAF) and production contract on 23 June 2005.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
SDD Contract	CPAF	Rockwell Collins, IA	50.158	36.664	Nov-06	50.061	Dec-07	32.976	Dec-08		169.859	
Subtotal Product Development			50.158	36.664		50.061		32.976		0.000	169.859	0.000
Remarks:												
(U) Support												
ITSP	SETA Contract	Various	3.201	3.472	Dec-06	2.635	Dec-07	1.440	Dec-08	Continuing	TBD	
MITRE	MIPR	Bedford, MA	2.218	1.863	Nov-06	1.891	Nov-07	1.230	Nov-08	Continuing	TBD	
PMA			0.977	0.433		2.661		0.980			5.051	
Subtotal Support			6.396	5.768		7.187		3.650		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
Various	Various	Various	0.250	0.535		1.285		2.259			4.329	
Subtotal Test & Evaluation			0.250	0.535		1.285		2.259		0.000	4.329	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			56.804	42.967		58.533		38.885		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **5047 Ground Element MEECN System (GEMS)**

GEMS Schedule

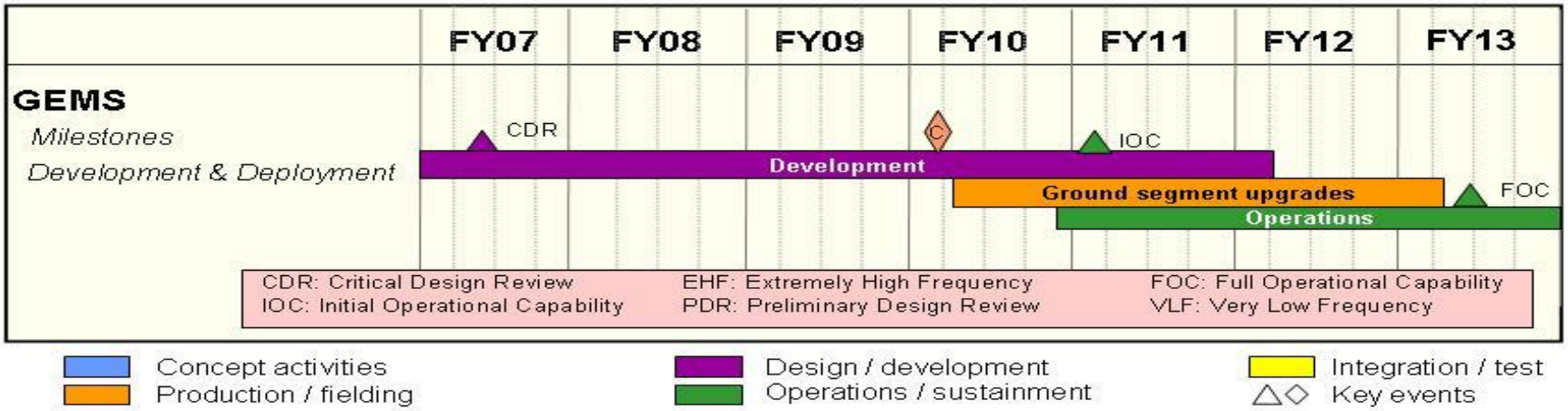


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **5047 Ground Element MEECN System (GEMS)**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) SDD	1-4Q	1-4Q	1-4Q
(U) Development Testing	1-4Q		

PE NUMBER: 0303140F
PE TITLE: Information Systems Security Program

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303140F Information Systems Security Program

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	156.125	186.255	187.933	255.280	175.493	194.117	187.990	Continuing	TBD
4579	Adv Security Solutions & Technologies (ASST)	1.942	3.180	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4861	AF Electronic Key Management System (AF EKMS)	4.130	4.726	3.152	3.053	2.960	2.271	2.187	Continuing	TBD
5100	Cryptographic Modernization	139.500	167.832	172.038	239.337	159.498	178.558	172.243	Continuing	TBD
5231	AF Key Management Infrastructure (AF KMI)	0.691	4.378	5.239	5.217	5.244	5.346	5.455	Continuing	TBD
7820	Computer Security RDT&E: Firestarter	9.862	6.139	7.504	7.673	7.791	7.942	8.105	Continuing	TBD

NOTES:
1. In FY05, the Air Force funding for Project 674579, ASST, was terminated. However, it has continued to receive Congressional adds in FY05-FY08. Its Mission Statement has been revised annually to reflect the work of the current Congressional adds under the Project.

(U) A. Mission Description and Budget Item Justification

The overall focus of the RDT&E efforts within this program is two-fold. Focus one is to provide the capability to protect and defend USAF Command, Control, Communications, Computers, and Intelligence, Surveillance, and Reconnaissance (C4ISR) and Weapon Systems from Information Warfare (IW) attacks and to ensure their recovery from such attacks. To this end, the project does research and development of information protection tools and transitions them to operational systems. Focus two is transforming electronic key delivery and DoD cryptographic devices to meet the next generation warfighting requirements. This includes: 1. a totally "man-out-of-the-loop" electronic crypto key distribution system -- from the actual generation of the key in the Key Processor all the way into the using End Crypto Unit (ECU). Thus, eliminating the current key vulnerability to compromise by individuals transporting or loading key; and 2. a reduced inventory of cryptographic devices that are more robust, stronger, able to communicate extremely large amounts of data at greatly increased data rates, be upgraded more easily and less expensively, and are net-centric and Global Information Grid-compatible.

Project 674579, Advanced Security Solutions and Technologies, was originally established to develop defensive information warfare solutions for AF Command and Control (C2), Intelligence, Surveillance, and Reconnaissance (ISR) systems. The AF funding for the Project was terminated in FY05, but the funding line has continued with multiple Congressional adds in FY06-FY08. In FY08 it received two Congressional adds for Cybersecurity Defend and Attack Exercises. The first add is a continuation from previous years to provide funding for exercises in the local San Antonio, TX area. The second add funds an expansion effort to provide two community exercises in Montana. These adds are being managed by the Air Intelligence, Surveillance, and Reconnaissance Agency (AFISRA) under the CIAS umbrella. They will bring a multi-disciplinary (AF, academic, and civil) approach to the planning and execution of joint military base/local civil agency Cybersecurity Defend and Attack Exercises.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303140F Information Systems Security Program

Project 674861, AFEKMS, is part of an NSA-led DoD EKMS program that has allowed DoD to migrate from the previous legacy manual system of generation, distribution, accounting, training, and material management of cryptographic keying materials to the current DoD EKMS. EKMS equipment procurement and fielding is well underway. The R&D portion of the AFEKMS Program will support EKMS software upgrade, maintenance, and repair throughout the life of the next-generation system, KMI (Capability Increment 2 [CI-2]). The warfighter will continue to use EKMS for the next several years -- having access to it through the old EKMS hierarchy or through the new KMI hierarchy and its interfaces back to EKMS until the fielding of Capability Increment CI-3 KMI. The CI-3 KMI will replace all of the EKMS functions.

Project 675100, AF Crypto Modernization, is part of a Joint Program led by NSA to replace, modernize, and transform the Type 1 Cryptographic Inventory throughout DoD. Not only will algorithms be upgraded, but reprogrammable chips will be used in the Crypto Devices. Thus, the next generation of algorithm upgrades will incur only the cost to reprogram those chips. The total inventory will be greatly reduced by doing a box-for-family of systems/functions replacement rather than the current box-for-box replacement. The logistics requirements will also be greatly simplified and reduced. The total inventory and logistics requirements will be 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. Its products are flowed down into the existing operational Network Operations Security Centers (NOSCs) and all of the Base Infrastructure Protection Systems (BIPs).

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 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303140F Information Systems Security Program

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	184.610	229.657	194.981
(U)	Current PBR/President's Budget	156.125	186.255	187.933
(U)	Total Adjustments	-28.485	-43.402	
(U)	Congressional Program Reductions	-15.000	-44.247	
	Congressional Rescissions	-0.913	-1.555	
	Congressional Increases	2.000	2.400	
	Reprogrammings	-9.955		
	SBIR/STTR Transfer	-4.617		

(U) Significant Program Changes:

The FY08 Appropriations Act Rescinded $15M from the FY07 overall funding for AF RDT&E, ISSP.

The FY08 Appropriations Act also reduced BPAC 67510, AF Cryptographic Modernization, FY08 by $45.047M for "unjustified program growth".

BPAC 674579, ASST, supports two Congressional adds in FY08: one for the on-going Cybersecurity Defend and Attack Exercise and one for the new Montana Cybersecurity Defend and Attack Exercise.

BPAC 675100, Cryptographic Modernization (CM), is a large umbrella capabilities-based AF program to support the overall NSA Cryptographic Modernization Initiative (CMI) to modernize and transform the current Type 1 Cryptographic Inventory throughout DoD. As such, it is composed of a sizeable number of individual cryptographic development programs that are staggered throughout the life of the AF CM Program. These development programs are centrally-managed, but decentrally-executed. The number of scheduled and on-going development programs varies from year-to-year leading to an unusual funding profile across the FYDP. However, detailed analysis of the requirements for the on-going development programs for any given year fully justifies the funding profile.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4579	Adv Security Solutions & Technologies (ASST)	1.942	3.180	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 Congressional adds in FY05, FY06 and FY07. In FY08 the project line received two Congressional adds: one for the continuing Cybersecurity Defend and Attack Exercise in San Antonio, TX; another for an expansion of that effort to the Great Falls, MT location, entitled Montana Cybersecurity Defend and Attack Exercise.

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 2007	FY 2008	FY 2009
(U) Manage the Cybersecurity Defend and Attack Exercise (Congressional Add)	1.942	2.380	
(U) Manage the Montana Cybersecurity Defend and Attack Exercise (Congressional Add)		0.800	
(U) Total Cost	1.942	3.180	0.000

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

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

(U) D. Acquisition Strategy

Congressional adds are for a specific on-going effort being done for AFISRA under the Center for Infrastructure Assurance and Security Program (CIAS) at University

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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)**

of Texas at San Antonio; and an extension of that effort to be conducted in Great Falls, MT. The extension effort will also be done for AFISRA by the CIAS Program.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

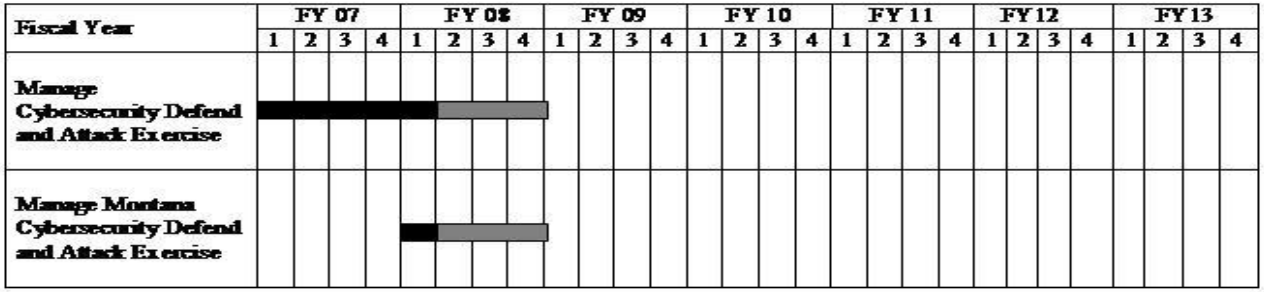
PE NUMBER AND TITLE: 0303140F Information Systems Security Program

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U)	Product Development												
	Cybersecurity Defend and Attack Exercise (Congressional Add)	FY03 Information Warfare Broad Area Announcement (IW BAA) Grant Amendment	University of TX San Antonio, San Antonio, TX	2.100	1.942	Sep-07	2.380	Jan-08	0.000		0.000	6.422	TBD
	Montana Cybersecurity Defend and Attack Exercises (Congressional Add)	FY03 Information Warfare Broad Area Announcement (IW BAA) Grant Amendment	FY03 Information Warfare Broad Area Announcement (IW BAA) Grant Amendment				0.800	Jan-08	0.000		0.000	0.800	TBD
	Subtotal Product Development			2.100	1.942		3.180		0.000		0.000	7.222	TBD
	Remarks:												
(U)	Total Cost			2.100	1.942		3.180		0.000		0.000	7.222	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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 2008
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 2007	FY 2008	FY 2009
(U) Manage the Cybersecurity Defend and Attack Exercise	1-4Q	1-4Q	
(U) Manage the Montana Cybersecurity Defend and Attack Exercise		1-4Q	

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4861	AF Electronic Key Management System (AF EKMS)	4.130	4.726	3.152	3.053	2.960	2.271	2.187	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

NOTE:
Former Project 674861, AF Electronic Key Management System - Key Management Infrastructure (AFEKMS-KMI), was split in FY07 to properly reflect the Joint KMI Program as a next-generation system rather than an upgrade to the current EKMS. The AFEKMS stayed in BPAC 674861; the AF KMI moved to a new BPAC, 675231.

(U) A. Mission Description and Budget Item Justification

The AFEKMS Program consists of multiple developments supporting the Air Force requirements/portion of the DoD EKMS Program. (The National Security Agency [NSA] acts as the Executive Agency for the DoD EKMS Program.) AFEKMS, in concert with the overarching DoD EKMS Program , provides a secure and flexible capability for the electronic generation, distribution, accounting, and management of key material, voice callwords, and communications security (COMSEC) publications for the current generation of DoD Command, Control, Communications, Computers, and Intelligence (C4I) and for current generation of weapon systems. EKMS replaced the previous manual distribution and management system providing cryptographic keying material for U.S. DoD Information Assurance. Information Assurance emphasizes confidentiality, access control, multi-level secure databases, trusted computing and information integrity. AFEKMS has a three-tier hierarchical structure. This tiered structure provides 'wholesale' to 'retail' to 'consumer' capability to distribute, manage and account for COMSEC keying material. Tier 1 installations comprise the wholesale generation and control capability. Tier 2 installations comprise the local distribution network and Tier 3 comprises the retail where keying material leaves the AFEKMS and enters the consumer End Cryptographic Units (ECUs).

EKMS improved protection of national security-related information by substantially enhancing confidentiality, integrity, and non-repudiation characteristics over the legacy manual key management systems. EKMS has and continues to greatly accelerate availability of crypto key materials through electronic transmission versus the manual handling and shipping of materials. While the current EKMS level-of-effort is directed at enhancing current and developing systems, the ultimate goal is for it to provide a temporary bridge to the DoD Key Management Infrastructure (KMI) Capability Increment (CI)-2, and then a migration path to the "full-up" KMI CI-3. Once KMI CI-3, with its advanced key generation/key distribution capability is fielded and operational, KMI interfaces to EKMS will be severed. Beginning KMI CI-2 functionality is expected in 2011.

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 2007	FY 2008	FY 2009
(U) Continue program office contract support to the AFEKMS Program for planning: upgrade/improvements to the EKMS necessary to support the capabilities needed to bridge transition to the Key Management Infrastructure (KMI); EKMS continued deployment (Phase 5); interface and integration of key management into weapon systems; and tech refresh	0.863	1.180	1.478

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 4861 AF Electronic Key Management System (AF EKMS)

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

		FY 2007	FY 2008	FY 2009
(U)	Continue End User Application Software Development: Common User Application Software (CUAS), Data Management Device (DMD), and computer-based training	3.267	2.257	0.000
(U)	Tier 2/3 Development: Support for ECU, weapon systems pending transition to KMI, and associated user software development		1.289	1.674
(U)	Total Cost	4.130	4.726	3.152

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	AF Other Procurement PE 0303140F	12.270	10.539	12.521	21.094	21.199	21.613	22.040	Continuing	TBD

Note: This line includes both AFEKMS and AF KMI Other Procurement (3080) funding.

(U) D. Acquisition Strategy

All major contracts within this Project are open to full and open competition with technology knowledge, expertise, and prior experience on similar projects weighted heavily in the evaluation process.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

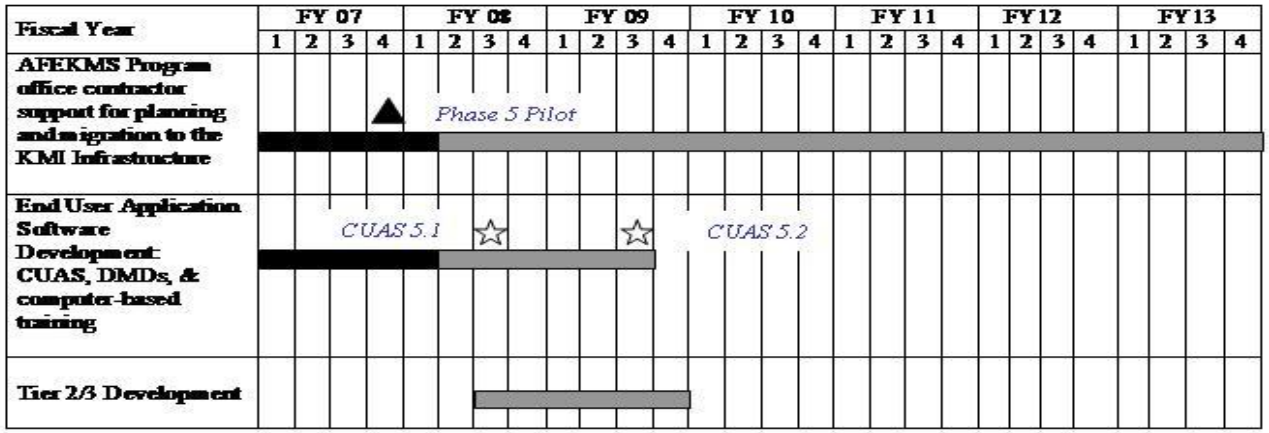
PE NUMBER AND TITLE: 0303140F Information Systems Security Program

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
AFEKMS Program office contractor support for planning	CPFF	Mitre, San Antonio, TX	3.804	0.863	Jan-07	1.237	Jan-08	1.431	Jan-09	Continuing	TBD	TBD
End User Application Software Development	T&M	SAIC, San Diego, CA	11.669	3.267	Jan-07	2.000	Jan-08	0.000			16.936	16.936
Tier 2/3 Development	TBD	TBD	0.000	0.000		1.489	Jan-08	1.721	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			15.473	4.130		4.726		3.152		Continuing	TBD	TBD
Remarks:												
(U) N/A												
(U) Total Cost			15.473	4.130		4.726		3.152		Continuing	TBD	TBD
Remarks: N/A												

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE 4861 AF Electronic Key Management System (AF EKMS)

Exhibit R-4: BPAC 4861, AFEKMS



Notes:

1. **Pilot – Consists of 8 COMSEC Accounts which will be converted to connect to the KMI Tiers above it via IP over SIPRNet rather than the current method using STU IIs/IIIs over the Public Switched Network (PSN)**
2. **CUAS – Common User Application Software**

☆ *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 2008
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 2007	FY 2008	FY 2009
(U) AFEKMS Program office contractor support for planning	1-4Q	1-4Q	1-4Q
(U) Phase 5 Pilot	4Q		
(U) End User Application Software Development	1-4Q	1-4Q	1-3Q
(U) CUAS 5.1 Rollout		3Q	
(U) CUAS 5.2 Rollout			3Q
(U) Tier 2/3 Development		3-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5100	Cryptographic Modernization	139.500	167.832	172.038	239.337	159.498	178.558	172.243	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

(U) The Cryptographic Modernization Program modernizes 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. Replacements/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 common solution to existing multiple cryptographic end items, as well as updating mid-term aging/unsupportable crypto equipment. Manpower and logistics requirements will be reduced and manpower efficiencies gained, while incremental capability enhancements and footprint reduction are provided. The third phase of the Cryptographic Modernization Program, Transformation, provides common joint solutions which enable network-centric capabilities and seamless crypto that is transparent to the user.

(U) 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 2007	FY 2008	FY 2009
(U) Completed KS-60 (KI-22) Cryptographic Modernization analysis and development of replacement	19.477	0.000	0.000
(U) Continue KG-3X Cryptographic Modernization development and test efforts of replacement crypto devices	10.435	24.543	30.744
(U) Continue IFF Cryptographic Modernization analysis and development of replacement	13.022	12.416	0.000
(U) Continue F-22 Multi-Function Crypto (Crypto Mod of KOV-20 & generic KOV-xx boxes)	3.789	1.138	5.780
(U) Continue Remote Rekey (CI-13) Cryptographic Modernization	3.071	9.700	18.303
(U) Continue Studies and Analyses (includes Crypto Transformation Initiative)	20.864	37.381	21.969
(U) Continue Space Cryptographic Modernization (includes Space Telemetry tracking and Commanding project and	42.226	37.001	49.832

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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 2007	FY 2008	FY 2009
	Space Mission Data project)			
(U)	Merged Wireless Cryptographic Modernization analysis with KMEM	0.200	0.000	0.000
(U)	Merged KM Crypto Interface Modernization analyses with KMEM	1.284	0.000	0.000
(U)	Merged KM Network Equipment Modernization analyses with KMEM	0.369	0.000	0.000
(U)	Continue KM Equipment Modernization (KMEM) development	0.000	5.449	4.893
(U)	Broke out KEESEE Cryptographic Modernization analysis (broken out into the following five individual Crypto Mod development programs after FY07)	15.647	0.000	0.000
(U)	Continue KOK-13 Combat Key Generator (formerly known as the earlier CM initiative KOK-13 Key Generation Modernization under KEESEE)	0.000	12.029	10.676
(U)	Continue VINSON/ANDVT Cryptographic Modernization (VACM) (formerly known as Secure Data Link Crypto under KEESEE)	0.000	3.529	11.970
(U)	Continue Link 16 Encryption Modernization (LSEM)) (formerly known as Secure Data Link Crypto under KEESEE)	0.000	0.306	6.777
(U)	Continue Range Telemetry Encryption Modernization (RTEM) (formerly known as Secure Data Link Crypto under KEESEE)	0.000	0.798	0.000
(U)	Continue Secure Crypto Enterprise Management (SCEM) (formerly known as Secure Data Link Crypto under KEESEE)	0.000	0.112	1.333
(U)	Merged High Speed Crypto analysis with Advanced Common Crypto	0.200	0.000	0.000
(U)	Continue Advanced Crypto Modernization analysis and development (inclues Smart Munitions, High Speed Crypto and Programmanble Objective Encryption Technologies [POET] [formerly know as Common Engines/Modules])	8.916	23.430	9.761
(U)	Total Cost	139.500	167.832	172.038

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF Other Procurement PE 0303140F	48.434	56.603	44.885	77.221	143.041	217.821	266.739	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 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
KS-60 (KI-22)	MIPRed to OO-ALC 526 GSSG. OO-ALC put on a CPAF contract.	OO-ALC/526 GSSG/GMGV, Hill AFB, UT	52.895	19.477	Jan-07	0.000		0.000		0.000	72.372	72.372
KG-3X	MIPRed to 639th ELSS/KM. ESC puts on a CPAF contract	6939th ELSS/KM, Hanscom AFB, MA	8.617	10.435	Jan-07	24.543	Jan-08	30.744	Jan-09	0.000	74.339	39.392
IFF	CPSG puts on two CPFF contracts.	CPSG/ZC, Lackland AFB, TX	30.750	13.022	Jan-07	12.416	Jan-08	0.000		0.000	56.188	47.888
F-22/ Multi Function Crypto (KOV -20)	MIPRed to ASC/YF. ASC puts two separate CPFF delivery orders to an existing CNI 2010 FFP contract.	ASC/YFAA F-22 SPO, Wright Patterson AFB, OH	0.000	3.789	Feb-07	1.138	Feb-08	5.780	Feb-09	Continuing	TBD	TBD
Remote Rekey	CPSG will put on a TBD Contract.	CPSG/ZC, Lackland AFB, TX	3.345	3.071	Jan-07	9.700	Jan-08	18.303	Jan-09	Continuing	TBD	TBD
Studies and Analyses	CPSG puts on three T&M contracts.	CPSG/ZX, Lackland AFB, TX	39.268	20.864	Jan-07	37.381	Jan-08	21.969	Jan-09	Continuing	TBD	TBD
Space Crypto Mod	CPSG puts	CPSG/ZJ,	27.045	42.226	Jan-07	37.001	Jan-08	49.832	Jan-09	Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303140F Information Systems Security Program

PROJECT NUMBER AND TITLE: 5100 Cryptographic Modernization

	on a CPFF contract.	Lackland AFB, TX											
Wireless Cryptographic Modernization analysis	TBD	TBD	0.000	0.200	Feb-07	0.000		0.000		0.000	0.200	0.200
											0.000	
KM Crypto Interface Modernization analyses	MIPRed to Fr. Monmouth, NJ for FFP Contract.	SNC, Sparks, NC	0.000	1.284	Feb-07	0.000		0.000		0.000	1.284	TBD
											0.000	
KM Network Equipment Modernization analyses	CAT I MIPR to NRL, DC; CAT II MIPR to Ft. Monmouth, NJ; CAT II MIPR to Hill AFB, UT	NRL, Washington, DC; BAH, San Antonio, TX; 309 NXW, Hill AFB, UT	0.000	0.369		0.000		0.000		0.000	0.369	TBD
											0.000	
KM Equipment Modernization development	CPSG placed on a T&M Contract	CPSG/NI, Lackland AFB, TX	0.000	0.000		5.449	Feb-08	4.893	Feb-09	Continuing	TBD	TBD
											0.000	
KEESEE Cryptographic Modernization analysis (broken out into the following five individual Crypto Mod development programs after FY07)			11.026	15.647	Feb-07	0.000		0.000		0.000	26.673	8.382
											0.000	
KOK-13 Combat Key Generator (formerly known as the earlier CM initiative, KOK-13 Key Generation Modernization) *	TBD	TBD	0.000	0.000		12.029	Feb-08	10.676	Feb-09	0.000	22.705	6.886
											0.000	
VINSON/ANDVT Cryptographic Modernization (formerly known as Secure Voice)	TBD	TBD	0.000	0.000		3.529	Feb-08	11.970	Feb-09	Continuing	TBD	TBD
											0.000	
Link 16 Encryption Modernization (formerly known as Secure Data Link)	TBD	TBD	0.000	0.000		0.306	Feb-08	6.777	Feb-09	Continuing	TBD	TBD
											0.000	
Range Encryption Modernization (former known as Telemetry Analyses and Development of Replacements)	TBD	TBD	0.000	0.000		0.798	Feb-08	0.000	Feb-09	Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

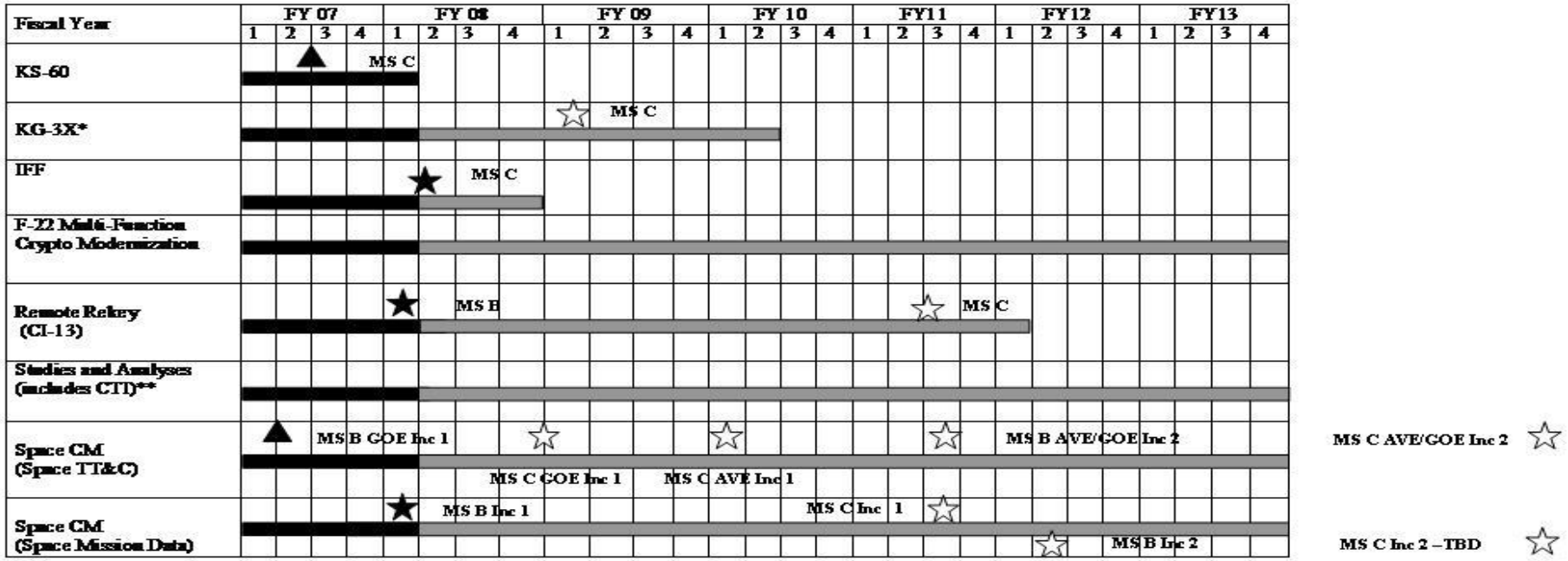
PE NUMBER AND TITLE: **0303140F Information Systems Security Program**

PROJECT NUMBER AND TITLE: **5100 Cryptographic Modernization**

												0.000	
	Secure Crypto Enterprise Management (SCEM)	TBD	TBD	0.000	0.000		0.112	Feb-08	1.333	Feb-09	Continuing	TBD	TBD
												0.000	
	High Speed Crypto analysis	TBD	TBD	0.000	0.200	Feb-07	0.000		0.000		0.000	0.200	0.200
												0.000	
	Advanced Common Crypto Modernization analysis and development (includes High Speed Optical Crypto, Common Crypto Engines/Modules, and Smart Munitions	TBD	TBD	0.000	8.916	Feb-07	23.430	Feb-08	9.761	Feb-09	Continuing	TBD	TBD
												0.000	
	Subtotal Product Development			172.946	139.500		167.832		172.038		Continuing	TBD	TBD
	Remarks:	* NOTE: Early efforts within the AF CM Program to scope requirements, determine work needed to provide modernization and/or transformation solutions, consider viable solutions, etc. are considered "in-house efforts" and labeled "CM Initiatives". If no requirements are found or work already underway will provide a solution, the initiative is closed out. Some initiatives will point to a common solution, and be merged to form and initiate a new CM project. For some initiatives, individual solutions will be able to be crafted within on-going projects, and the work under the initiative will be dispersed across on-going or newly initiated projects.											
(U)	Total Cost			172.946	139.500		167.832		172.038		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 5100 Cryptographic Modernization

Exhibit R-4: BPAC 5100 Cryptographic Modernization (p 1 of 3)

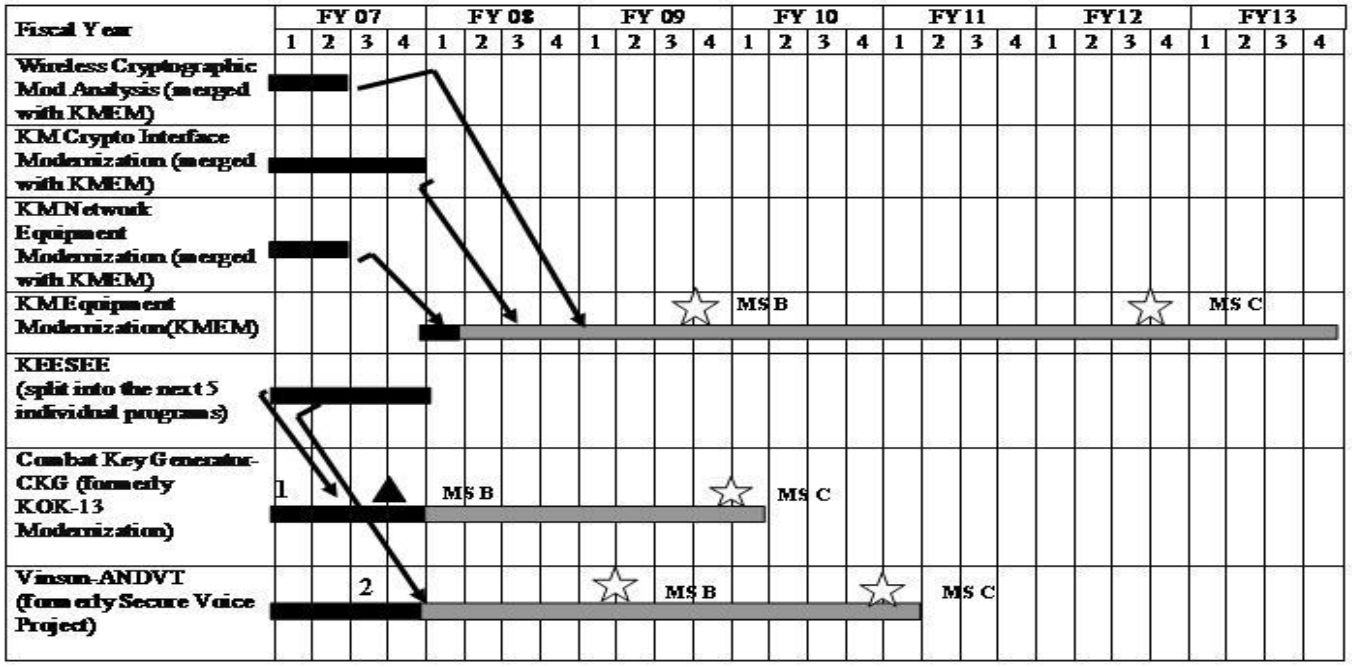


☆ *Major Event or Milestone*
Planned Ongoing Activity
Ongoing Activity that is Complete
Planned Combining/Splitting of Program
▲ *Completed Event*
△ *Planned Task(s)*

* Schedule reflects the new KG-3X program revised baseline.
** Studies and Analyses includes KMI Transformation

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 5100 Cryptographic Modernization

Exhibit R-4: BPAC 5100 Cryptographic Modernization (p 2 of 3)



☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

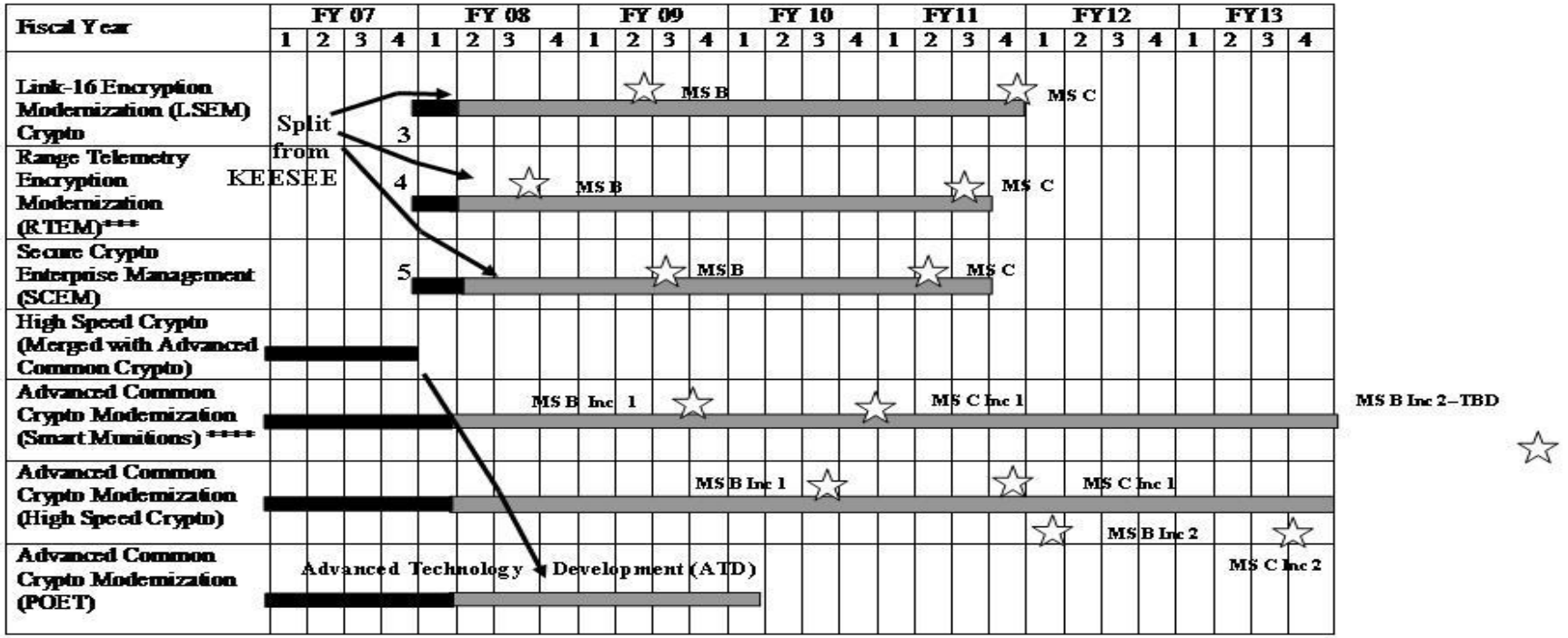
Planned Combining/Splitting of Program

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 5100 Cryptographic Modernization

Exhibit R-4: BPAC 5100 Cryptographic Modernization (p 3 of 3)



Major Event or Milestone
Planned Ongoing Activity
Ongoing Activity that is Complete
Planned Combining/Splitting of Program
Completed Event
Planned Task(s)

*** RTEM revised acquisition strategy pending
**** Smart Munitions Increment 2 milestones TBD

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303140F Information Systems Security Program**	PROJECT NUMBER AND TITLE **5100 Cryptographic Modernization**

(U)	**Schedule Profile**	FY 2007	FY 2008	FY 2009
(U)	Completed KS-60 (KI-22) Cryptographic Modernization	1-4Q	1Q	
(U)	Continue KG-3X Cryptographic Modernization*	1-4Q	1-4Q	
(U)	Complete IFF Mode 5 Cryptographic Modernization	1-4Q	1-4Q	
(U)	Continue F/A-22 Multi Function Crypto (Crypto Mod of KOV-20 & generic KOV-xx boxes)	1-4Q	1-4Q	1-4Q
(U)	Continue Remote Rekey (CI-13) Cryptographic Modernization	1-4Q	1-4Q	1-4Q
(U)	Continue Studies and Analyses (includes Crypto Transformation Initiative)	1-4Q	1-4Q	1-4Q
(U)	Continue Space Cryptographic Modernization (includes Space Telemetry Tracking and Commanding project and the Space Mission Data project)	1-4Q	1-4Q	1-4Q
(U)	Wireless Cryptographic Modernization analyses (merged with KMEM)	1-2Q		
(U)	KM Network Equipment Modernization analyses (merged with KMEM)	1-4Q		
(U)	KM Network Interface Modernization analyses (merged with KMEM)	1-2Q		
(U)	Continue KM Equipment Modernization (KMEM) Development		1-4Q	1-4Q
(U)	KEESEE Cryptographic Modernization analysis broken out into the following five individual Crypto Mod development programs after FY07)	1-4Q		
(U)	Continue KOK-13 Combat Key Generator (formerly known as the earlier CM initiative KOK-13 Key Generation Modernization under KEESEE)	1-4Q	1-4Q	1-4Q
(U)	Continue Link 16 Encryption Modernization (LSEM) (formerly known as Secure Data Link Crypto under KEESEE)		1-4Q	1-4Q
(U)	Continue Range Telemetry Encryption Modernization (RTEM) (formerly known as Secure Data Link Crypto under KEESEE)		1-4Q	
(U)	Continue Secure Crypto Enterprise Management (SCEM) (formerly known as Secure Data Link Crypto under KEESEE)		1-4Q	1-4Q
(U)	High Speed Optical Crypto analysis (merged with Advanced Common Crypto)	1-4Q		
(U)	Continue Advanced Common Crypto Modernization analysis and development (includes High Speed Optical Cryp, Common Crypto Engines/Modules, and Smart Munitions)	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5231	AF Key Management Infrastructure (AF KMI)	0.691	4.378	5.239	5.217	5.244	5.346	5.455	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

NOTE:
Former Project 674861, AF Electronic Key Management System - Key Management Infrastructure (AFEKMS-KMI) was split in FY07 to properly reflect the Joint KMI Program as a next-generation system rather than an upgrade to the current EKMS. The AFEKMS stayed in BPAC 674861; the AF KMI moved to this new BPAC, 675231. However, since the transformational key generation/key provisioning capability will not be built into KMI until Capability Increment (CI)-3, EKMS will continue to provide this capability via a number of temporary interfaces created for that purpose.

(U) A. Mission Description and Budget Item Justification

The Air Force Key Management Infrastructure (AF KMI) Program consists of multiple developments supporting the AF requirements/portion of the DoD Key Management Infrastructure (KMI). (The National Security Agency [NSA] acts as the Executive Agency for the DoD KMI Program.) AF KMI, in concert with this overarching DoD KMI Program, will provide a secure and flexible capability for the electronic generation, distribution, accounting, and management of: key material; voice callwords; and communications security (COMSEC) publications for all DoD Command, Control, Communications, Computers, and Intelligence (C4I) and for the Services' weapon systems. KMI represents a broad-scale replacement of the current Electronic Key Management System (EKMS). The new KMI will provide capabilities that will allow networked operation in consonance with the Global Information Grid (GIG) and other DoD, fellow Service, and AF enterprise objectives. It thereby will assure a viable support infrastructure for future weapons and C4I programs to 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. CPSG and NSA are exploring new key delivery methods for KMI CI-3: "Mobile" COMSEC Accounts that can be wheeled out to platforms and remote ECUs; a new Simple Key Loader (SKL) for Special Operations that carries more

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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)

keys and is smaller and lighter; and a method called "over-the-air-keying (OTAK)" to ultimately replace the data transfer devices.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Provide program office contract support for Air Force Key Management planning and systems integration, and migration to the Key Management Infrastructure	0.691	1.560	2.089
(U)	Develop the next generation Last Mile Systems & Concept Refinement (F22): End user key delivery devices; user node application software; and related computer-based training	0.000	2.818	3.150
(U)	Total Cost	0.691	4.378	5.239

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	See AF Other Procurement PE 33140F	12.270	10.593	12.521	21.094	21.199	21.631	22.040	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 2008

BUDGET ACTIVITY: 07 Operational System Development

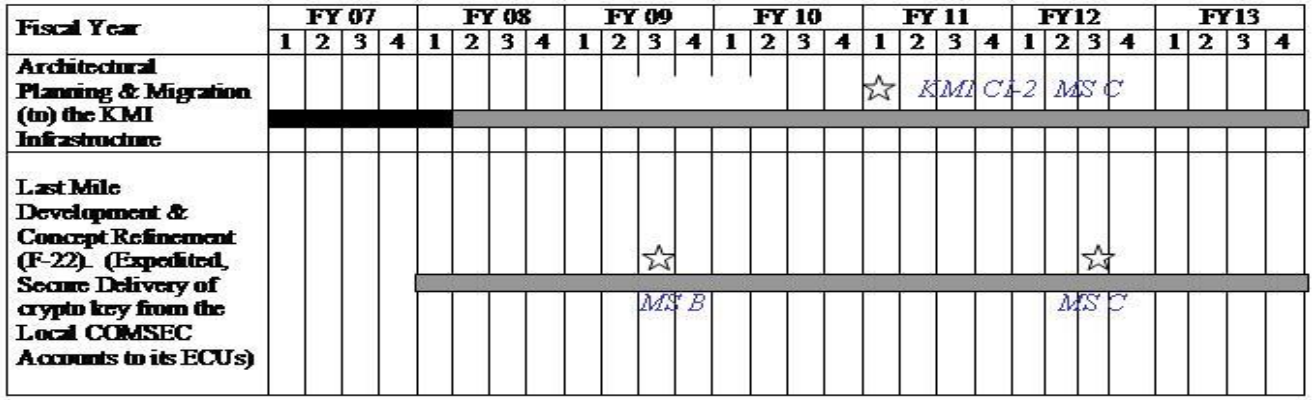
PE NUMBER AND TITLE: 0303140F Information Systems Security Program

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Architectural Planning & Migration (to) the KMI Infrastructure	CPFF	MITRE, San Antonio, TX	0.000	0.691	Jan-07	0.873	Jan-08	0.911	Jan-09	Continuing	TBD	TBD
Studies & Analyses & Systems Engineering	CPFF	MITRE, San Antonio, TX	0.000	0.000		0.686	Jan-08	0.909	Jan-09	Continuing	TBD	TBD
Last Mile Development	CPFF	TBD	0.000	0.000		2.574	Jan-08	3.160	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.691		4.133		4.980		Continuing	TBD	TBD
Remarks:												
(U) Support												
Budget Analyst	T&M	BAH, San Antonio, TX	0.000	0.000		0.125	Mar-08	0.134	Mar-09	Continuing	TBD	TBD
System Administrator						0.120	Jul-08	0.125	Jul-09	Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.245		0.259		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	0.691		4.378		5.239		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 5231 AF Key Management Infrastructure (AF KMI)

Exhibit R-4: BPAC 5321, AF KMI



☆ Major Event or Milestone

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ Completed Event

△ Planned Task(s)

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
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 2007	FY 2008	FY 2009
(U) Architectural Planning & Migration (to) the KMI Infrastructure	1-4Q	1-4Q	1-4Q
(U) Develop next generation Last Mile Systems & Concept Refinement (F-22)		1-4Q	1-4Q
(U) MS B			3Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
7820	Computer Security RDT&E: Firestarter	9.862	6.139	7.504	7.673	7.791	7.942	8.105	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 technical transition opportunities for research in the area of Information Assurance (IA) technologies and tools needed to protect and defend Air Force Network-Centric Command, Control, Communications, Computer, and Intelligence (C4I) systems from computer network attacks, and ensure recovery from those attacks. As one of the Air Force managers for IA R&D, the PMO ensures that the emphasis of the program is directed toward information/computer/network security; damage assessment and recovery; dynamic security policy enforcement; and active response and attribution. These areas of emphasis are realized through cyberspace surveillance; cyber indications and warning (CI&W); high-speed and host-based intrusion detection; fusion and correlation of attack indicators; decision support; recovery; cyber forensics; and active response. Current Air Force systems, such as the Combat Information Transport System/Base Information Protection (CITS/BIP) and Information Warfare Planning Capability (IWPC), leverage this technology to meet their information protection needs/requirements. Additionally, this program utilizes IA technology investments by the Defense Advanced Research Projects Agency (DARPA), the National Security Agency (NSA), Department of National Intelligence (DNI), Disruptive Technology Office (DTO), and the Department of Homeland Security (DHS), Advanced Research Project Activity (ARPA) to jump-start its development of solutions to existing Air Force IA requirements. This program coordinates and cooperates with the JTF-GNO, STRATCOM, DISA, NSA and other services to ensure Global Information Grid (GIG) IA requirements are being met.

This program is in Budget Activity 7, Operational System Development, because it addresses the development and transition of information security, protection, and defensive capabilities and technologies.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Completed development of secure agent frameworks for Enterprise Defense to support protection of the warfighter C4ISR systems	0.750	0.000	0.000
(U)	Completed IP v6 Risk Mitigation	0.454	0.000	0.000
(U)	Continue development of cyber forensic tools and methodologies	0.908	0.320	0.282
(U)	Continue development of technology for self-healing, self-regenerative systems (to include automated system recovery)	0.950	0.670	0.830
(U)	Continue development of information attack correlation methodologies	0.800	0.768	0.680
(U)	Completed development of methodologies for Steganography Detection and Dynamic Quarantine of Worms	0.523	0.408	0.000
(U)	Continue effort to transition DARPA/DTO/ARPA information assurance (IA) technology into AF Information Protection, Detection, & Response architecture	0.810	0.616	0.660
(U)	Continue effort to develop metrics for reliable information assurance (IA) measurement and testing	0.350	0.276	0.303
(U)	Continue development of secure interoperable distributed agent computing	0.975	0.475	0.588

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007	FY 2008	FY 2009
(U)	Continue effort to provide active response, dynamic policy Enforcement and computer/network attack attribution	0.787	0.617	0.724
(U)	Continue effort to provide dynamic, cost effective, risk mitigation information assurance techniques for wireless networks and systems	0.547	0.330	0.557
(U)	Continue effort to provide IA/Cyber modeling and simulation for mission impact assessment and dynamic network security planning	0.686	0.260	0.572
(U)	Continue effort to provide secure coalition IA data management, collaboration, and visualization	0.675	0.415	0.684
(U)	Completed effort to provide Internet Protocol (IP) Telephony (Voice Over IP) security tools	0.444	0.000	0.000
(U)	Continue Cyber Security Bots	0.203	0.417	0.832
(U)	Continue Integrated Airborne Network Security IO Platform	0.000	0.567	0.792
(U)	Total Cost	9.862	6.139	7.504

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

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

(U) D. Acquisition Strategy

All major contracts within this project are awarded after full and open competition utilizing evolutionary capability and incremental development.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

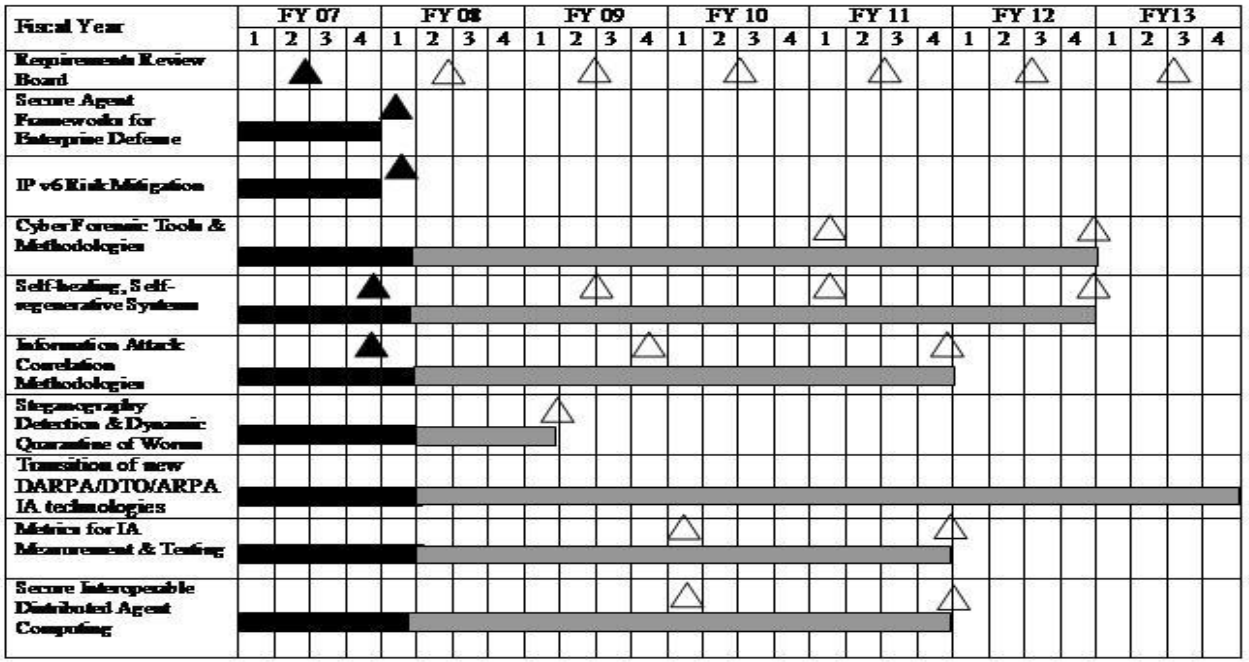
PE NUMBER AND TITLE: **0303140F Information Systems Security Program**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
FFRDC (MITRE)	CPFF	Multiple Locations	6.304	0.558	Jan-07	0.370	Jan-08	0.396	Jan-09	Continuing	TBD	TBD
Multiple Contractors	CPFF	Multiple Locations	97.664	8.004	Jan-07	4.969	Jan-08	6.263	Jan-09	Continuing	TBD	TBD
Multiple Universities	CPFF	Multiple Locations	14.816	1.300	Jan-07	0.800	Jan-08	0.845	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			118.784	9.862		6.139		7.504		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			118.784	9.862		6.139		7.504		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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)



☆ *Major Event or Milestone*

Planned Ongoing Activity

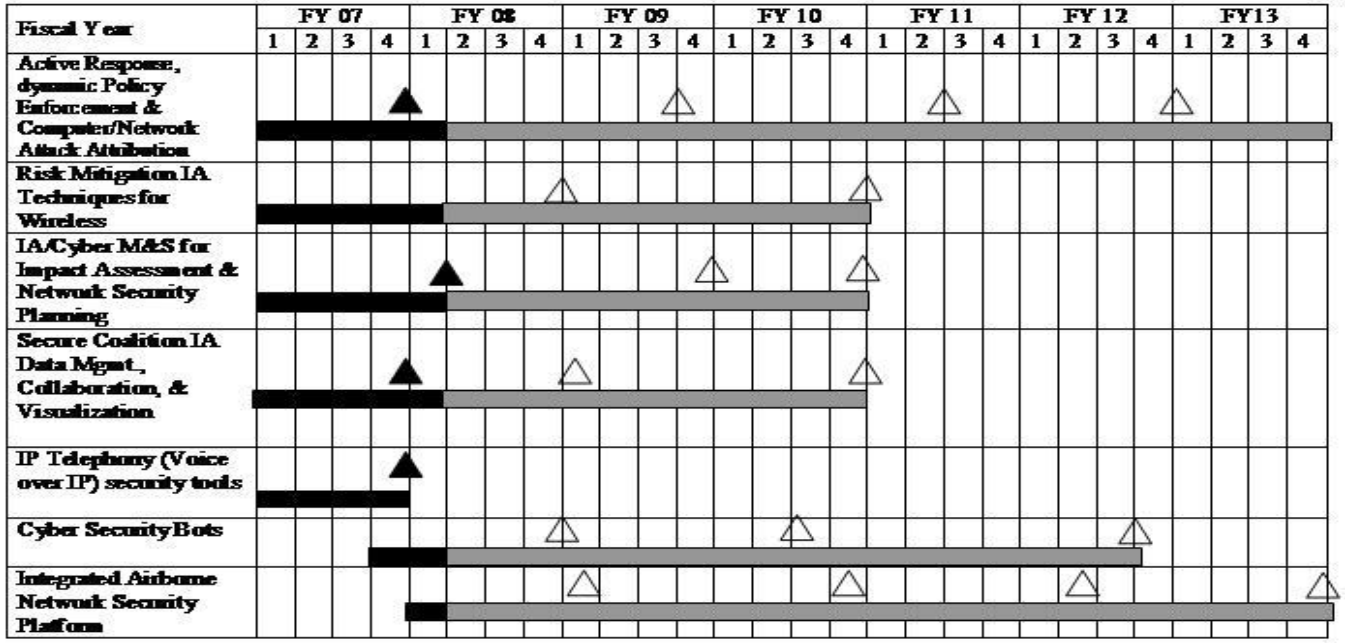
Ongoing Activity that is Complete

Completed Event

△ *Planned Task(s)*

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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 2008
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**

	Schedule Profile	FY 2007	FY 2008	FY 2009
(U)	Requirements Review Boards	2Q	2Q	2Q
(U)	Completed development of secure agent frameworks for Enterprise Defense	1-4Q		
(U)	Completed IPv6 Risk Mitigation	1-4Q		
(U)	Continue development of cyber forensic tools and methodologies	1-4Q	1-4Q	1-4Q
(U)	Continue development of technology for self-healing, self-regenerative systems	1-4Q	1-4Q	1-4Q
(U)	Continue information attack correlation methodologies	1-4Q	1-4Q	1-4Q
(U)	Completed development of methodologies for steganography detection and dynamic quarantine of worms	1-4Q		
(U)	Continue DARPA/ DTO/ARPA information assurance Technology 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 active response, dynamic policy enforcement, and computer/network attack attribution	1-4Q	1-4Q	1-4Q
(U)	Continue risk mitigation IA techniques for wireless networks and systems	1-4Q	1-4Q	1-4Q
(U)	Continue IA/Cyber modeling and simulation for mission impact assessment and dynamic network security planning	1-4Q	1-4Q	1-4Q
(U)	Continue secure coalition IA data management collaboration and visualization	1-4Q	1-4Q	1-4Q
(U)	Completed Internet Protocol (IP) Telephony (Voice Over IP) security tools	1-4Q		
(U)	Continue Cyber Security Bots (Cybercraft)	4Q	1-4Q	1-4Q
(U)	Continue Integrated Airborne Network Security IO platform		1-4Q	1-4Q

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PE NUMBER: 0303141F
PE TITLE: Global Combat Support System (GCSS)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303141F Global Combat Support System (GCSS)

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	22.530	11.756	4.320	3.727	4.017	3.688	3.649	Continuing	TBD
5046 Systems Engineering & Integration	22.530	11.756	4.320	3.727	4.017	3.688	3.649	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Global Combat Support System-Air Force (GCSS-AF) will provide the warfighter and supporting elements with timely, accurate, and trusted Agile Combat Support (ACS) information. This information will have the appropriate level of security needed for the Air Expeditionary Forces (AEF) to execute the Air Force mission throughout the full spectrum of military operations.

The GCSS-AF program modernizes, consolidates, develops, and integrates Air Force and Department of Defense combat support information systems. The modernized systems are being developed in compliance with and hosted on the Network Centric Enterprise Systems, replacing the Defense Information Infrastructure (DII) Common Operating Environment (COE). The modernized systems will be implemented and sustained worldwide and support both wartime and peacetime requirements using hardware, software, and communications capabilities available from standard open systems government contracts and communications infrastructure programs. In this manner, GCSS-AF avoids added costs, removes business processing inefficiencies, reduces deployment footprint, and improves the speed with which information flows.

This program is in Budget Activity 7, Operational System Development, because the program modernizes Automated Information Systems (AIS).

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	19.895	10.631	4.415
(U)	Current PBR/President's Budget	22.530	11.756	4.320
(U)	Total Adjustments	2.635	1.125	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.075	-0.075	
	Congressional Increases		1.200	
	Reprogrammings	3.200		
	SBIR/STTR Transfer	-0.490		

(U) Significant Program Changes:

During FY07, the Air Force added $3.2M RDT&E to support the Integration of SMART pro-sight and Active Risk Manager (ARM). In FY08, Congress added $1.2M for Tech Order Optimization.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5046	Systems Engineering & Integration	22.530	11.756	4.320	3.727	4.017	3.688	3.649	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Global Combat Support System-Air Force (GCSS-AF) will provide the warfighter and supporting elements with timely, accurate, and trusted Agile Combat Support (ACS) information. This information will have the appropriate level of security needed for the Air Expeditionary Forces (AEF) to execute the Air Force mission throughout the full spectrum of military operations.

The GCSS-AF program modernizes, consolidates, develops, and integrates Air Force and Department of Defense combat support information systems. The modernized systems are being developed in compliance with and hosted on the Network Centric Enterprise Systems, replacing the Defense Information Infrastructure (DII) Common Operating Environment (COE). The modernized systems will be implemented and sustained worldwide and support both wartime and peacetime requirements using hardware, software, and communications capabilities available from standard open systems government contracts and communications infrastructure programs. In this manner, GCSS-AF avoids added costs, removes business processing inefficiencies, reduces deployment footprint, and improves the speed with which information flows.

This program is in Budget Activity 7, Operational System Development, because the program modernizes Automated Information Systems (AIS).

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Integration Framework (IF) Development	13.000	7.906	2.900
(U) Multi-Site Engineering	3.050		
(U) Integration of SMART Pro-Sight and Active Risk Manager	3.030		
(U) Tech Order Optimization		1.200	
(U) Test and Evaluation	0.500	0.500	0.420
(U) ESC/NI Program Management and Operations	1.100	1.150	0.500
(U) Integrated Requirements Support System (IRSS) Integration	0.500	0.500	0.500
(U) Air Force Knowledge Service	1.350	0.500	0.000
(U) Total Cost	22.530	11.756	4.320

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Integrated Framework Operation & Maintenance, AF; PE	58.279	30.900	30.560	32.800	33.367	33.944	34.049	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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)	DISA Operation & Maintenance, AF; PE 0303141F	52.852	53.474	16.666	19.212	19.356	19.782	20.217	Continuing	TBD
(U)	Other Procurement, AF; PE 0303141F	21.702	12.234	10.493	18.204	15.361	15.458	14.670	Continuing	TBD

(U) D. Acquisition Strategy

On 30 October 2007, the Assistant Secretary of the Air Force (Acquisition) chaired the Air Force Review Board for the GCSS-AF's Transition to Sustainment Strategy. Mrs. Payton signed an Senior Acquisition Executive Decision Mamemorandum documenting GCSS-AF as a Post-Milestone C Program with its initial increment to go to sustainment. The Exibit R-4 Schedule reflects this latest guidance. Thus, the preponderance of GCSS-AF development, that is system engineering, design, and installation, was provided for in the Indefinite Delivery/Indefinite Quantity (ID/IQ) contract with Firm-Fixed-Price (FFP), Cost Reimbursable (CR), Cost-Plus-Fixed-Fee (CPFF), Cost-Plus-Award-Fee (CPAF), and Labor-Hour (LH) Contract Line Item Numbers (CLINs), awarded after full and open competition in 1996. The program has a two-year contract extension. During this contract extension, there will be a competition for an Operations and Maintenance contract for the fielded capability.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Lockheed Martin Systems IF Development	Level of Effort	Lockheed Martin IT, Owego, NY		13.000	Oct-06	7.906	Oct-07	2.900	Oct-08	Continuing	TBD	TBD
Multi-Site Enginnering	Level of Effort	Lockheed Martin IT, Owego, NY		3.050	Oct-06					0.000	3.050	TBD
IRSS Integration	C/T&M	DFSG/SS, Wright Patterson AFB, OH		0.500	Oct-06	0.500	Oct-07	0.500	Oct-08	Continuing	TBD	TBD
Integration of SMART Pro-Sight and Active Risk Manager	TBD	TBD		3.030							3.030	3.030
Tech Order Optimization	TBD	TBD				1.200					1.200	1.200
Air Force Knowledge Service Development	Level of Effort	DFSG/SS, Wright Patterson AFB, OH		1.350	Oct-06	0.500	Oct-07	0.000	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	20.930		10.106		3.400		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Test and Evaluation	Statement of Commitment	46th CTF, WP AFB, OH; and JITC, Fort Huachuca, AZ		0.500	Oct-06	0.500	Oct-07	0.420	Oct-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.500		0.500		0.420		Continuing	TBD	TBD
Remarks:												
(U) Management												
ESC/NI Program Management and Operations	Various Contracts	Hanscom AFB, MA		1.100	Oct-06	1.150	Oct-07	0.500	Oct-08	Continuing	TBD	TBD
Subtotal Management			0.000	1.100		1.150		0.500		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	22.530		11.756		4.320		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303141F Global Combat Support System (GCSS)**	PROJECT NUMBER AND TITLE **5046 Systems Engineering & Integration**

Global Combat Support System – Air Force

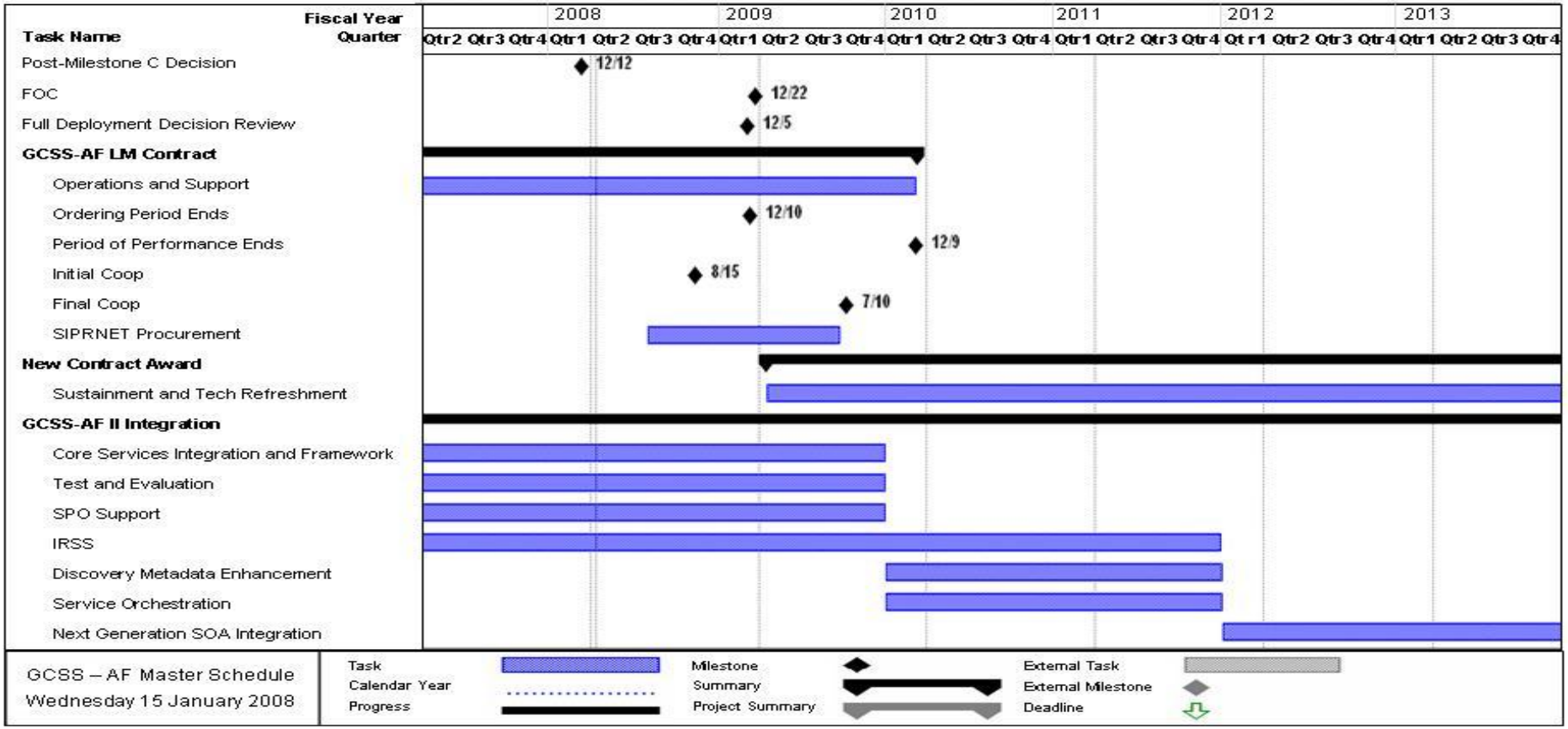

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303141F Global Combat Support System (GCSS)**	PROJECT NUMBER AND TITLE **5046 Systems Engineering & Integration**

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) Major Milestones			
(U) *** SAE Post-Milstone C Decision Memorandum	4Q		
(U) *** Full Operational Capability (FOC)			4Q
(U) *** Full Deployment Decision Review (FDDR)		4Q	
(U) Original GCSS-AF/Lockheed Martin Contract			
(U) *** Operations and Support	1-4Q	1-4Q	1-4Q
(U) *** Ordering Period Ends		4Q	
(U) *** Period of Performance Ends			4Q
(U) *** Initial Continuity of Operations (COOP) Capability		3Q	
(U) *** Final COOP Capability			3Q
(U) *** SIPRNET Procurement		2-4Q	1-2Q
(U) New Contract Award			
(U) *** Sustainment and Technical Refreshment			1-4Q
(U) GCSS-AF II Integration			
(U) *** Core Services Integration and Framework	1-4Q	1-4Q	1-3Q
(U) *** Test and Evaluation	1-4Q	1-4Q	1-3Q
(U) *** SPO Support	1-4Q	1-4Q	1-3Q
(U) *** IRSS	1-4Q	1-4Q	1-4Q
(U) *** Discovery and Metadata Enhancement			4Q
(U) *** Service Orchestration			4Q
(U) Next Generation SOA Integration (FY11)			

PE NUMBER: 0303150F
PE TITLE: WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	3.204	4.471	3.218	3.203	3.138	3.199	3.263	0.000	0.000
4667	Global Command and Control System - AF	3.204	4.471	3.218	3.203	3.138	3.199	3.263	0.000	0.000

(U) A. Mission Description and Budget Item Justification

The Global Command and Control System (GCCS) is the Joint Command and Control (C2) System of Record and the designated C2 migration system for the DOD. It is an integrated Command, Control, Communications, Computer, and Intelligence (C4I) system capable of supporting all echelons of the US military command structure. GCCS solves C4I interoperability problems between Service components by establishing a Common Operating Environment (COE), and has an end objective to eliminate stovepiped systems. The GCCS-Air Force program provides C2, intelligence, surveillance, reconnaissance (ISR) and operational information for the Joint Force Air Component Commander (JFACC) and the Air and Space Operations Center-Weapon System (AOC-WS) for planning and execution, air space deconfliction, targeting, weaponeering and many other applications supporting air operational command and control, and fully supports the Aerospace Expeditionary Force (AEF) concept. The Air Force is responsible for developing four of the modules that make up the COE, and integration of Air Force unique applications with the COE. Integration efforts are directed towards future aerospace C2 concepts supporting requirements for the AOC, including ISR, and intended to automate operational systems with an objective of providing the right people with the right information at the right time while reducing the overall foot print of the system. As they become available, GCCS-AF will integrate applications into the WINx environment satisfying warfighter requirements for the Common Operational Picture (COP), Joint Defensive Planner (JDP), Joint Targeting Toolbox (JTT), Air Tasking Order (ATO) Reader, and Deliberate Crisis Action Planning and Execution Segment (DCAPES) capabilities.

The GCCS-AF program is actively supporting planning for transition of functionality to DOD's next generation Joint C2 enabler, the Net Enabled Command Capability (NECC) Program. The GCCS-AF program's FY09-13 funding will be used to implement evolving Joint and Air Force GCCS functional capability as well as facilitate transition, development and delivery of functionality to the NECC system.

This effort is Budget Activity 7, Operational System Development, because the program develops and implements software upgrades for integrating existing operational systems and computer networks that will eventually evolve to the NECC system riding on the Global Information Grid.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	3.290	3.397	3.244
(U)	Current PBR/President's Budget	3.204	4.471	3.218
(U)	Total Adjustments	-0.086	1.074	
(U)	Congressional Program Reductions		-0.047	
	Congressional Rescissions		-0.079	
	Congressional Increases		1.200	
	Reprogrammings			
	SBIR/STTR Transfer	-0.086		

(U) Significant Program Changes:

The FY08 $8M Congressional Add was reprogrammed to the Integrated Command and Control Applications (IC2A) program (PE 64740F). The FY08 $1.2M Congressional Add will be reprogrammed to the appropriate PE. These reprogramming actions will enable execution in accordance with Congressional intent.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4667	Global Command and Control System - AF	3.204	4.471	3.218	3.203	3.138	3.199	3.263	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 Global Command and Control System (GCCS) is the Joint Command and Control (C2) System of Record and the designated C2 migration system for the DOD. It is an integrated Command, Control, Communications, Computer, and Intelligence (C4I) system capable of supporting all echelons of the US military command structure. GCCS solves C4I interoperability problems between Service components by establishing a Common Operating Environment (COE), and has an end objective to eliminate stovepiped systems. The GCCS-Air Force program provides C2, intelligence, surveillance, reconnaissance (ISR) and operational information for the Joint Force Air Component Commander (JFACC) and the Air and Space Operations Center-Weapon System (AOC-WS) for planning and execution, air space deconfliction, targeting, weaponeering and many other applications supporting air operational command and control, and fully supports the Aerospace Expeditionary Force (AEF) concept. The Air Force is responsible for developing four of the modules that make up the COE, and integration of Air Force unique applications with the COE. Integration efforts are directed towards future aerospace C2 concepts supporting requirements for the AOC, including ISR, and intended to automate operational systems with an objective of providing the right people with the right information at the right time while reducing the overall foot print of the system. As they become available, GCCS-AF will integrate applications into the WINx environment satisfying warfighter requirements for the Common Operational Picture (COP), Joint Defensive Planner (JDP), Joint Targeting Toolbox (JTT), Air Tasking Order (ATO) Reader, and Deliberate Crisis Action Planning and Execution Segment (DCAPES) capabilities.

The GCCS-AF program is actively supporting planning for transition of functionality to DOD's next generation Joint C2 enabler, the Net Enabled Command Capability (NECC) Program. The GCCS-AF program's FY09-13 funding will be used to implement evolving Joint and Air Force GCCS functional capability as well as facilitate transition, development and delivery of functionality to the NECC system.

This effort is Budget Activity 7, Operational System Development, because the program develops and implements software upgrades for integrating existing operational systems and computer networks that will eventually evolve to the NECC system riding on the Global Information Grid.

(U) B. Accomplishments/Planned Program ($ in Millions)		FY 2007	FY 2008	FY 2009
(U)	Continue Integration of Air Force Capabilities into GCCS (COP, DCAPES, ATO Reader, Joint Defensive Planner (JDP), Joint Targeting Toolbox (JTT)), Prototype Software Development, GCCS Migration Support	1.390	1.497	1.344
(U)	GCCS-AF(I) Systems Engineering	1.814	1.774	1.874
(U)	Carbon Nanotubes Enhanced Power for Space		1.200	
(U)	Total Cost	3.204	4.471	3.218

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Other Procurement, AF	13.803	14.222	10.799	10.477	10.247	14.054	14.330	Continuing	TBD
(U)	Operations & Maintenance	38.642	50.414	49.519	50.714	51.145	54.117	55.225	Continuing	TBD

(U) D. Acquisition Strategy

GCCS-AF is developed and fielded using a spiral acquisition approach, synchronized with Common Operating Environment (COE) and compliant with the GCCS-Joint baseline. All deployment of GCCS-AF capabilities are synchronized with the GCCS-Joint Program fielding schedule, which is led by DISA. The GCCS-AF program is actively supporting DOD planning for transition of functionality to the NECC Program.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Carbon Nanotube Enhanced Power for Space	SS/FFP	Unknown				1.200	Feb-08			0.000	1.200 0.000	1.200
WINxB	SS/FFP	Northrop Gruman ITS, Herndon VA		0.900	Oct-06	0.900	Oct-07	0.850	Oct-08	Continuing	TBD	
Subtotal Product Development			0.000	0.900		2.100		0.850		Continuing	TBD	1.200
Remarks:												
(U) Support												
Information Technology Services Program (ITSP)	SS/FFP	Various								0.000	0.000	
Program Management Support	FFRDC/SS/ FFP	Mitre/ESC		1.814	Oct-06	1.774	Oct-07	1.874	Oct-08	Continuing	TBD	
Miscellaneous	SS/BOA	Various		0.190	Oct-06	0.297	Oct-07	0.194	Oct-08	Continuing	TBD	
Subtotal Support			0.000	2.004		2.071		2.068		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
Test and Accreditation	MIPR	Multiple		0.300	Oct-06	0.300	Oct-07	0.300	Oct-08	Continuing	TBD	
Subtotal Test & Evaluation			0.000	0.300		0.300		0.300		Continuing	TBD	0.000
Remarks:												
(U) Total Cost			0.000	3.204		4.471		3.218		Continuing	TBD	1.200

Exhibit R-4, RDT&E Schedule Profile

DATE: **February 2008**

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**

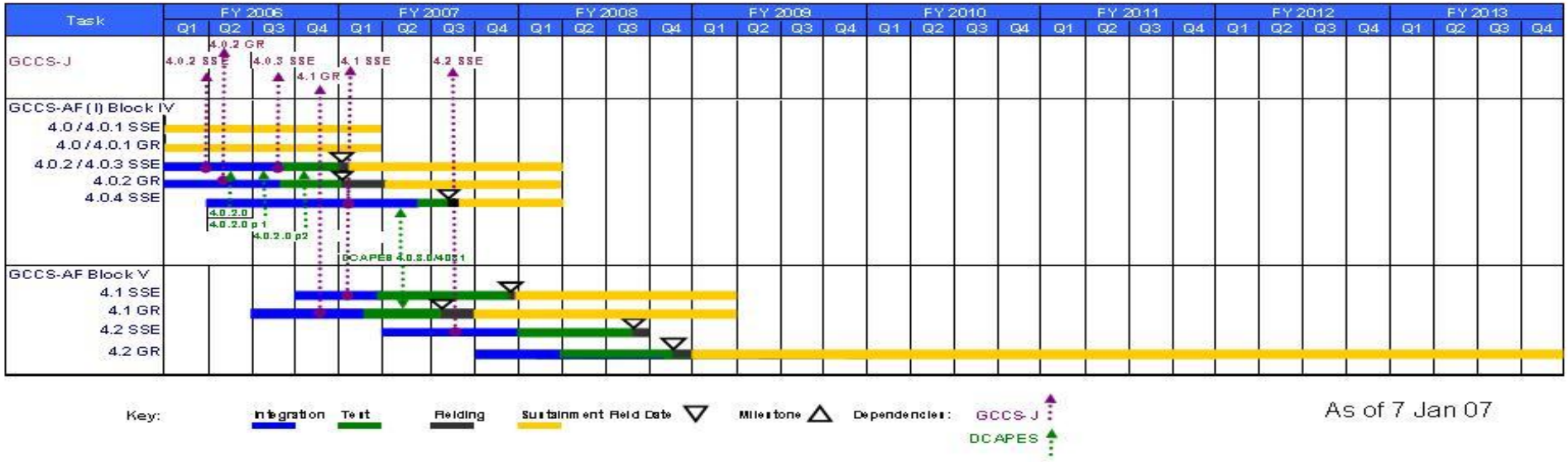

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM**	PROJECT NUMBER AND TITLE **4667 Global Command and Control System - AF**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) GCCS-AF v4.0.2: Global Release (GR)/SSE Development/Integration/Fielding/Testing	1Q		
(U) GCCS-AF v4.1: GR/SSE Development/Integration/Fielding/Testing	1-4Q		
(U) GCCS-AF v4.2: GR/SSE Development/Integration/Fielding/Testing	2-4Q	1-4Q	

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PE NUMBER: 0303158F
PE TITLE: Joint Command and Control

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303158F Joint Command and Control

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	5.651	5.745	3.234	3.139	3.125	5.202	5.306	Continuing	TBD
5216	JC2 Technology and System Development	5.651	5.745	3.234	3.139	3.125	5.202	5.306	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Net Enabled Command Capability (NECC) - is the next generation of joint command and control (C2) capabilities for the Department of Defense. NECC will replace the Global Command and Control System (GCCS) Family of Systems (FoS). The GCCS program includes each of the component GCCS programs (i.e., GCCS-AF FoS, GCCS-M, GCCS-J and GCCS-A), which are the current programs of record within each component. These GCCS programs will transition into a single NECC development effort.

The Air Force's initial contribution to NECC Increment I (FY08-FY11) will be drawn from elements of the GCCS-Air Force Family of Systems (GCCS-AF FoS). GCCS-AF FoS consists of the following programs (each with their own program elements): TBMCS Force Level (TBMCS-FL), Joint Defensive Planner (JDP) - part of TBMCS-FL baseline program element, Joint Targeting Toolkit (JTT), GCCS-AF Infrastructure (GCCS-AF I), Deliberate Crisis Action Planning and Execution Segment (DCAPES) and the C2 portion of the Joint Environmental Toolkit (JET). Leveraging the capabilities provided by the Net-Centric Enterprise Services (NCES) program, NECC will accelerate the evolution towards a net-centric, web-based, open-system standards approach to providing C2 capabilities and services that will establish NECC as the core of the DoD C2 enterprise architecture.

All of the current GCCS-AF FoS will transition to NECC by the end of Increment I (FY08-FY11). NECC will deliver capabilities as stated in the JROC validated NECC Capability Development Document (CDD). NECC enhances the capabilities of the GCCS FoS and includes the migration of capabilities to a more modern, interoperable architecture. The Technology Development Phase underway encompasses risk reduction activities and engineering analyses with selected system and architectural analyses. The requested RDT&E funding is critical to support Air Force net-centric transformation efforts in the areas of strategic and operational command and control.

Funding for FY08 and beyond supports the Air Force contribution to NECC by maintaining the Air Force Component Program Management Office (CPMO) responsible for all AF acquisition activities related to NECC. The AF CPMO will be responsible for development, integration, architecture, system engineering, testing and transition planning, as directed by the DISA PEO for Command and Control Capabilities (PEO-C2C).

This effort is Budget Activity 7 and will perform efforts necessary to evaluate integrated technologies, representative modes or prototype joint C2 capabilities in a high fidelity and realistic operating environment.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303158F Joint Command and Control

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	5.768	5.841	5.352
(U)	Current PBR/President's Budget	5.651	5.745	3.234
(U)	Total Adjustments	-0.117	-0.096	
(U)	Congressional Program Reductions		-0.059	
	Congressional Rescissions		-0.037	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.117		
(U)	Significant Program Changes:			

FY09 program reduction of $2M is a result of higher Air Force priorities

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303158F Joint Command and Control	PROJECT NUMBER AND TITLE: 5216 JC2 Technology and System Development	

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5216	JC2 Technology and System Development	5.651	5.745	3.234	3.139	3.125	5.202	5.306	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Net Enabled Command Capability (NECC) - is the next generation of joint command and control (C2) capabilities for the Department of Defense. NECC will replace the Global Command and Control System (GCCS) Family of Systems (FoS). The GCCS program includes each of the component GCCS programs (i.e., GCCS-AF FoS, GCCS-M, GCCS-J and GCCS-A), which are the current programs of record within each component. These GCCS programs will transition into a single NECC development effort.

The Air Force's initial contribution to NECC Increment I (FY08-FY11) will be drawn from elements of the GCCS-Air Force Family of Systems (GCCS-AF FoS). GCCS-AF FoS consists of the following programs (each with their own program elements): TBMCS Force Level (TBMCS-FL), Joint Defensive Planner (JDP) - part of TBMCS-FL baseline program element, Joint Targeting Toolkit (JTT), GCCS-AF Infrastructure (GCCS-AF I), Deliberate Crisis Action Planning and Execution Segment (DCAPES) and the C2 portion of the Joint Environmental Toolkit (JET). Leveraging the capabilities provided by the Net-Centric Enterprise Services (NCES) program, NECC will accelerate the evolution towards a net-centric, web-based, open-system standards approach to providing C2 capabilities and services that will establish NECC as the core of the DoD C2 enterprise architecture.

All of the current GCCS-AF FoS will transition to NECC by the end of Increment I (FY08-FY11). NECC will deliver capabilities as stated in the JROC validated NECC Capability Development Document (CDD). NECC enhances the capabilities of the GCCS FoS and includes the migration of capabilities to a more modern, interoperable architecture. The Technology Development Phase underway encompasses risk reduction activities and engineering analyses with selected system and architectural analyses. The requested RDT&E funding is critical to support Air Force net-centric transformation efforts in the areas of strategic and operational command and control.

Funding for FY08 and beyond supports the Air Force contribution to NECC by maintaining the Air Force Component Program Management Office (CPMO) responsible for all AF acquisition activities related to NECC. The AF CPMO will be responsible for development, integration, architecture, system engineering, testing and transition planning, as directed by the DISA PEO for Command and Control Capabilities (PEO-C2C).

This effort is Budget Activity 7 and will perform efforts necessary to evaluate integrated technologies, representative modes or prototype joint C2 capabilities in a high fidelity and realistic operating environment.

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303158F Joint Command and Control	PROJECT NUMBER AND TITLE 5216 JC2 Technology and System Development

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

		FY 2007	FY 2008	FY 2009
(U)	Technical Engineering Services	2.100	2.100	1.800
(U)	Program Management Support Activities	1.646	1.590	1.434
(U)	Air Force Support to NECC Development and Piloting	1.905	2.055	0.000
(U)	Total Cost	5.651	5.745	3.234

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Other Procurement, AF	0.000	0.000	5.349	5.669	6.729	7.454	5.502	Continuing	TBD
(U)	Operations & Maintenance	0.000	0.000	0.000	0.000	0.000	4.100	3.300	Continuing	TBD

(U) D. Acquisition Strategy

The NECC acquisition strategy is being jointly developed by the Defense Information Systems Agency (DISA), the Component Program Management Offices (CPMOs), the Assistant Secretary of Defense for Networks and Information Integration (ASD (NII)), Under Secretary of Defense for Acquisition, Technology and Logistics (AT&L), and Joint Forces Command (JFCOM). As Lead Component for NECC, DISA has overall responsibility for development and coordination of an acquisition strategy to support Milesone B, which is planned for 2QFY08.

Each service/component will be responsible for awarded contracts or utilizing existing contracts to development C2 capabilities as described by the DISA NECC JPEO. Funding will also be provided by DISA JPEO.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303158F Joint Command and Control

PROJECT NUMBER AND TITLE: 5216 JC2 Technology and System Development

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
											0.000	
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Support												
Technical Engineering Services	FP	MITRE, Bedford, MA	1.100	2.100	Nov-06	2.100	Nov-07	1.800	Nov-08	Continuing	TBD	TBD
Subtotal Support			1.100	2.100		2.100		1.800		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												
NECC Evaluation Capability Module (ECM) Piloting	MIPR, CPFF	46 TS Det 1, Eglin AFB	0.507	1.905	Jan-07	2.055	Nov-07	0.000	Nov-08	Continuing	TBD	TBD
		350 ELSG, Hanscom									0.000	
Program Management Support	CPFF	350 ELSG, Hanscom AFB, MA	2.991	1.646	Nov-06	1.590	Nov-07	1.434	Nov-08	Continuing	TBD	TBD
Subtotal Management			3.498	3.551		3.645		1.434		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			4.598	5.651		5.745		3.234		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303158F Joint Command and Control	PROJECT NUMBER AND TITLE: 5216 JC2 Technology and System Development

NECC Program Structure/Schedule

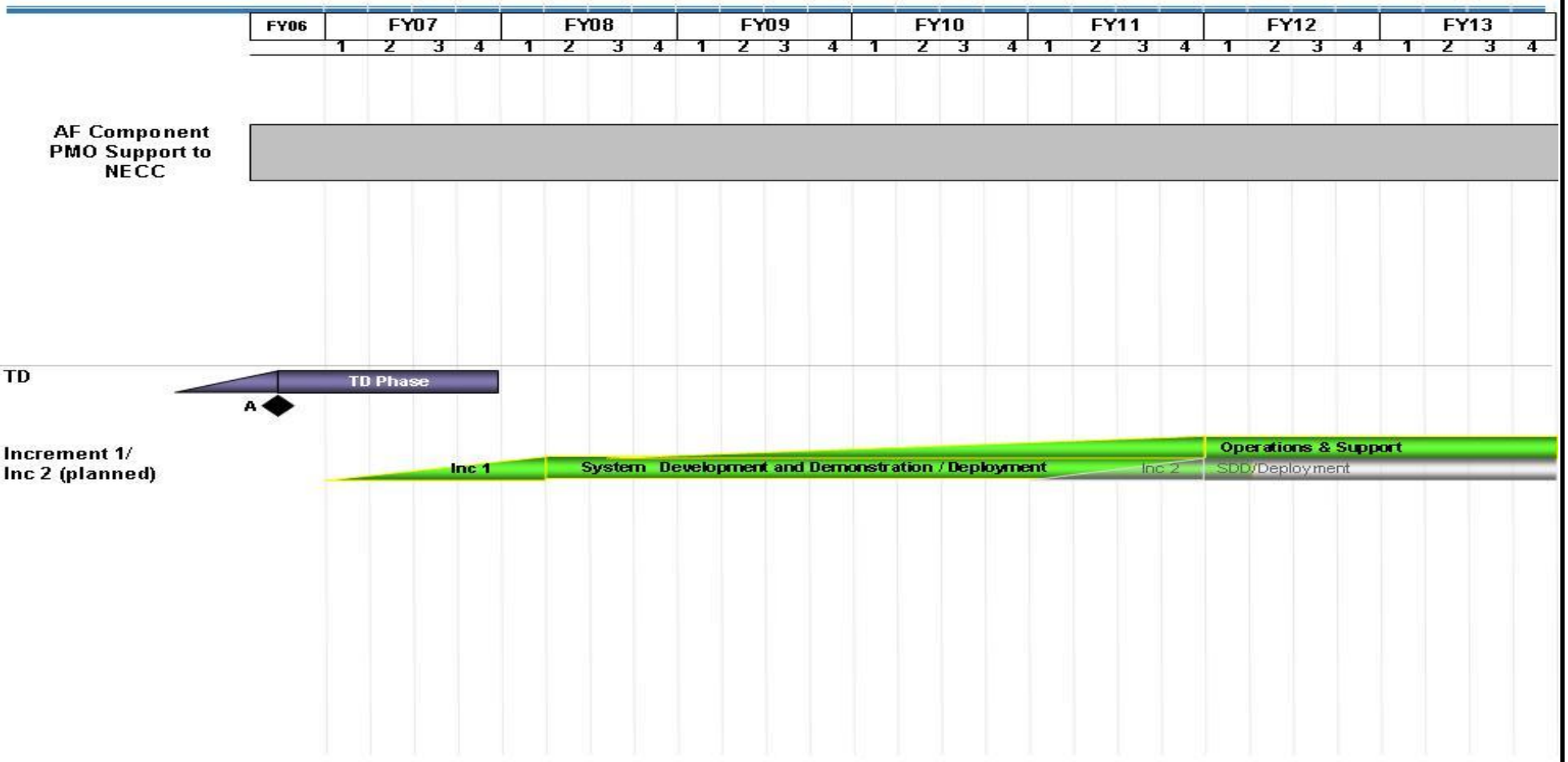

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303158F Joint Command and Control	PROJECT NUMBER AND TITLE: 5216 JC2 Technology and System Development

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) AF CPMO Support to NECC	1-4Q	1-4Q	1-4Q
(U) Air Force Support for NECC Increment I Tech Demo Phase	1-4Q	1Q	
(U) Air Force Support for NECC Increment I System Design and Development (SDD) and Deployment Phases		2-4Q	1-4Q

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PE NUMBER: 0303601F
PE TITLE: MILSATCOM Terminals

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303601F MILSATCOM Terminals**

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	257.226	384.652	337.098	342.209	234.390	184.912	187.514	Continuing	TBD
2487 MILSATCOM Terminals	257.226	384.652	337.098	342.209	234.390	184.912	187.514	Continuing	TBD

FY08 funding totals do not include $79.750M in FY08 GWOT Requirements still pending Congressional consideration.

(U) A. Mission Description and Budget Item Justification

FY2008 funding totals do not include $79.750M FY2008 GWOT requirements still pending Congressional consideration.

The Military Satellite Communications (MILSATCOM) Terminals program develops equipment enabling users to communicate via Milstar, Advanced Extremely High Frequency (AEHF), Ultra High Frequency (UHF) Follow-On (UFO), Wideband Global SATCOM (WGS), Defense Satellite Communication System (DSCS), Enhanced Polar Systems (EPS), Transformational Communication Satellite (TSAT), and other military and commercial satellites, to support tactical Air and Space Expeditionary Force requirements and maintain essential connectivity for strategic forces. Program RDT&E currently includes the following program operations and support efforts:

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) The Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) 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 1 terminals will also support the command and control (C2) of Milstar and AEHF satellites. Increment 2 will provide robust secure 2-way Ku/Ka wideband SATCOM capability (274 Megabits per second - Mbps) on High Altitude Endurance (HAE) Intelligence, Surveillance, and Reconnaissance (ISR) aircraft (i.e., the Global Hawk Unmanned Aerial Vehicle). Increment 3 will provide Extended Data Rate-Plus (XDR+) capabilities to platforms requiring High Data Rate EHF (45 Mbps) and Processed Ka (311 Mbps) communications in support of the TSAT constellation. Increment 4 will provide optical (Lasercom) communication capability for Airborne ISR platforms requiring data rates in excess of 1 Gigabit per second. Also included in the FAB-T program is the Advanced Multi-band Communications Antenna System (AMCAS) which will deliver a family of multi-beam, multi-band, low-profile antenna to enable simultaneous connectivity to more than one satellite. This antenna addresses existing (limited) aircraft external surface area, historically high antenna integration costs, and aerodynamic/low-observability restrictions. AMCAS also enables airborne weapon systems to support the warfighter's need for multiple frequency bands (EHF and Ka). The AEHF Interim Command and Control (C2) terminal is a modified AEHF Universal System Test Terminal (AUST-T) that will perform C2 to work with the AEHF Satellite Mission Control Sub-System (ASMCS) and control AEHF satellites until FAB-T becomes available to perform these functions.

3) High Data Rate (HDR) Radio Frequency (RF) Ground Terminal development. Develops a transponded Ka-band HDR capability in support of the Distributed Common Ground System (DCGS) receipt of data from the Airborne ISR (AISR) platforms using FAB-T Inc 2 and Ka-band terminals. This bandwidth will be provided via the fourth and fifth WGS satellites. This terminal will also support the lower data rate provided by the first three WGS satellites.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303601F MILSATCOM Terminals

4) Joint Terminal Engineering Office (JTEO) provides tri-service coordination of terminal development, acquisition and fielding activities.

This effort is funded in Budget Activity 7, Operational System Development because some of its programs have completed Milestone C reviews and are in production.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	269.926	388.491	372.443
(U)	Current PBR/President's Budget	257.226	384.652	337.098
(U)	Total Adjustments	-12.700	-3.839	
(U)	Congressional Program Reductions	0.000		
	Congressional Rescissions	0.000	-3.839	
	Congressional Increases			
	Reprogrammings	-5.191		
	SBIR/STTR Transfer	-7.509		

(U) Significant Program Changes:

Decrease in FY09 budget due to: 1) transfer of Predator unique funds from FAB-T Inc 2 to the Predator program for Ka terminal development, 2) delay of AMCAS SDD until 1QFY10 to allow technology maturation and 3) reflect Air Force inflation and fact-of-life takes.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303601F MILSATCOM Terminals	PROJECT NUMBER AND TITLE: 2487 MILSATCOM Terminals	

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2487 MILSATCOM Terminals	257.226	384.652	337.098	342.209	234.390	184.912	187.514	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

FY2008 funding totals do not include $79.750M FY2008 GWOT requirements still pending Congressional consideration.

The Military Satellite Communications (MILSATCOM) Terminals program develops equipment enabling users to communicate via Milstar, Advanced Extremely High Frequency (AEHF), Ultra High Frequency (UHF) Follow-On (UFO), Wideband Global SATCOM (WGS), Defense Satellite Communication System (DSCS), Enhanced Polar Systems (EPS), Transformational Communication Satellite (TSAT), and other military and commercial satellites, to support tactical Air and Space Expeditionary Force requirements and maintain essential connectivity for strategic forces. Program RDT&E currently includes the following program operations and support efforts:

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) The Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) 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 1 terminals will also support the command and control (C2) of Milstar and AEHF satellites. Increment 2 will provide robust secure 2-way Ku/Ka wideband SATCOM capability (274 Megabits per second - Mbps) on High Altitude Endurance (HAE) Intelligence, Surveillance, and Reconnaissance (ISR) aircraft (i.e., the Global Hawk Unmanned Aerial Vehicle). Increment 3 will provide Extended Data Rate-Plus (XDR+) capabilities to platforms requiring High Data Rate EHF (45 Mbps) and Processed Ka (311 Mbps) communications in support of the TSAT constellation. Increment 4 will provide optical (Lasercom) communication capability for Airborne ISR platforms requiring data rates in excess of 1 Gigabit per second. Also included in the FAB-T program is the Advanced Multi-band Communications Antenna System (AMCAS) which will deliver a family of multi-beam, multi-band, low-profile antenna to enable simultaneous connectivity to more than one satellite. This antenna addresses existing (limited) aircraft external surface area, historically high antenna integration costs, and aerodynamic/low-observability restrictions. AMCAS also enables airborne weapon systems to support the warfighter's need for multiple frequency bands (EHF and Ka). The AEHF Interim Command and Control (C2) terminal is a modified AEHF Universal System Test Terminal (AUST-T) that will perform C2 to work with the AEHF Satellite Mission Control Sub-System (ASMCS) and control AEHF satellites until FAB-T becomes available to perform these functions.

3) High Data Rate (HDR) Radio Frequency (RF) Ground Terminal development. Develops a transponded Ka-band HDR capability in support of the Distributed Common Ground System (DCGS) receipt of data from the Airborne ISR (AISR) platforms using FAB-T Inc 2 and Ka-band terminals. This bandwidth will be provided via the fourth and fifth WGS satellites. This terminal will also support the lower data rate provided by the first three WGS satellites.

4) Joint Terminal Engineering Office (JTEO) provides tri-service coordination of terminal development, acquisition and fielding activities.

This effort is funded in Budget Activity 7, Operational System Development because some of its programs have completed Milestone C reviews and are in production.

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303601F MILSATCOM Terminals	PROJECT NUMBER AND TITLE 2487 MILSATCOM Terminals

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Continue concept/prototype demo/MILSATCOM Terminals roadmap/SATCOM funding	2.772	4.313	4.403
(U)	Continue Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) development	238.183	361.576	317.232
(U)	Continue High Data Rate (HDR) RF Ground Terminal development	8.850	10.799	7.491
(U)	Continue Joint Terminal Engineering Office (JTEO) Support	7.421	7.964	7.972
(U)	Total Cost	257.226	384.652	337.098

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Aircraft Procurement, Air Force, Project 119992 (Budget Activity 5, P-27 and P-61, PE 0303601F only) (1)	9.052	0.000	0.000	105.844	284.412	431.149	399.951	Continuing	TBD
(U) Other Procurement, Air Force, 'MILSATCOM Space', Project 836780 (Budget Activity 3, P-66, PE 0303601F only) (1)	75.209	109.694	106.067	172.349	211.170	167.591	157.316	Continuing	TBD

(1) Spares Included

NOTE: Related RDT&E costs for MILSATCOM satellite systems to which terminal development is linked can be found in RDT&E Budget Item Justification Sheets for the following Program Elements (PEs):

PE 0303110F Defense Satellite Communication System (Space)
PE 0603430F Advanced EHF MILSATCOM (Space)
PE 0603845F Transformational SATCOM (TSAT)
PE 0603432F Polar MILSATCOM (Space)
PE 0603854F Wideband SATCOM (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)

(U) D. Acquisition Strategy

FAB-T provides a family of Beyond Line-of-Sight (BLOS) satellite communications (SATCOM) and Line-of-Sight (LOS) terminals with an open architecture to

satisfy the requirements identified in the Advanced Wideband Terminal (AWT) and Command Post Terminal (CPT) Operational Requirements Documents (ORDs).

Increment 1 provides the layered architecture which enables support for evolving and new communication capabilities and technologies. Capabilities include transmission and reception of voice, data, imagery, and video as well as broadcast reception over protected and wideband SATCOM and LOS systems. Increment 1 also provides the capability for air and ground communications using the Milstar Extremely High Frequency (EHF) and Advanced Extremely High Frequency (AEHF) waveforms. Increment 1 terminals are planned for the B-2, B-52, and RC-135 aircraft and to upgrade the existing Command Post Terminals (CPTs) located on the ground (fixed and transportable) and airborne on the E-4 and E-6B aircraft.

Increment 2 will provide transponded Ka band communications over Wideband Global SATCOM (WGS), transponded Ku band communications over commercial satellites and LOS capabilities using Multi-Platform Common Data Link (MP-CDL) capabilities. These capabilities include communication over the WGS and provide LOS air-to-air, air-to-ground and ground-to-air for the Standard Common Data Link (STD-CDL). Increment 2 risk reduction contract was awarded sole source to Boeing Corporation due to ongoing Increment 1 development activities which lay the groundwork for all increments.

Advanced Multi-band Communications Antenna System (AMCAS) is a technology advancement program that will provide a multi-beam, multi-band antenna to enable connectivity to more than one satellite. This antenna program addresses limited aircraft external surface areas, historically high antenna integration costs, and aerodynamic and low observability restrictions. It enables airborne weapon systems to support the warfighter's need for higher data rates while providing a common solution for multiple platforms.

Increment 3 will add 2-way processed Ka band and EHF Extended Data Rate Plus (XDR+) that increases the EHF data rate from 8 Mbps to 45 Mbps and provides connectivity with the Transformational Communications Satellite (TSAT).

Increment 4 is planned to develop Optical Communications (Lasercom). Lasercom will provide very high bandwidth communications so that sensor data may be transmitted to exploitation facilities at very high data rates (e.g., 1 > Gbps). Airborne Command & Control aircraft will also use Lasercom to exchange or update large databases.

The program strategy is to procure future increments using the open system architecture and adding functionality as funding becomes available and when requirements are identified. These increments may include providing SATCOM capability combinations of AEHF, Global Broadcast Service (GBS), and commercial wideband video and data services to over fifty-seven additional aircraft/platform types that are identified in the AWT Operational Requirements Document (ORD).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

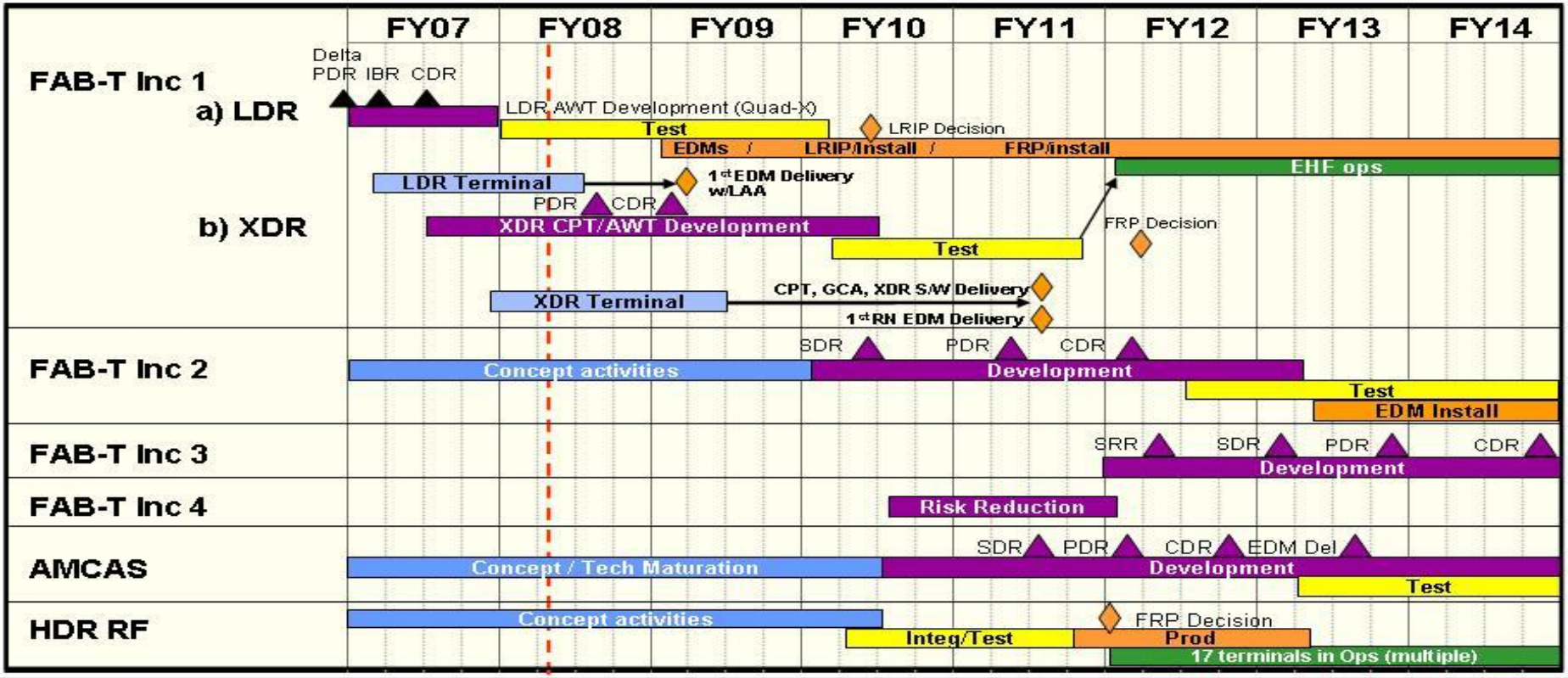
PE NUMBER AND TITLE: 0303601F MILSATCOM Terminals

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
FAB-T Development	CPAF	Boeing Corp., Anaheim, CA	479.952	204.300	Jan-07	335.312	Jan-08	268.875	Jan-09	Continuing	TBD	
FAB-T	Various	Various	18.892	9.488	Jan-07	6.838	Jan-08	29.825	Jan-09	Continuing	TBD	
High Data Rate (HDR) RF Ground Terminal Development	FFP	Comtech, Tempe, AZ	0.000	1.614	Aug-07	3.547	Jan-08	2.771	Jan-09	Continuing	TBD	
High Data Rate (HDR) RF Ground Terminal Development	FFP	Raytheon, Maraboro, MA		2.985	Aug-07	3.548	Jan-08	2.772	Jan-09	Continuing	TBD	
High Data Rate (HDR) RF Air Terminal Development (merged with FAB-T beginning in FY06)	CPAF	Boeing Corp., Anaheim, CA	13.787								13.787	
Lasercom Terminal Development Studies	FFP	Various	30.395								30.395	
Subtotal Product Development			543.026	218.387		349.245		304.243		Continuing	TBD	0.000
Remarks:												
(U) Support												
Systems Engineering Support	CPAF	MITRE, Bedford MA	198.825	21.510	Jan-07	20.560	Jan-08	18.190	Jan-09	Continuing	TBD	
Systems Engineering/Functional/Financial Support	Various	Various	216.440	15.711	Jan-07	12.416	Jan-08	12.431	Jan-09	Continuing	TBD	
Miscellaneous	Various	Various	30.494	1.618	Jan-07	2.431	Jan-08	2.234	Jan-09	Continuing	TBD	
											0.000	
Subtotal Support			445.759	38.839		35.407		32.855		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
Various Programs	Various	AF Research Lab	25.018							Continuing	TBD	
Miscellaneous T&E	Various	Various	26.187							Continuing	TBD	
											0.000	
Subtotal Test & Evaluation			51.205	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			1,039.990	257.226		384.652		337.098		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303601F MILSATCOM Terminals	PROJECT NUMBER AND TITLE 2487 MILSATCOM Terminals

MILSATCOM Terminals Schedule (R-Doc)



CDR: Critical Design Review
EDM: Engineering Design Model
IPR: Interim Program Review
LRIP: Low Rate Initial Production
PDR: Preliminary Design Review
SDR: System Design Review
SRR: System Requirements Review
TIM: Technical Interchange Meeting

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

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303601F MILSATCOM Terminals	PROJECT NUMBER AND TITLE: 2487 MILSATCOM Terminals

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) FAB-T (Inc 1) Low Data Rate (LDR) Critical Design Review (CDR)	2Q		
(U) FAB-T (Inc 1) Extended Data Rate (XDR) Preliminary Design Review (PDR)		3Q	
(U) FAB-T (Inc 1) XDR CDR			1Q
(U) FAB-T 1st Engineering Development Model (EDM) Delivery of LDR terminal			1Q

PE NUMBER: 0304260F
PE TITLE: Airborne SIGINT Enterprise (JMIP)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	119.646	135.162	173.631	169.364	157.415	151.286	154.367	Continuing	TBD
5180	RC-135 (Airborne SIGINT Development - RC-135)	37.730	49.061	49.091	46.631	31.741	29.539	34.320	Continuing	TBD
5182	MQ-1/MQ-9 (Airborne SIGINT Development - Predator)	2.428	8.031	2.717	2.935	3.028	3.086	3.150	Continuing	TBD
5183	Common Development (Airborne SIGINT Development - Common Development)	57.704	47.349	65.618	69.430	78.932	85.052	90.290	Continuing	TBD
5184	RQ-4 (Airborne SIGINT Development - Global Hawk	10.480	10.817	41.917	34.598	20.495	11.708	11.944	Continuing	TBD
5185	Compass Bright (Airborne SIGINT Development - Compass Bright)	7.092	8.529	8.774	9.014	9.187	9.366	9.558	Continuing	TBD
5186	Special Programs (Airborne SIGINT Development - Special Platforms)	4.212	11.375	5.514	6.756	14.032	12.535	5.105	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

(U) This PE provides signals intelligence (SIGINT) development efforts for all USAF airborne platforms. The funds in this PE are distributed among all Airborne SIGINT Enterprise (ASE) projects based on the development priorities established by the USAF SIGINT Capabilities Working Group (SCWG) in order to build a total SIGINT capability. As a result, the USAF will move funds between projects periodically to develop the highest priority projects in response to urgent warfighter needs. This PE will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability. Modernization efforts include sensors for the platforms and their appropriate interfaces with the Air Force Distributed Common Ground System (AF DCGS). This approach 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.

(U) Funds in any project may be used to fund initiatives in other projects within this PE at the discretion of the SCWG.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP)

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	117.390	139.627	143.982
(U)	Current PBR/President's Budget	119.646	135.162	173.631
(U)	Total Adjustments	2.256		
(U)	Congressional Program Reductions		-10.000	
	Congressional Rescissions		-0.865	
	Congressional Increases		6.400	
	Reprogrammings	2.256		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

(U) In FY07, Internal AF reprogramming actions added a total of $2.256M to the ASE PE. The additional funds were used in the Airborne Signals Intelligence Payload (ASIP) development In FY08, SIGINT development projects will continue work in the ASIP Program (to include integration and flight test on the U-2 and RQ-4). A total of $15.3M was added to increase and accelerate MQ-1 SIGINT efforts. Congress reduced this amount by $10.0M. Congress also added $6.4M to the Special Projects project line for SENIOR SCOUT beyond line-of-sight datalink work. In FY09 funding was transferred from the Global Hawk PE to the ASE PE by OSD to accomplish ASIP-related tasks including completion of developmental logistics tasks associated with the design, development, and integration of ASIP. Additional requirements include Logistics Support Analysis (LSA) tasks, designing and developing support equipment, technical orders, training courses/aids/devices, and specialized shipping containers.

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2008**

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5180	RC-135 (Airborne SIGINT Development - RC-135)	37.730	49.061	49.091	46.631	31.741	29.539	34.320	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. Funding increased in FY08-FY10 over previous submissions to reflect the SIGINT Capabilities Working Group (SCWG) priorities and the accomplishment of other ASE initiatives.

(U) A. Mission Description and Budget Item Justification

(U) This project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the RC-135 SIGINT sensors and their associated air and ground components. Through extensive utilization of commercial-off-the-shelf (COTS)-based solutions to fielding of needed capabilities, it also incurs the need for continuous diminishing manufacturing sources integration efforts consistent with the COTS technology cycle.

(U) These efforts provide the requisite engineering for preliminary assessments of technical feasibility, operability, or military utility as well as specific engineering implementations integrated into the various baseline modifications.

(U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

(U) RC-135 Breakdown of funds (in millions):

	FY07	FY08	FY09	FY10	FY11	FY12	FY13
RIVET JOINT	31.330	42.261	42.191	39.731	24.741	22.339	27.120
COMBAT SENT	3.400	3.700	3.700	3.600	3.700	3.800	3.800
COBRA BALL	3.000	3.100	3.200	3.300	3.300	3.400	3.400

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) (U) Initiates Non-Recurring Engineering (NRE) for the RC-135 SIGINT Systems SEE Classified Budget Exhibits (PE 0305207F)	37.730	49.061	49.091
(U)			
(U) Total Cost	37.730	49.061	49.091

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	(U) PE 0305207F, APAF	104.200	105.300	106.900	109.800	112.100	174.900	178.400	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 FY08-FY13 include the procurement, fielding and logistical support for three distinct RIVET JOINT baseline configurations [baseline 8, 9, 10] and two distinct baselines [baselines 3 & 4] for COMBAT SENT and COBRA BALL. Development and integration managed by the Big Safari Systems Group; they employ evolutionary acquisition approaches to field incremental capability improvements.

Exhibit R-3, RDT&E Project Cost Analysis

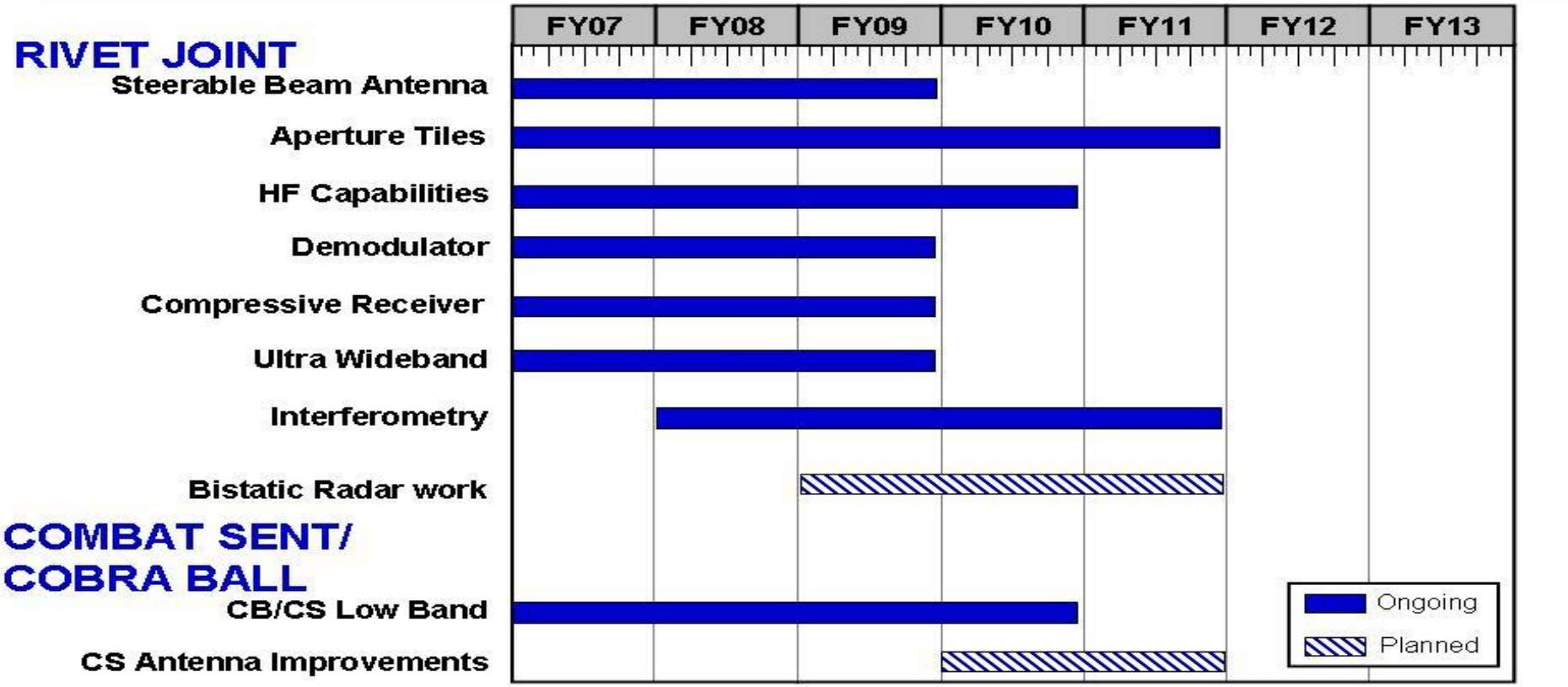
DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
SIGINT Sensor Development and Integration	CPFF and FFP	L-3 COM Greenville, TX		37.730	Jan-07	49.061	Jan-08	49.091	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	37.730		49.061		49.091		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	37.730		49.061		49.091		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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)

ASE
RC-135 Development
RIVET JOINT, COMBAT SENT, COBRA BALL



FY08 Staffer Brief

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(U) Development of RIVET JOINT mission sensors	1-4Q	1-4Q	1-4Q
(U) Development of COMBAT SENT mission sensors	1-4Q	1-4Q	1-4Q
(U) Development of COBRA BALL mission sensors	1-4Q	1-4Q	1-4Q

Details are classified and are shown in the classified portion of PE 0305207F

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5182	MQ-1/MQ-9 (Airborne SIGINT Development - Predator)	2.428	8.031	2.717	2.935	3.028	3.086	3.150	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) MQ-1/9 SIGINT development efforts in the ASE PE began in FY07.

(U) A. Mission Description and Budget Item Justification

(U) This project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the MQ-1/MQ-9 SIGINT sensors and their associated air and ground components. This is an RTD&E effort to integrate SIGINT capability on to the MQ-1/MQ-9 platforms. The sensor shall be capable of collecting technical data and geolocating signals of interest and providing sensor data to a workstation. The integration effort shall include the use of existing sensor suites to the maximum extent possible to minimize design costs and reduce development time lines. Design efforts specific to the Predator or Reaper systems may include, but not be limited to, antennas, EMI reduction, encryption techniques, and changes to the aircraft, ground station, data link, and simulator necessary to accommodate a SIGINT payload and its data throughput.

(U) Funding will begin efforts on antennas, receivers, processors, software development, aircraft integration and ground station upgrades to allow a persistent reconnaissance, surveillance, targeting, and acquisition capability against mission specific threats. Development of a networked capability to other SIGINT platforms will also be initiated. FY 08 funding was added to this activity to increased and accelerate a SIGINT capability on this platform.

(U) This project provides the warfighter with increased combat capability as soon as technology and risk achieve satisfactory levels.

(U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Signals Intelligence (SIGINT) Sensor Development/Integration for MQ-1/9	2.428	8.031	2.717
(U) Total Cost	2.428	8.031	2.717

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) 0305219F MQ-1 RDT&E (GWOT)	15.000								15.000
(U) 0305219F MQ-1 APAF (BP11)			26.690	29.630	32.000				88.320

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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) 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 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0304260F Airborne SIGINT Enterprise (JMIP)**

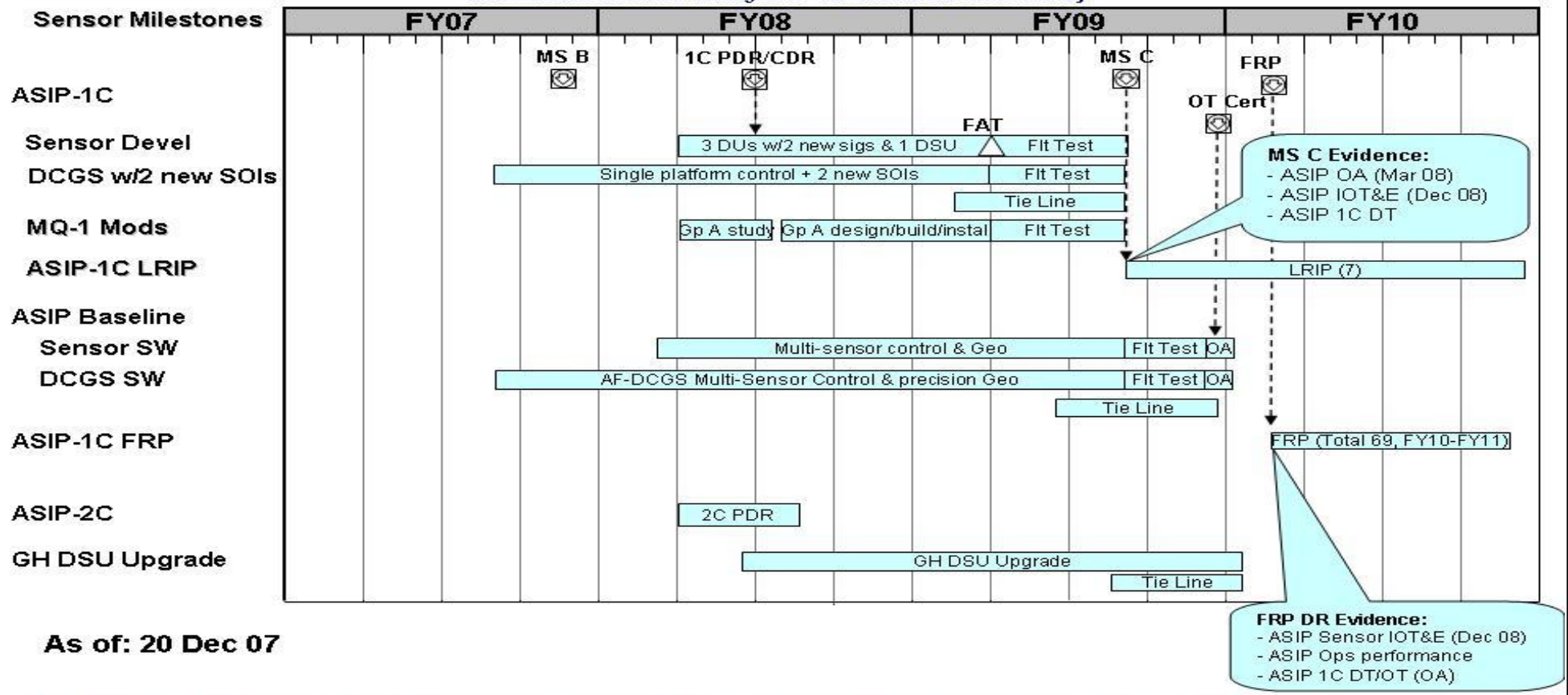
PROJECT NUMBER AND TITLE: **5182 MQ-1/MQ-9 (Airborne SIGINT Development - Predator)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
SIGINT Sensors Integration	CPFF	General Atomics, San Diego, CA				1.300	Apr-08	2.717	Jan-09	Continuing	TBD	TBD
SIGINT Sensors Development	CPIF	Northrop Grumman ESL, San Jose, CA		2.428	Dec-07	4.964	Jan-08			Continuing	TBD	TBD
Management, Various Integration Efforts, & Flight Test	Various	Various				1.767	Jan-08			Continuing	TBD	TBD
Subtotal Product Development			0.000	2.428		8.031		2.717		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	2.428		8.031		2.717		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE: 5182 MQ-1/MQ-9 (Airborne SIGINT Development - Predator)

ASIP-1C/2C Schedule

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



As of: 20 Dec 07

Final Schedule Depends on Platform Contractor's Ability to Support

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
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 2007	FY 2008	FY 2009
(U) ASIP 1C Development & FT		1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE: 5183 Common Development (Airborne SIGINT Development - Common Development)	

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5183	Common Development (Airborne SIGINT Development - Common Development)	57.704	47.349	65.618	69.430	78.932	85.052	90.290	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) This projects supports the development of the Airborne Signals Intelligence payload (ASIP) sensor for use on multiple platforms as well as projects common to the ASE PE overall to include, but not limited to: Air Force Cryptologic Architecture (AFCA) maintenance and modeling and simulation.

(U) A. Mission Description and Budget Item Justification

(U) This project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of sensors and their associated air and ground components that will be used on/by more than one platform. The common development SIGINT program develops new sensors and maintains present capability by developing replacements for current components affected by diminishing manufacturing sources as well as enhancing capability via incremental development to exploit evolving signals of interest to meet emerging operational requirements. The current sensors being developed are the Airborne Signals Intelligence Payload (to be tested on both the Global Hawk (RQ-4B) and U-2) and the ASIP 1C/2C (to be tested on the MQ-1 and MQ-9). The systems' open architecture and Joint Airborne SIGINT Architecture (JASA) compliant design supports streamlined integration of ASIP onto additional ISR platforms.

(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 on both the RQ-4 and U-2. ASIP 1C/2C will deliver developmental units for integration and test on the MQ-1 and a preliminary design for the MQ-9. (Additional funding is required to complete the 2C design for the MQ-9.) U-2 test articles completed integration and test in 4Q FY06 and began flight test in 1Q FY07. The Global Hawk article is scheduled to complete integration and test for the developmental article and begin flight test in 2Q FY08. In accordance with an evolutionary acquisition strategy, ASIP will begin preliminary design activities to support incremental 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.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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) B. Accomplishments/Planned Program ($ in Millions)

		FY 2007	FY 2008	FY 2009
(U)	ASIP Baseline development/integration	56.354	44.949	0.200
(U)	ASIP Upgrades		0.200	23.198
(U)	ASIP 1C/2C development/integration			39.820
(U)	Various SIGINT Architecture Efforts	1.350	2.200	2.400
(U)	Total Cost	57.704	47.349	65.618

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Sensor Integration 0305220F-Sensor Development BP10 APAF			54.000	53.600	59.700	83.500	135.900		386.700
(U)	Sensor Integration 0305220F-Sensor Development BP11 APAF		18.000	88.300	109.600	109.400	59.300	5.100	3.470	393.170
(U)	0305219F MQ-1 RDT&E (GWOT)	15.000								15.000
(U)	0305219F MQ-1 APAF (BP11)			26.690	29.630	32.000				88.320

(U) D. Acquisition Strategy

Signals Intelligence (SIGINT) capabilities will be developed and integrated onto various platforms using an Evolutionary Acquisition approach.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
(U) SIGINT Sensor Development & Integration	CPAF	Northrop Grumman, San Jose, CA	56.202	32.961	Oct-06	30.096	Jan-08	52.503	Jan-09	Continuing	TBD	TBD
(U) ASIP U-2	CPIF	Lockheed Martin Aeronautics, Palmdale, CA	9.710	7.483	Oct-06	1.111	Oct-07			Continuing	TBD	TBD
(U) ASIP U-2	CPIF	L-3 Comm, Salt Lake City, UT	0.209	0.743	Dec-06	0.144	Mar-08			0.000	1.096	TBD
(U) AFDCGS Integration	CPIF	Lockheed Martin Astronautics, Denver, CO	3.980	4.350	Oct-06	1.200	Nov-07			Continuing	TBD	TBD
(U) U2 ASIP Integration & AFDCGS Integration	CPIF	Raytheon, Falls Church, VA	7.005	6.137	Oct-06	3.020	Nov-07			Continuing	TBD	TBD
(U) Various SIGINT Architecture Efforts	Various	Various	0.250	1.350	Nov-06	2.200	Jan-08	2.400	Jan-09	Continuing	TBD	TBD
(U) Management, Various Integration Efforts, and Flight Test	Various	Various	3.079	4.680	Nov-06	9.578	Jan-08	10.715	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			80.435	57.704		47.349		65.618		Continuing	TBD	TBD
Remarks: Above costs for U-2 and AFDCGS are for the baseline ASIP. Upgrade costs for ASIP specific contracts are TBD.												
(U) Total Cost			80.435	57.704		47.349		65.618		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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

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

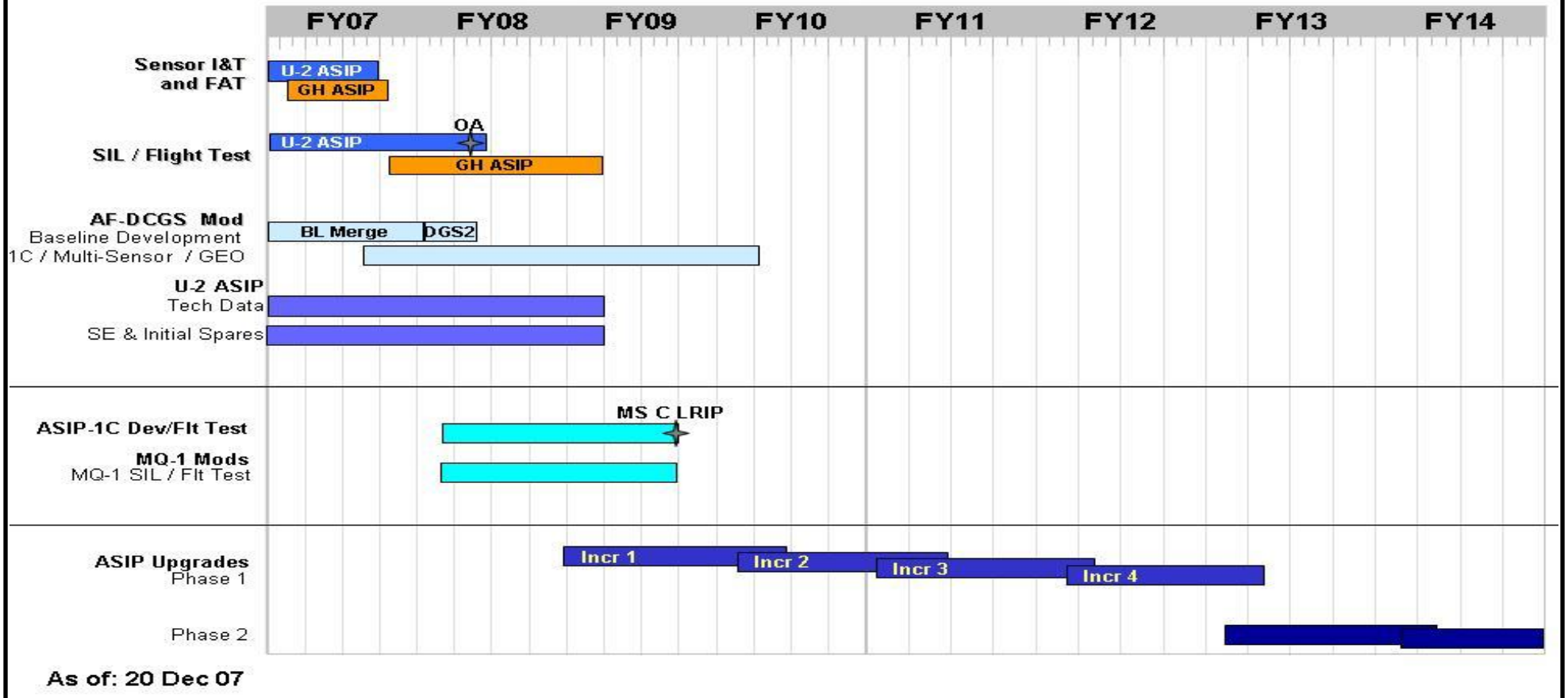


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5183 Common Development (Airborne SIGINT Development - Common Development)**

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) ASIP Sensor I&T and Factory Acceptance Test (FAT)	1-3Q		
(U) ASIP U-2 System Integration Lab (SIL) & Flight Test (FT)	1-4Q	1-2Q	
(U) ASIP GH SIL & FT	4Q	1-4Q	1Q
(U) AF DCGS Development- ASIP U-2	1-4Q	1-2Q	
(U) AF DCGS Development- ASIP 1C (Multi-Sensor & GEO)	3-4Q	1-4Q	1-4Q
(U) ASIP U-2 Tech Data	1-4Q	1-4Q	1Q
(U) ASIP U-2 Support Equipment & Initial Spares	1-4Q	1-4Q	1Q
(U) ASIP 1C Development & FT		1-4Q	1-4Q
(U) ASIP UPGRADES		4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5184	RQ-4 (Airborne SIGINT Development - Global Hawk	10.480	10.817	41.917	34.598	20.495	11.708	11.944	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) This project covers RQ-4 SIGINT development integration in the ASE PE.

(U) A. Mission Description and Budget Item Justification

(U) This project supports sensor integration and test, flight test, design studies, engineering analysis and non-recurring engineering of the air and ground components for the Global Hawk SIGINT sensors.

(U) This project provides the warfighter with a near-term combat capability with increased capability improvements implemented as soon as technology and risk achieve satisfactory levels. The current sensor being developed for the Global Hawk SIGINT capability is the Airborne Signals Intelligence Payload (ASIP). In accordance with an evolutionary acquisition strategy, ASIP will begin preliminary design activities to support spiral software and hardware upgrades beginning in FY08. These upgrades are designed to exploit evolving signals of interest to meet emerging operational requirements.

(U) Funding includes completion of developmental logistics tasks associated with the design, development, and integration of ASIP. Additional requirements include Logistics Support Analysis (LSA) tasks, designing and developing support equipment, technical orders, training courses/aids/devices, and specialized shipping containers.

(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 2007	FY 2008	FY 2009
(U) Signals Intelligence (SIGINT) Sensor Integration on the Global Hawk aircraft	10.480	10.817	41.917
(U) Total Cost	10.480	10.817	41.917

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Sensor Integration 0305220F-Sensor Development BP10 APAF			54.000	53.600	59.700	83.500	135.900		386.700
(U) Sensor Integration 0305220F-Sensor Development BP11 APAF		18.000	88.300	109.600	109.400	59.300	5.100	3.470	393.170

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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) 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 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
SIGINT Sensor Integration	CPAF	Northrop Grumman Mission Sys, San Jose, CA	4.957	10.480	Oct-06	10.817	Jan-08	41.917	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			4.957	10.480		10.817		41.917		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			4.957	10.480		10.817		41.917		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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 UPGRADES

In ASE PE

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

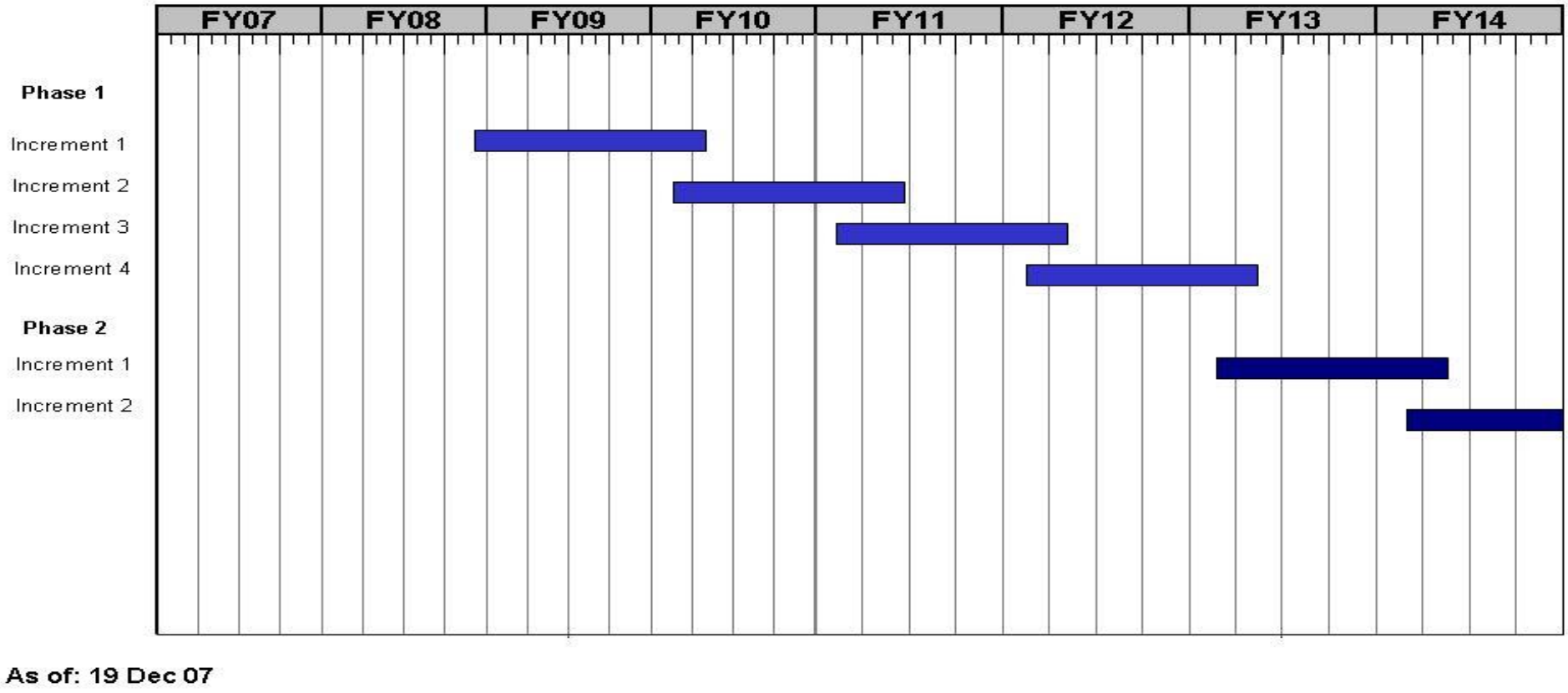
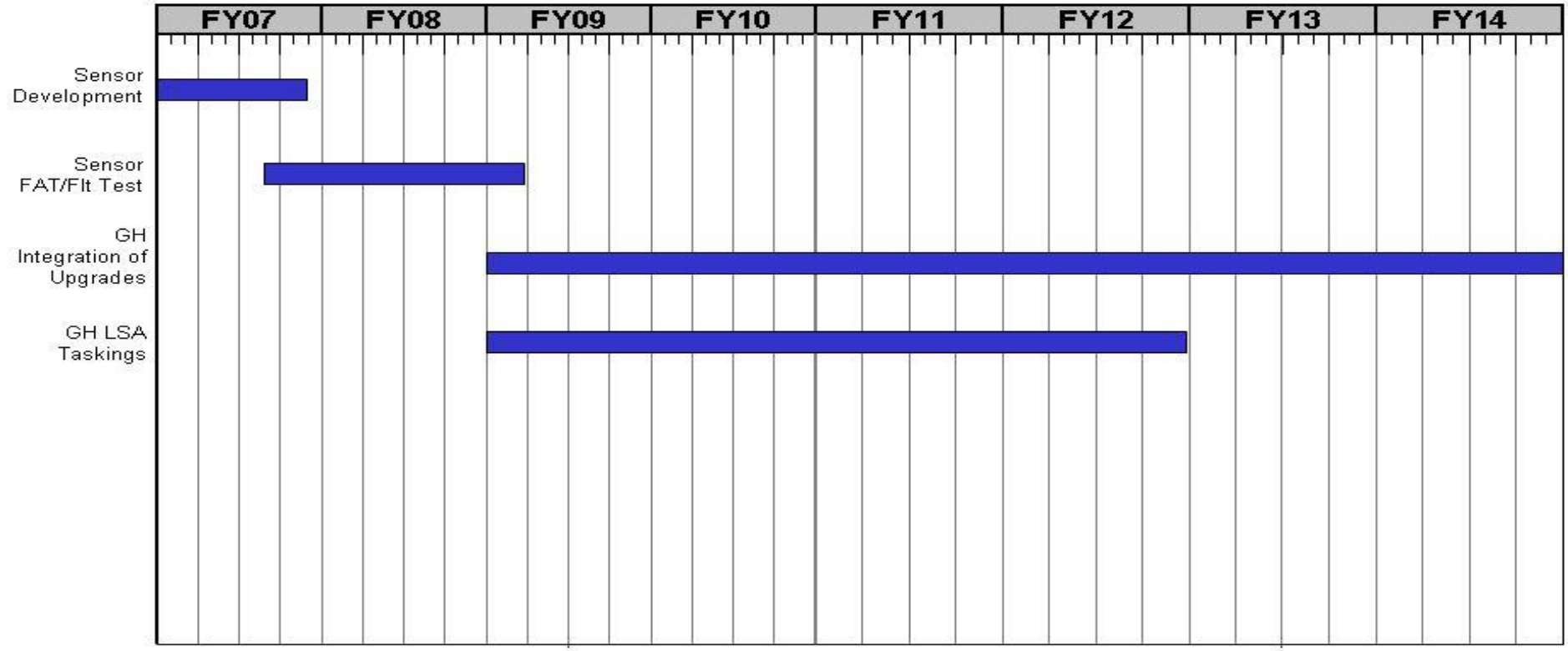


Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE: 5184 RQ-4 (Airborne SIGINT Development - Global Hawk

GH ASIP Baseline RDT&E

U.S. AIR FORCE

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



As of: 20 Dec 07

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(U) GH Sensor Development	1-4Q		
(U) GH Sensor Factory Acceptance Test & Flight Test	3-4Q	1-4Q	1Q
(U) GH SIGINT Upgrades			1-4Q
(U) GH Logistics Support Analysis Tasking			1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5185	Compass Bright (Airborne SIGINT Development - Compass Bright)	7.092	8.529	8.774	9.014	9.187	9.366	9.558	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

(U) The COMPASS BRIGHT program develops, demonstrates, and rapidly transitions advanced Air Force-specific SIGINT and radio frequency (RF) measurement and signature intelligence (MASINT) capabilities against emerging and future target signals. It is the only USAF program that pursues SIGINT and RF MASINT technology transition.

(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 2007	FY 2008	FY 2009
(U) Continue COMPASS BRIGHT development projects in the signals intelligence (SIGINT) and radio frequency (RF) measurement and signature intelligence (MASINT) areas	6.250	7.680	7.901
(U) Mission Support, Program Management Activities	0.842	0.849	0.873
(U) Total Cost	7.092	8.529	8.774

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

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

(U) D. Acquisition Strategy

(U) Ongoing COMPASS BRIGHT technology development and demonstration contracts will continue through existing laboratory relationships and other existing contractual vehicles, with future development projects emphasizing full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Various	Various	AFRL		6.250	Jan-07	7.680	Jan-08	7.901	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	6.250		7.680		7.901		Continuing	TBD	TBD
Remarks:												
(U) Management												
ASC/303 AESW (Aeronautical Systems Wing)		WPAFB, OH		0.842		0.849		0.873		Continuing	TBD	TBD
Subtotal Management			0.000	0.842		0.849		0.873		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	7.092		8.529		8.774		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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)

ASE Compass Bright Schedule

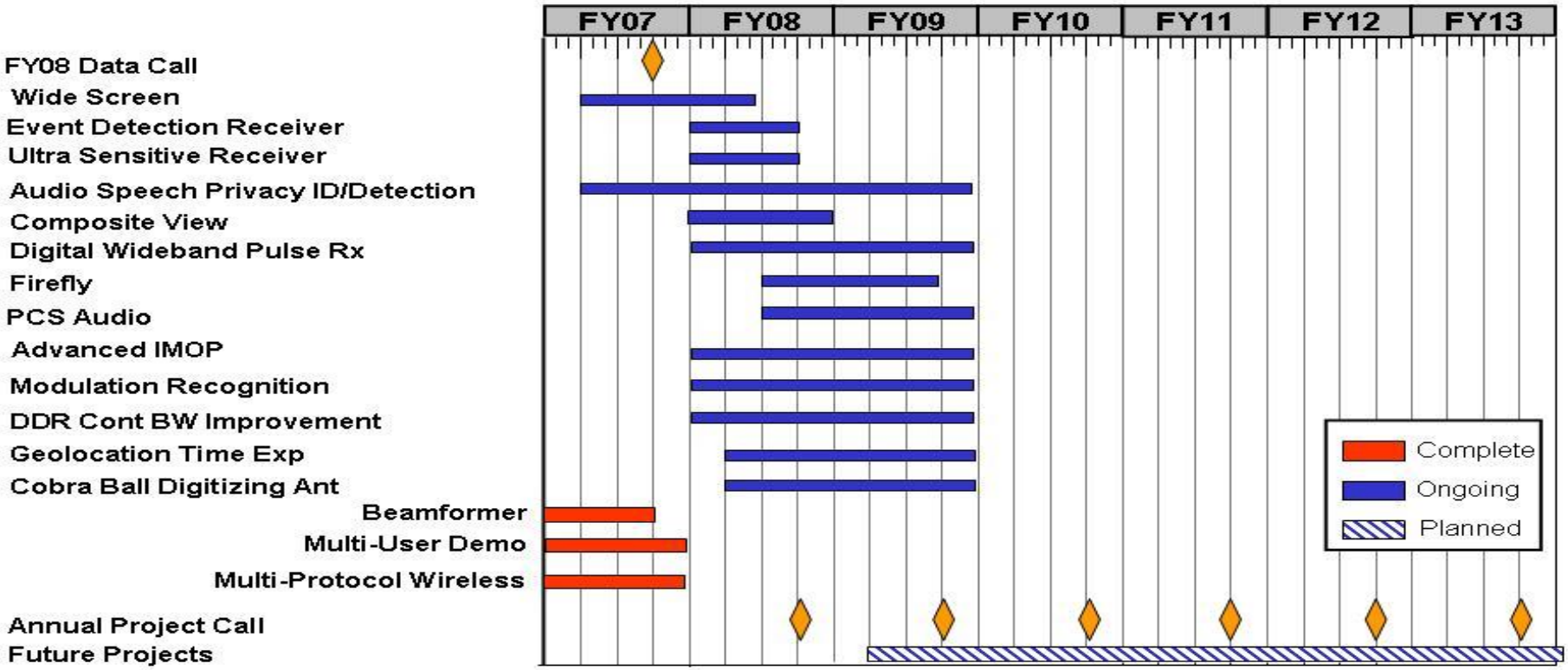


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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5185 Compass Bright (Airborne SIGINT Development - Compass Bright)**

(U)	**Schedule Profile**	FY 2007	FY 2008	FY 2009
(U)	FY08 Proposal Call	3Q		
(U)	Wide Screen	2-4Q	1-2Q	
(U)	Event Detection Receiver		1-3Q	
(U)	Ultra Sensitive Receiver		1-3Q	
(U)	Audio Speech privacy ID and Detection (ASPID)	2-4Q	1-4Q	1-4Q
(U)	Composite View		1-4Q	
(U)	Digital Wideband Pulse Reciever		1-4Q	1-4Q
(U)	FireFly		3-4Q	1-3Q
(U)	PCS Audio Speaker Search System		3-4Q	1-4Q
(U)	Advanced IMOP Classifier		1-4Q	1-4Q
(U)	Modulation Recognition Using Cell Processors		1-4Q	1-4Q
(U)	DDR Continuous Recording Bandwidth Improvement		1-4Q	1-4Q
(U)	Geolocation Time Experiment (Geo/Timex)		2-4Q	1-4Q
(U)	Cobra Ball Digitizing Antenna		2-4Q	1-4Q
(U)	Beamformer	1-3Q		
(U)	Multi-User Detection Demo	1-4Q		
(U)	Multi-Protocol Wireless Architecture Demo	1-4Q		
(U)	FY09 Proposal Calls		3Q	

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2008**

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5186	Special Programs (Airborne SIGINT Development - Special Platforms)	4.212	11.375	5.514	6.756	14.032	12.535	5.105	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) This project will be used to fund SIGINT development efforts in programs such as SENIOR SCOUT, Small UAVs and others.

(U) A. Mission Description and Budget Item Justification

(U) This project supports special SIGINT studies as well as the development and integration of advanced SIGINT capabilities on Senior Scout and other classified platforms. Through extensive utilization of COTS-based solutions to fielding of needed capabilities, it also incurs the need for continuous diminishing manufacturing sources integration efforts consistent with the COTS technology cycle.

(U) Senior Scout development efforts will include antenna improvements, sensitivity upgrades, and radio frequency distribution upgrades. Additionally, development will begin to allow this platform to network with other SIGINT assets to increase collection accuracy.

(U) This project provides the warfighter with a near term combat capability with increased capability improvements accomplished as soon as technology and risk achieve satisfactory levels. Sensors will be integrated and tested on various platforms as funding permits.

(U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Signals Intelligence (SIGINT) Sensor Integration	4.212	11.375	5.514
(U) Total Cost	4.212	11.375	5.514

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) 0503115F	3.434	3.671	3.970	4.063	4.116	4.198	4.281	Continuing	TBD

(U) D. Acquisition Strategy

(U) Signals Intelligence (SIGINT) capabilities will be integrated on to various classified platforms using an Evolutionary Acquisition approach.

Exhibit R-3, RDT&E Project Cost Analysis

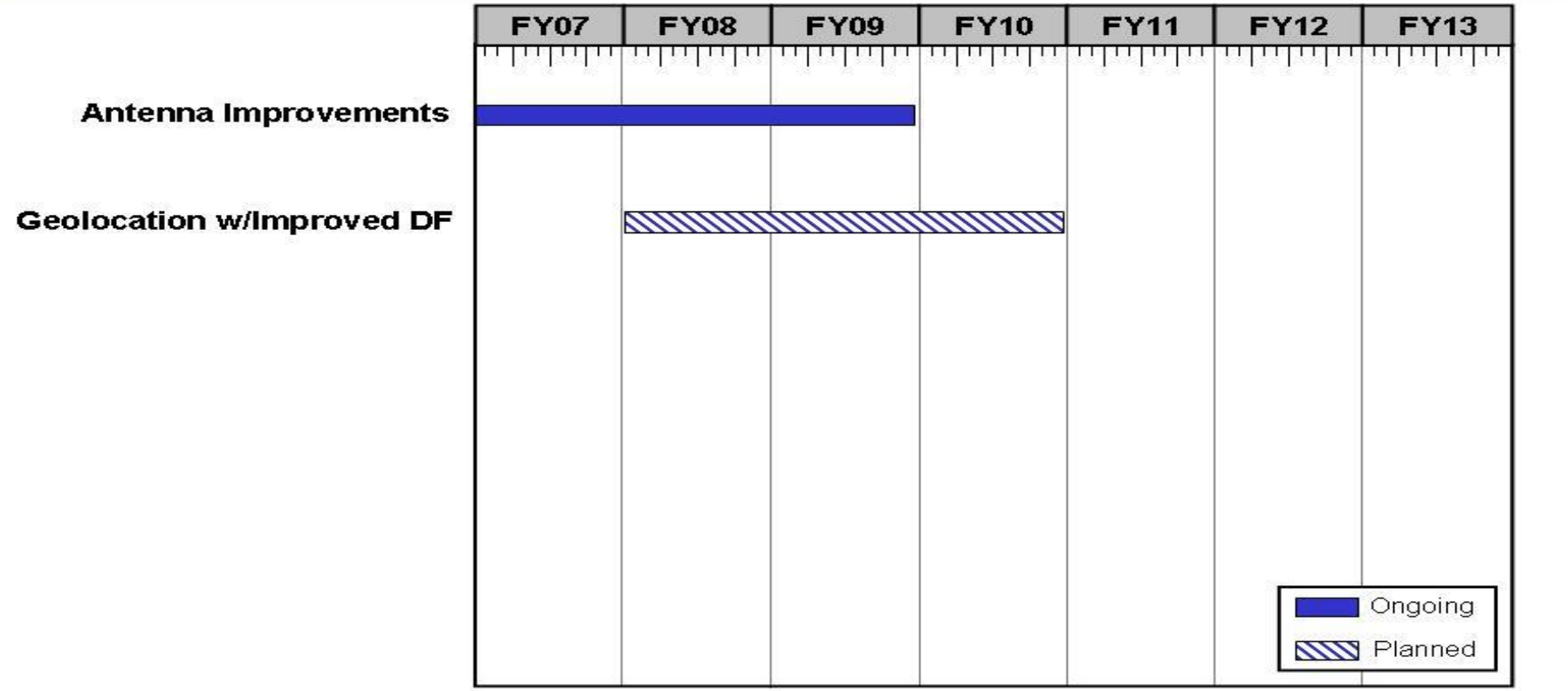
DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
SIGINT Sensor Integration	Various	Sierra Nevada, Reno, NV		4.212	Jan-07	11.375	Jan-08	5.514	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	4.212		11.375		5.514		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	4.212		11.375		5.514		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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)

ASE
Special Programs Development
SENIOR SCOUT



FY08 Staffer Brief

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
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 2007	FY 2008	FY 2009
(U) Sensor Development on Senior Scout	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0305099F
PE TITLE: Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)

Exhibit R-2, RDT&E Budget Item Justification

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)**

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	12.115	6.638	6.275	6.120	5.864	5.878	5.890	Continuing	TBD
4689 Global Access Architecture	12.115	6.638	6.275	6.120	5.864	5.878	5.890	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM): the Air Force (AF) program is designed to ensure that all AF acquisitions and modifications conform to appropriate CNS/ATM and Navigation Safety performance requirements to enable access to worldwide civil managed airspace. CNS/ATM and Navigation Warfare (NAVWAR) are major components of the DoD's Global Access, Navigation, and Safety (GANS) management effort. The 853d Electronic Systems Group (ELSG) supports CNS/ATM as the AF's central focal point for identifying, analyzing, and evaluating aviation authority civil operational airspace requirements, as well as identifying, analyzing, and evaluating the technical performance requirements of the CNS capabilities necessary to enable access to civil aviation authority regulated. Furthermore, Department of Defense policy states that military platforms conducting peacetime operations will conform to applicable rules to ensure interopability and transparency within domestic and international airspace. Additionally, 853d ELSG supports AF aircraft Single Managers in verifying the system's end-to-end performance for each CNS capability integrated into AF aircraft. Per AFPD 63-13, 853d ELSG will develop and maintain CNS/ATM performance matrices used to identify specific CNS/ATM requirements for each AF aircraft. The 853d ELSG will provide acquisition and engineering support services through the entire acquisition framework to include development of technical architectures, program management reviews and test planning. Additionally, the 853d ELSG will develop and award Indefinite Delivery/Indefinite Quantity contracts for centralized procurement and sustainment of CNS/ATM and Nav Safety products and promote commonality of CNS equipment and architectures between aircraft. The 853d ELSG will also participate in the development of Operational Safety, Suitability and Effectiveness assurance and Airworthiness Certification Plans. Dual-use capabilities of avionics to satisfy both civil and military CNS/ATM requirements will be explored as well as enhancements to net-centric concepts. 853d ELSG will continue projections of studies and prototyping efforts necessary to ensure AF aircraft are postured to meet current civil standards and future changes to civil standards leading to the concept of free flight. No other program satisfies civil CNS/ATM initiatives. This program is assigned Budget Activity 7, Operational Systems Development. The 853d has also started providing Air Force management oversight support within the federal multi-departmental (Departments of Transportation, Defense, Homeland Security, Commerce, White House Office of Science & Technology Policy, FAA & NASA) Next Generation Air Transportation System (NextGen) initiative. The Next Gen initiative, and similar initiatives globally (e.g. Single European Sky) will impact all Air Force platforms and future CNS/ATM Navigation Safety performance requirements in both civil and military environments.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	6.595	6.681	6.250
(U)	Current PBR/President's Budget	12.115	6.638	6.275
(U)	Total Adjustments	5.520	-0.043	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.043	
	Congressional Increases			
	Reprogrammings	5.700		
	SBIR/STTR Transfer	-0.180		

(U) Significant Program Changes:

FY06: Global Air Traffic Management (GATM) name changed to Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM). FY07: 5.7M reprogramming to support the development of the NextGen/DoD Network Enabled Operation (NEO) Spiral 1 Demonstration. FY07/08 : Reductions due to reprogramming to higher DoD priorities. The difference in the FY09 CNS/ATM budget of $25K is due to inflation.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4689 Global Access Architecture	12.115	6.638	6.275	6.120	5.864	5.878	5.890	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): the Air Force (AF) program is designed to ensure that all AF acquisitions and modifications conform to appropriate CNS/ATM and Navigation Safety performance requirements to enable access to worldwide civil managed airspace. CNS/ATM and Navigation Warfare (NAVWAR) are major components of the DoD's Global Access, Navigation, and Safety (GANS) management effort. The 853d Electronic Systems Group (ELSG) supports CNS/ATM as the AF's central focal point for identifying, analyzing, and evaluating aviation authority civil operational airspace requirements, as well as identifying, analyzing, and evaluating the technical performance requirements of the CNS capabilities necessary to enable access to civil aviation authority regulated. Furthermore, Department of Defense policy states that military platforms conducting peacetime operations will conform to applicable rules to ensure interopability and transparency within domestic and international airspace. Additionally, 853d ELSG supports AF aircraft Single Managers in verifying the system's end-to-end performance for each CNS capability integrated into AF aircraft. Per AFPD 63-13, 853d ELSG will develop and maintain CNS/ATM performance matrices used to identify specific CNS/ATM requirements for each AF aircraft. The 853d ELSG will provide acquisition and engineering support services through the entire acquisition framework to include development of technical architectures, program management reviews and test planning. Additionally, the 853d ELSG will develop and award Indefinite Delivery/Indefinite Quantity contracts for centralized procurement and sustainment of CNS/ATM and Nav Safety products and promote commonality of CNS equipment and architectures between aircraft. The 853d ELSG will also participate in the development of Operational Safety, Suitability and Effectiveness assurance and Airworthiness Certification Plans. Dual-use capabilities of avionics to satisfy both civil and military CNS/ATM requirements will be explored as well as enhancements to net-centric concepts. 853d ELSG will continue projections of studies and prototyping efforts necessary to ensure AF aircraft are postured to meet current civil standards and future changes to civil standards leading to the concept of free flight. No other program satisfies civil CNS/ATM initiatives. This program is assigned Budget Activity 7, Operational Systems Development. The 853d has also started providing Air Force management oversight support within the federal multi-departmental (Departments of Transportation, Defense, Homeland Security, Commerce, White House Office of Science & Technology Policy, FAA & NASA) Next Generation Air Transportation System (NextGen) initiative. The Next Gen initiative, and similar initiatives globally (e.g. Single European Sky) will impact all Air Force platforms and future CNS/ATM Navigation Safety performance requirements in both civil and military environments.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continue operational requirements analysis, demonstration, and evaluation	1.122	1.122	1.122
(U) Continue development of common avionics and technologies	1.757	1.894	1.701
(U) Continue acquisition of ID/IQ aviation equipment	0.840	0.840	0.840
(U) Continue Nav/Safety and GPS/NAVWAR integration and interoperability evaluations	0.510	0.506	0.506
(U) Continue system architechure definitions, development, and certification	2.186	2.276	2.106

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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) B. Accomplishments/Planned Program ($ in Millions)

	FY 2007	FY 2008	FY 2009
(U) NextGen/DoD Network Enabled Operation (NEO) Demostration	5.700		
(U) Total Cost	12.115	6.638	6.275

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) The methodology used to attain CNS/ATM capabilities as required by the MAJCOMs for each platform varies widely - the estimating and tracking of these costs varies even more from program to program. Funding summary information can only be provided by analyzing the specific platform's budget/PE. Please refer to each particular PE affected by CNS/ATM for funding data.									

(U) D. Acquisition Strategy

CNS/ATM acquisition strategy enables 853d ELSG to guide CNS/ATM and Nav Safety equipment procurements for AF aircraft Single Managers. 853d ELSG will ensure standardization and support airworthiness certification of AF platforms/systems that operate in the national and global air traffic environments. The Group will collaborate on performance assessment efforts, provide technical expertise and interface with appropriate product/support centers, battle labs, and Department of Defense research and development facilities in the execution of assigned tasks. Program Research and Development Agreements (PDRAs), Cooperative Research and Development Agreements (CDRAs), and Indefinite Delivery/Indefinite Quantity (ID/IQ) contracts will be competitively awarded.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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**

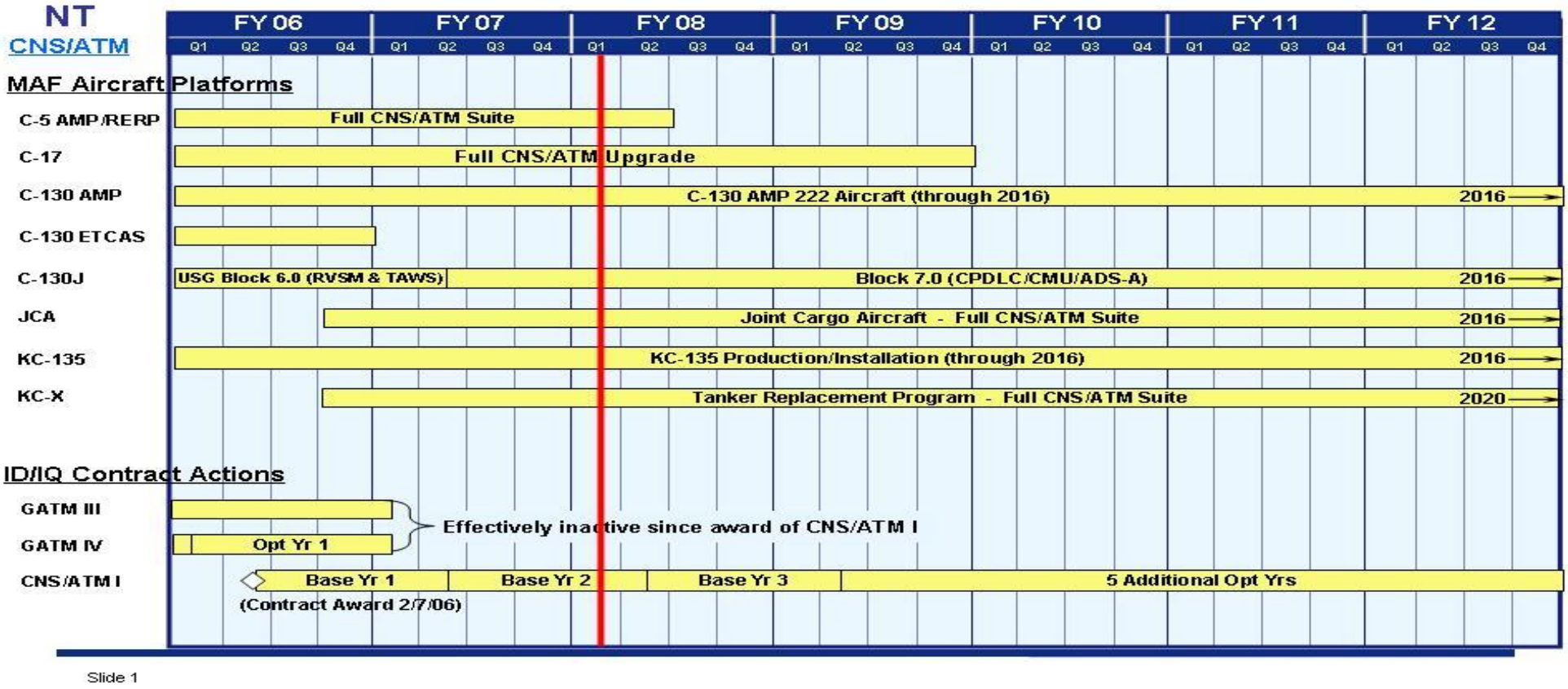
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
MIT	FFP			0.697	Oct-06	0.286	Oct-07	0.270	Oct-07	Continuing	TBD	
Honeywell	FFP									Continuing	TBD	
Allied Signal	FFP									0.000	0.000	
Rockwell Collins	FFP									Continuing	TBD	
MITRE Corporation	CPAF			3.158	Oct-06	3.169	Oct-07	3.010	Oct-07	Continuing	TBD	
Horizons Technology Inc	FFP									Continuing	TBD	
TASC	CPFF									0.000	0.000	
Smiths Industries	FFP									Continuing	TBD	
SAIC	T&M									0.000	0.000	
ARINC Inc	FFP									Continuing	TBD	
Lockheed Martin	CPAF									0.000	0.000	
Bremmer Associates	FFP									0.000	0.000	
Northop Grumman	CPAF									0.000	0.000	
MCR	IDIQ			0.193	May-06	0.217	May-07	0.200	May-08	Continuing	TBD	
Federal Tech Services	FFP									0.000	0.000	
DISA/DIT	FFP									Continuing	TBD	
ACS Defense	FFP			1.692	May-06	1.618	May-07	1.521	May-08		4.831	
A&AS Support	FFP			0.620	Aug-07						0.620	
Boeing	FFP			5.000	Jun-07						5.000	
WBB	FFP			0.080	Aug-07	0.000					0.080	
Various	various			0.273		0.909		0.860		Continuing	TBD	
Subtotal Product Development			0.000	11.713		6.199		5.861		Continuing	TBD	0.000
Remarks:												
(U) Support												
MITRE Corporation										Continuing	TBD	
Various	Various			0.402		0.439		0.414		Continuing	TBD	
Subtotal Support			0.000	0.402		0.439		0.414		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
412th FLTS (Edwards AFB)										Continuing	TBD	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		Continuing	TBD	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												

Exhibit R-3, RDT&E Project Cost Analysis			DATE: February 2008
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) Total Cost	0.000	12.115	6.638	6.275	Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)	PROJECT NUMBER AND TITLE: 4689 Global Access Architecture

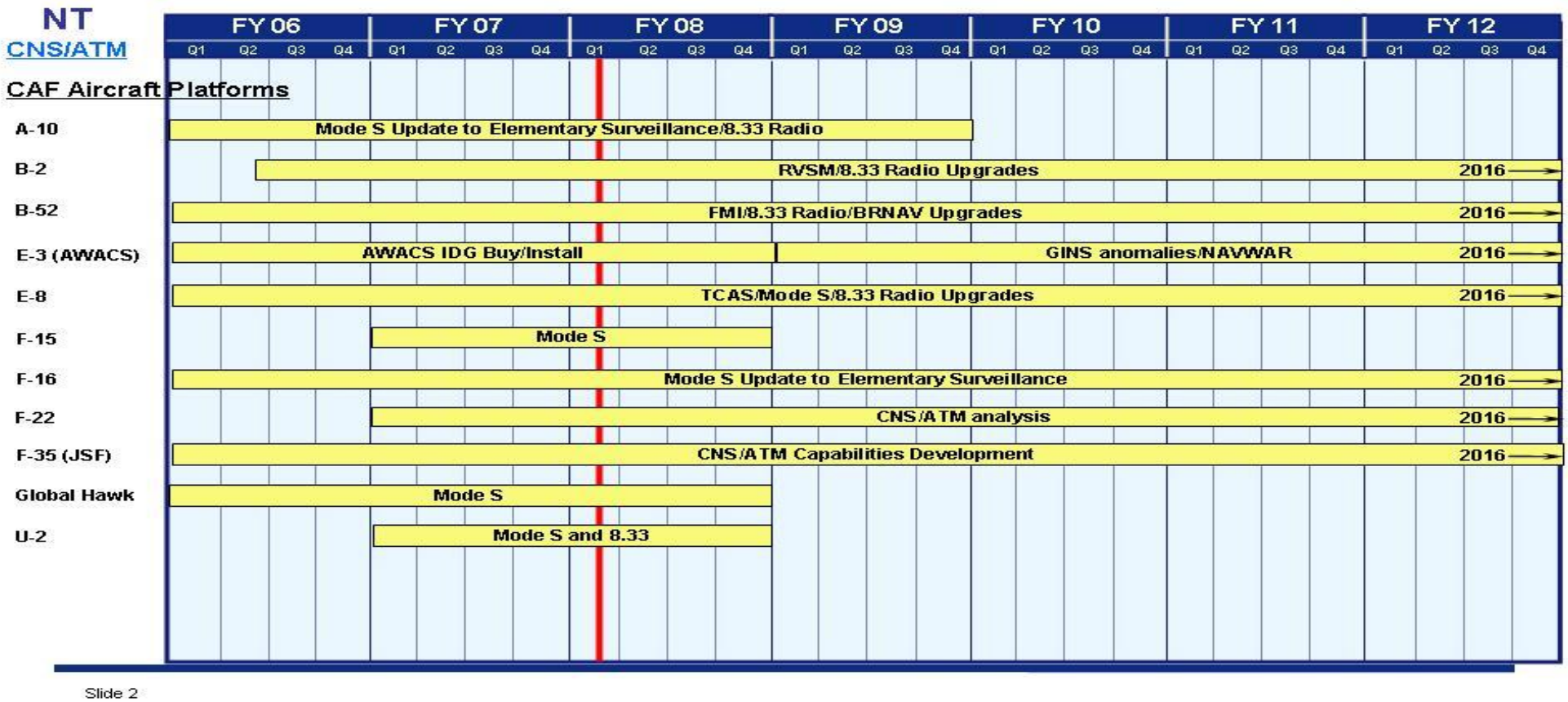
853d ELSG Master Schedule NT (1 of 2)



Slide 1

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)	PROJECT NUMBER AND TITLE: 4689 Global Access Architecture

853d ELSG Master Schedule NT (2 of 2)



Slide 2

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(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: 0305103F
PE TITLE: Cyber Security Initiative

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305103F Cyber Security Initiative

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	0.000	2.083	0.000	0.000	0.000	0.000	0.000	0.000
5288 Cyber Security	0.000	0.000	2.083	0.000	0.000	0.000	0.000	0.000	0.000

(U) A. Mission Description and Budget Item Justification

The DoD Cyber Crime Center (DC3) was created as a DoD center of excellence to efficiently organize, equip, train, and employ scarce resources to more effectively address the proliferation of computer crimes affecting the DoD. DC3 has a digital forensics laboratory, training program, institute, and National Cyber Investigative Joint Task Force Analytical Group.

To enable its operations, through the Defense Cyber Crime Institute (DCCI), DC3 will remain on the leading edge of computer technologies and techniques through research, development, testing and evaluation applied to digital evidence processing and computer forensic analysis; and by conducting liaison and by partnering with governmental, university, and private industry computer security officials.

DC3 will develop imaging tools, steganalysis and stegextraction tools, and password over-ride tools. These software tools will enable DC3 to increase the probability of data recovery that would otherwise remain undetected.

The Intrusions/Intruders Signature Program (IISP) provides for the R&D of products and technologies that detect trace and profile hostile cyber adversaries. This capability provides network monitoring and the framework for sharing and automating reverse engineering techniques.

Computer Incident Batch Oriented Recursive Examination (CIBORE) is used to aid the counterintelligence and law enforcement communities to respond to computer intrusions. It is also a data reduction tool that takes a large volume of data, identifies the known “good” and “bad” files and eliminates them from consideration, leaving several GBs of files as candidate malicious code files.

This program is categorized in Budget Activity (BA) 7 because it supports the development efforts of operational systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305103F Cyber Security Initiative

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.000	0.000	0.000
(U)	Current PBR/President's Budget	0.000	0.000	2.083
(U)	Total Adjustments	0.000		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305103F Cyber Security Initiative	PROJECT NUMBER AND TITLE: 5288 Cyber Security	

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5288 Cyber Security	0.000	0.000	2.083	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

The DoD Cyber Crime Center (DC3) was created as a DoD center of excellence to efficiently organize, equip, train, and employ scarce resources to more effectively address the proliferation of computer crimes affecting the DoD. DC3 has a digital forensics laboratory, training program, institute, and National Cyber Investigative Joint Task Force Analytical Group.

To enable its operations, through the Defense Cyber Crime Institute (DCCI), DC3 will remain on the leading edge of computer technologies and techniques through research, development, testing and evaluation applied to digital evidence processing and computer forensic analysis; and by conducting liaison and by partnering with governmental, university, and private industry computer security officials.

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This program is categorized in Budget Activity (BA) 7 because it supports the development efforts of operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) DCCI forensics tool and validation to support digital forensics			2.083
(U)			
(U)			
(U) Total Cost	0.000	0.000	2.083

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) O & M (0305103)			15.000	15.200	15.700	16.000	16.500	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305103F Cyber Security Initiative	PROJECT NUMBER AND TITLE: 5288 Cyber Security

(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 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305103F Cyber Security Initiative

PROJECT NUMBER AND TITLE: 5288 Cyber Security

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
General Dynamics	FFP	Lithicum, Maryland						2.083	Dec-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.000		2.083		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		2.083		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305103F Cyber Security Initiative	PROJECT NUMBER AND TITLE: 5288 Cyber Security

U.S. AIR FORCE

Schedule

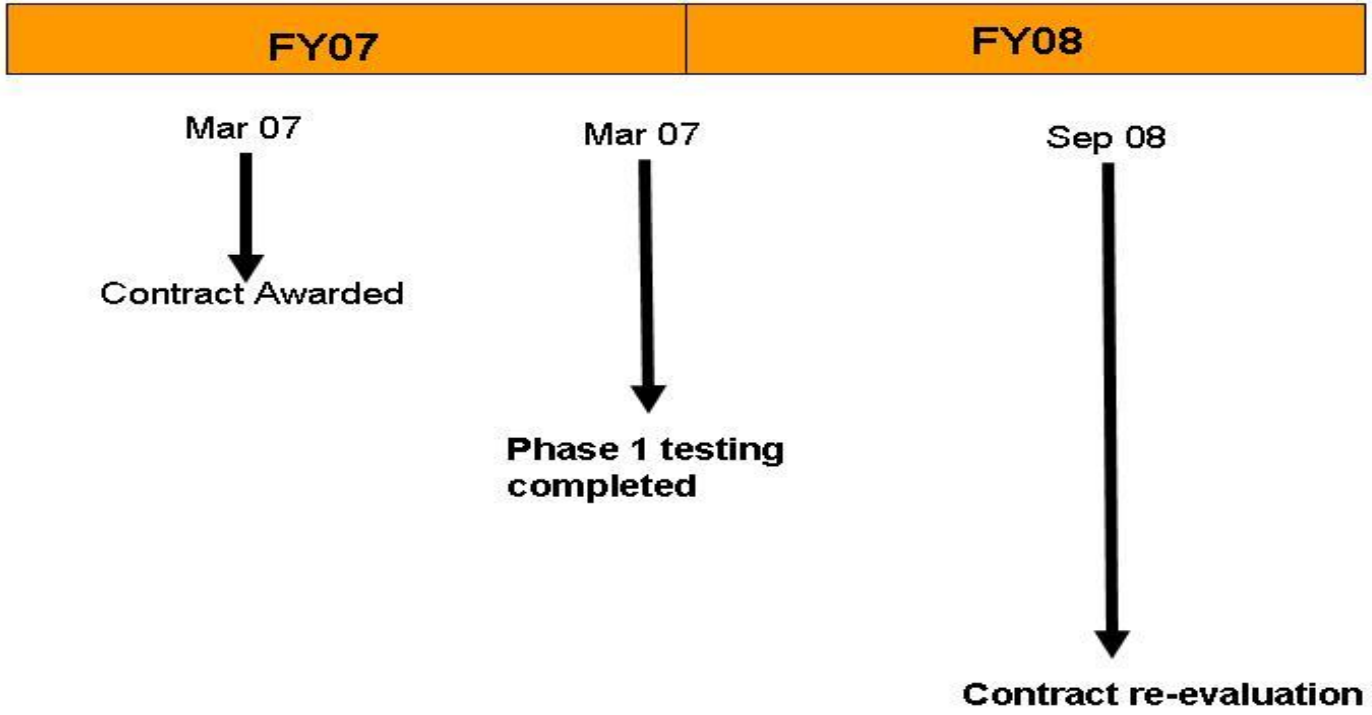

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305103F Cyber Security Initiative	PROJECT NUMBER AND TITLE: 5288 Cyber Security

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Phase I Testing			1-4Q
(U) Contract re-evaluation			4Q

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PE NUMBER: 0305110F
PE TITLE: Satellite Control Network

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305110F Satellite Control Network

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	21.238	26.898	16.758	19.026	16.920	17.249	17.595	Continuing	TBD
3276 Satellite Control Network	21.238	26.898	16.758	19.026	16.920	17.249	17.595	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Air Force Satellite Control Network (AFSCN) mission is to command and control space systems and to distribute space system information in support of operational DoD missions, National Security, RDT&E programs, and other designated users. Air Force Space Command (AFSPC) performs operations, maintenance, modernization, and sustainment of the system to provide operational capabilities validated by a Joint Staff Capstone Requirements Document and a Headquarters USAF-approved Operational Requirements Document (ORD). This program element contains funds for the development and acquisition of this integrated national satellite telemetry, tracking, commanding, and data relay capability to meet the requirements of the growing inventory of operational and developmental DoD, National, Civil, and Allied satellite systems.

The AFSCN is a global infrastructure of control centers, Remote Tracking Stations (RTSs), and communications links that provides unique capability for DoD to deploy and operate its satellites. AFSCN provides the highly reliable command and control, communications, and range systems required to support the nation's surveillance, navigation, communications, warning, and weather satellite operations. The AFSCN is the DoD's common user network that provides satellite state-of-health, telemetry, tracking, and commanding (TT&C) for the following operational and future satellite systems: Defense Meteorological Satellite Program (DMSP), Global Positioning System (GPS), Defense Satellite Communications System (DSCS), Defense Support Program (DSP), Space Based Infrared System (SBIRS), Space Based Surveillance System (SBSS), Space Tracking and Surveillance System (STSS), Fleet Satellite (FLEETSAT), Military Strategic and Tactical Relay Satellite (MILSTAR), the Navy's Ultra High Frequency Follow-On (UHF F/O), Mobile User Objective System (MUOS), Advanced EHF (AEHF), Wideband Global SATCOM (WGS), Transformational Communications Satellites (TSAT), Skynet, NATO III/IV, and classified programs. Support to NASA and National Oceanic and Atmospheric Administration (NOAA) satellites is provided on an "as required" basis. In addition, the AFSCN provides launch and early orbit tracking operations in support of all major US launches and provides satellite end-of-life disposal operations. It is the world's only global satellite control network equipped with high-power capability necessary for satellite rescue and anomaly resolution operations.

AFSCN Improvement and Modernization (I&M) is an ongoing program of replacements and upgrades which will meet AFSPC operational requirements to replace non-standard, unsupportable equipment with more reliable, maintainable, interoperable, and standardized hardware and software. This new equipment will enable AFSPC satellite operations to be performed with fewer, less skilled personnel and will reduce hardware/software maintenance costs. The principal efforts within this program are currently focused on Range Upgrades and Network Operations Upgrades.

RANGE UPGRADES: This effort will upgrade the current RTSs. Several integrated efforts, which are now grouped into the RTS Block Change (RBC) effort, will standardize, automate and make interoperable the remote tracking stations through the replacement of outdated government unique equipment with commercial off-the-shelf technology in order to reduce failures, correct operational deficiencies, and reduce operating and sustainment costs. We will also examine the capability of phased array antenna in the RBC upgrade. Additionally, interoperability efforts to address standards and protocols and external user connectivity are included in

this segment.

NETWORK OPERATIONS UPGRADES: These upgrades build the net-centric, Internet Protocol (IPv6) software baseline for AFSCN in accordance with the latest DOD information technology standards. These critical upgrades improve AFSCN resource management capabilities to include Remote Tracking Station (RTS) control and monitoring services, Electronic Scheduling and Dissemination system (ESD) enhancements, and Fault Detection/Isolation/Correction (FD/FI/FC). These capabilities tie together current disparate systems to provide a modern automated, self-healing, and robust IP network.

This effort is in Budget Activity 7, Operational System Development, because it supports a fielded system.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	19.783	27.256	17.005
(U)	Current PBR/President's Budget	21.238	26.898	16.758
(U)	Total Adjustments	1.455	-0.358	
(U)	Congressional Program Reductions		-0.186	
	Congressional Rescissions		-0.172	
	Congressional Increases			
	Reprogrammings	2.005		
	SBIR/STTR Transfer	-0.550		
(U)	Significant Program Changes:			

FY07: Increase ($2M) to complete Vandenberg Tracking Station

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3276	Satellite Control Network	21.238	26.898	16.758	19.026	16.920	17.249	17.595	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 Global SATCOM (WGS), Transformational Communications Satellites (TSAT), Skynet, NATO III/IV, and classified programs. Support to NASA and National Oceanic and Atmospheric Administration (NOAA) satellites is provided on an "as required" basis. In addition, the AFSCN provides launch and early orbit tracking operations in support of all major US launches and provides satellite end-of-life disposal operations. It is the world's only global satellite control network equipped with high-power capability necessary for satellite rescue and anomaly resolution operations.

AFSCN Improvement and Modernization (I&M) is an ongoing program of replacements and upgrades which will meet AFSPC operational requirements to replace non-standard, unsupportable equipment with more reliable, maintainable, interoperable, and standardized hardware and software. This new equipment will enable AFSPC satellite operations to be performed with fewer, less skilled personnel and will reduce hardware/software maintenance costs. The principal efforts within this program are currently focused on Range Upgrades and Network Operations Upgrades.

RANGE UPGRADES: This effort will upgrade the current RTSs. Several integrated efforts, which are now grouped into the RTS Block Change (RBC) effort, will standardize, automate and make interoperable the remote tracking stations through the replacement of outdated government unique equipment with commercial off-the-shelf technology in order to reduce failures, correct operational deficiencies, and reduce operating and sustainment costs. We will also examine the capability of phased array antenna in the RBC upgrade. Additionally, interoperability efforts to address standards and protocols and external user connectivity are included in this segment.

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305110F Satellite Control Network	PROJECT NUMBER AND TITLE 3276 Satellite Control Network

NETWORK OPERATIONS UPGRADES: These upgrades build the net-centric, Internet Protocol (IPv6) software baseline for AFSCN in accordance with the latest DOD information technology standards. These critical upgrades improve AFSCN resource management capabilities to include Remote Tracking Station (RTS) control and monitoring services, Electronic Scheduling and Dissemination system (ESD) enhancements, and Fault Detection/Isolation/Correction (FD/FI/FC). These capabilities tie together current disparate systems to provide a modern automated, self-healing, and robust IP network.

This effort is in Budget Activity 7, Operational System Development, because it supports a fielded system.

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

		FY 2007	FY 2008	FY 2009
(U)	Range Upgrades: continue upgrades to include development of interoperability and RTS Block Change efforts. Participate in demo of phased array antenna applicability to RBC effort. Continue predeployment system engineering and network integration.	17.574	22.211	9.460
(U)	Network Operations Upgrades: continue upgrades to network operations to include development of Orbit Analysis Subsystem follow-on upgrade, enterprise management, information assurance, and predeployment system engineering and network integration.	0.000	1.000	3.600
(U)	Program support, to include System Program Office operations, SETA, FFRDC and Systems Engineering and Integration	3.664	3.687	3.698
(U)				
(U)	Total Cost	21.238	26.898	16.758

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	OPAF, Electronics & Telecom Equipment (BA 03, PE 0305110F, P-64)	71.999	49.664	65.383	62.689	65.251	66.535	67.852	Continuing	TBD
(U)	OPAF, Initial Spares & Repair Parts (BA 05 PE 0305110F, P-103)	3.551	0.000	0.000	0.000	0.000	0.000	0.000	0.000	18.098

(U) D. Acquisition Strategy

The AF uses the competitively awarded Satellite Control Network Contract (SCNC), managed by Space and Missile System Center, to modernize and sustain the AFSCN on a non-interference basis as it continues to support operational, RDT&E, and other designated users.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Satellite Control Network Contract	C/CPAF	Honeywell, Colorado Springs, CO		17.574	Dec-06	23.211	Dec-07	13.060	Dec-08	Continuing	TBD	TBD
											0.000	
Subtotal Product Development			0.000	17.574		23.211		13.060		Continuing	TBD	TBD
Remarks:												
(U) Support												
Program Support (FFRDC, SETA, SPO ops)	various	various		3.664	Dec-06	3.687	Dec-07	3.698	Dec-08	Continuing	TBD	TBD
Subtotal Support			0.000	3.664		3.687		3.698		Continuing	TBD	TBD
Remarks:												
(U) Subtotal additional reprogrammings												
(U) Total Cost			0.000	21.238		26.898		16.758		Continuing	TBD	TBD
Remarks:												

Exhibit R-4, RDT&E Schedule Profile

DATE: February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0305110F Satellite Control Network	3276 Satellite Control Network

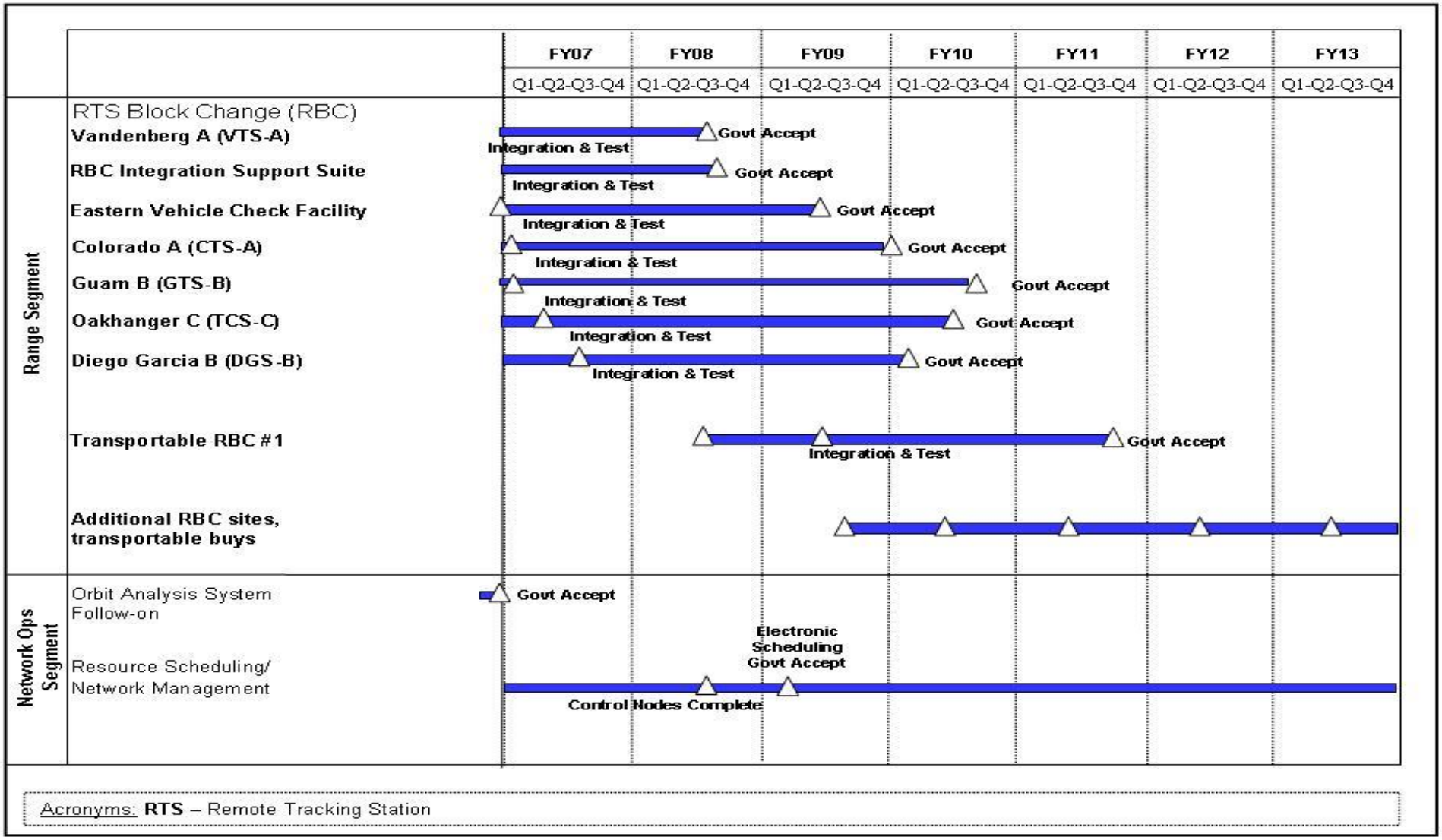

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305110F Satellite Control Network	PROJECT NUMBER AND TITLE 3276 Satellite Control Network

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) RANGE UPGRADES (Remote Tracking Station (RTS) Block Change)			
(U) - Vandenberg RTS Boresight Test	3Q		
(U) - Vandenberg RTS Gov't acceptance		3Q	
(U) - Begin Transportable RBC #1		3Q	
(U) - RBC Integration Support Suite Gov't acceptance		3Q	
(U) - Eastern Vehicle Check Facility			2Q
(U) - Begin Hawaii RTS block change			2Q
(U) - Colorado RTS Gov't acceptance			4Q
(U) NETWORK OPERATIONS UPGRADES			
(U) - Electronic Scheduling Segment Verification Test	3Q		
(U) - Resource Scheduling control nodes upgrade complete		2Q	
(U) - Electronic Scheduling Gov't acceptance			2Q

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PE NUMBER: 0305111F
PE TITLE: WEATHER SERVICE

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305111F WEATHER SERVICE

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	41.676	40.959	47.347	42.906	38.504	39.002	40.196	Continuing	TBD
2738	Weather Service	41.676	40.959	47.347	42.906	38.504	39.002	40.196	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This budget activity funds operational development necessary to acquire, modify, and sustain segments of the Air Force Weather Weapon System (AFWWS). The AFWWS provides timely, accurate, consistent and relevant space and terrestrial weather information for battlespace situational awareness. The AFWWS supports worldwide operations of Air Force and Army warfighters, Special Operation Forces (SOF), and other government agencies with weather observing and forecasting capabilities at in-garrison and deployed locations. Air Force Weather (AFW) programs are aligned under the five capability areas of Weather Data Collection (WDC), Weather Data Analysis (WDA), Weather Forecasting, Product Tailoring/Warfighter Applications (PT/WA), and Weather Dissemination (relies on Commercial-off-the-Shelf products and so does not use RDT&E funding). Through this alignment, AFW ensures an integrated and systems-oriented approach to program management decisions.

WDC provides automated terrestrial and space environmental sensing capabilities at fixed and deployed locations worldwide. WDA provides a net-centric infrastructure that assimilates worldwide sources of space and terrestrial weather data and produces decision-quality information for warfighters. Weather Forecasting provides advanced scientific numerical weather prediction capabilities for automated, high resolution forecast products for mission planning, rehearsal, and execution. Additionally, WDA and Forecasting capabilities will be expanded to integrate and exploit data from a new generation of environmental sensing satellites. PT/WA provides timely, target-scale weather information to operational commanders for a given Area of Responsibility, and at tactical levels, provides front-line weather information to warfighters in support of combat operations. PT/WA supports the 'train as you fight' concept by assuring fixed and deployable systems have a similar look and feel.

This effort is in Budget Activity 7, Operational System Development, because it supports operational software development and system tests associated with the upgrade and replacement of currently operational systems, systems already in production, and systems with approved production funds in the DoD budget.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305111F WEATHER SERVICE

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	35.701	39.747	47.347
(U)	Current PBR/President's Budget	41.676	40.959	47.347
(U)	Total Adjustments	5.975		
(U)	Congressional Program Reductions		-0.127	
	Congressional Rescissions		-0.261	
	Congressional Increases	1.000	1.600	
	Reprogrammings	4.975		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

In FY08: Congressional plus-up of $800K for Operational Risk Management (ORM) visualization and integration and $800K for Tropospheric Airborne Meteorological Data Reporting (TAMDAR) system integration and performance evaluation on UAS.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305111F WEATHER SERVICE	PROJECT NUMBER AND TITLE: 2738 Weather Service	

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2738 Weather Service	41.676	40.959	47.347	42.906	38.504	39.002	40.196	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 provides timely, accurate, consistent and relevant space and terrestrial weather information for battlespace situational awareness. The AFWWS supports worldwide operations of Air Force and Army warfighters, Special Operation Forces (SOF), and other government agencies with weather observing and forecasting capabilities at in-garrison and deployed locations. Air Force Weather (AFW) programs are aligned under the five capability areas of Weather Data Collection (WDC), Weather Data Analysis (WDA), Weather Forecasting, Product Tailoring/Warfighter Applications (PT/WA), and Weather Dissemination (relies on Commercial-off-the-Shelf products and so does not use RDT&E funding). Through this alignment, AFW ensures an integrated and systems-oriented approach to program management decisions.

WDC provides automated terrestrial and space environmental sensing capabilities at fixed and deployed locations worldwide. WDA provides a net-centric infrastructure that assimilates worldwide sources of space and terrestrial weather data and produces decision-quality information for warfighters. Weather Forecasting provides advanced scientific numerical weather prediction capabilities for automated, high resolution forecast products for mission planning, rehearsal, and execution. Additionally, WDA and Forecasting capabilities will be expanded to integrate and exploit data from a new generation of environmental sensing satellites. PT/WA provides timely, target-scale weather information to operational commanders for a given Area of Responsibility, and at tactical levels, provides front-line weather information to warfighters in support of combat operations. PT/WA supports the 'train as you fight' concept by assuring fixed and deployable systems have a similar look and feel.

This effort is in Budget Activity 7, Operational System Development, because it supports operational software development and system tests associated with the upgrade and replacement of currently operational systems, systems already in production, and systems with approved production funds in the DoD budget.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Program			
(U) WDC: Includes but is not limited to AF participation with National Weather Service and Federal Aviation Administration in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar.	0.338	0.338	0.338
(U) WDA: Continues incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites.	12.006	9.863	10.740
(U) Forecasting: Continues integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites.	14.082	12.690	15.906
(U) PT/WA: Continues software development and integration of regional and tactical weather systems and integration with warfighter C4I systems. In FY08/09 realigned funds within PE 0305111F in response to government cost	14.250	17.268	20.363

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007	FY 2008	FY 2009
	estimates and March 06 contract award--no increase in total program funding.			
(U)	Airborne Meteorological Data Reporting Modernization: Develops airborne weather sensors on Unmanned Aerial Vehicles (UAVs)	1.000	0.800	
(U)	Total Cost	41.676	40.959	47.347

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Other Procurement, AF, Weather Service (PE 0305111F WSC 833070, 838010, and 86190A)	48.311	54.005	60.130	45.785	46.331	43.982	42.140	Continuing	TBD
(U)	Operations and Maintenance	135.066	142.978	148.236	156.044	157.384	160.524	164.388	Continuing	TBD

(U) D. Acquisition Strategy

AFWWS employs an incremental development strategy with a series of incremental Initial Operational Capabilities (IOCs) and software releases to enable rapid development and fielding of capabilities using full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305111F WEATHER SERVICE**

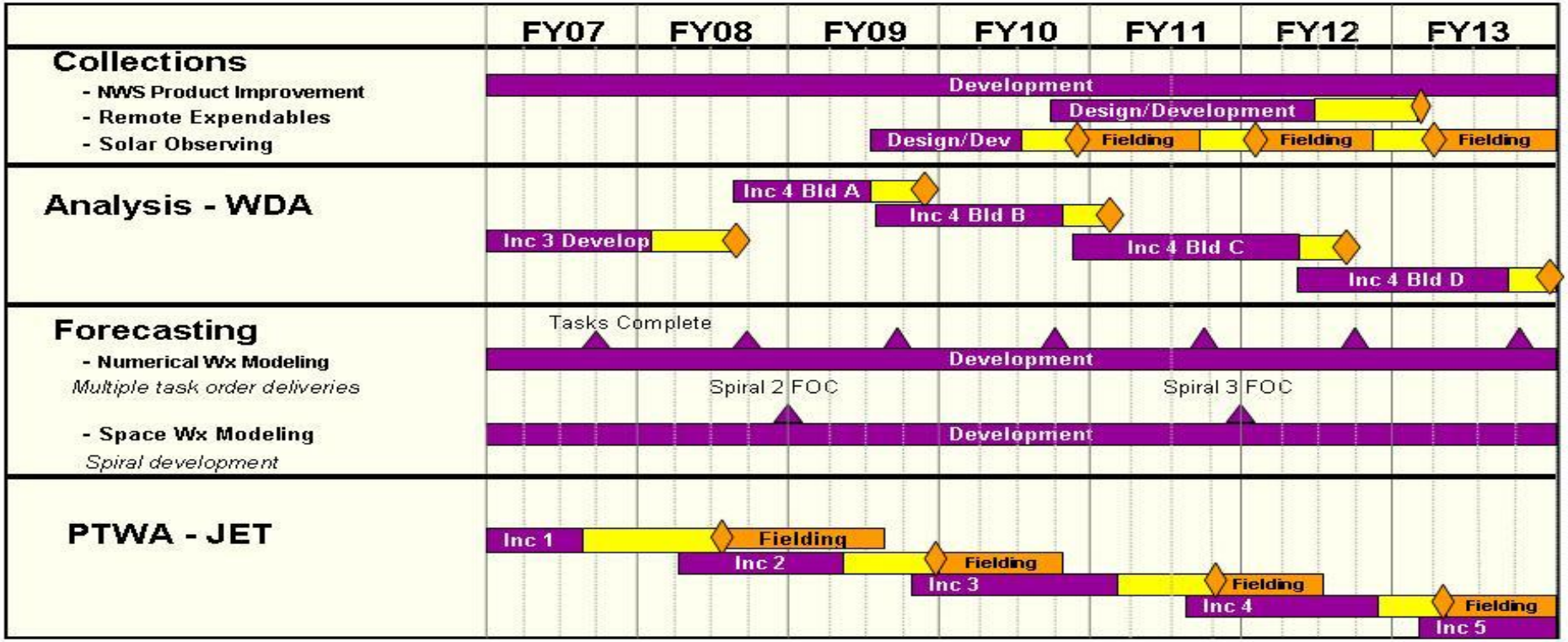
PROJECT NUMBER AND TITLE: **2738 Weather Service**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Northrop Grumman	C/CPAF	Bellevue, NE		5.752	Nov-06	2.427	Jan-08	2.417	Nov-08	Continuing	TBD	TBD
Raytheon Technical Services	C/CPFF	Bellevue, NE		7.664	Nov-06	6.212	May-08	7.600	Nov-08	Continuing	TBD	TBD
Raytheon Information & Intelligence Systems	C/CPAF	Bellevue, NE		10.668	Jan-07	13.803	Jan-08	16.000	Nov-08	Continuing	TBD	TBD
National Center for Atmospheric Research	MIPR	Boulder, CO		4.523	Jan-07	3.702	Jan-08	8.314	Jan-09	Continuing	TBD	TBD
National Aeronautics & Space Administration	MIPR	Greenbelt, MD		0.461	Jan-07	1.805	Jan-08	2.800	Jan-09	Continuing	TBD	TBD
University Corporation for Atmospheric Research	MIPR	Boulder, CO						1.200	Jan-09		1.200	
Various	various	various		10.155	Oct-06	10.467	Oct-07	5.156	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	39.223		38.416		43.487		Continuing	TBD	TBD
Remarks:												
(U) Management												
Electronic Sytems Center		Hanscom AFB, MA		2.143	Oct-06	1.960	Oct-07	3.003	Oct-08	Continuing	TBD	TBD
Space & Missile Systems Center		Los Angeles AFB, CA		0.020	Oct-06	0.020	Oct-07	0.020	Oct-08	Continuing	TBD	TBD
Air Force Research Laboratory		Hanscom AFB, MA		0.290	Oct-06					Continuing	TBD	TBD
Air Force Research Laboratory		Rome Labs, NY				0.563	Oct-07	0.837	Oct-08		1.400	
Subtotal Management			0.000	2.453		2.543		3.860		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	41.676		40.959		47.347		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305111F WEATHER SERVICE	PROJECT NUMBER AND TITLE 2738 Weather Service

PE 0305111F Weather Service

As of Jan 08



Note: NWS product improvements, Forecasting, and SWAFS are operational and being upgraded through incremental development activities.

Design / development
Production / fielding
Integration / test
Key events

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305111F WEATHER SERVICE**	PROJECT NUMBER AND TITLE **2738 Weather Service**

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) WDC NWS Product Improvement Effort (Note 1)	1-4Q	1-4Q	1-4Q
(U) WDA Increment 3 Delivery		3Q	
(U) WDA Increment 4 Build A Delivery			4Q
(U) Forecasting Tasks Complete	3Q	3Q	3Q
(U) Forecasting - SWAFS Spiral 2 Full Operational Capability		4Q	
(U) PT/WA - JET Increment 1 IOC		4Q	
(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 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305114F Air Traffic Control/Approach/Landing System (ATCALS)

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	3.670	8.293	6.867	3.585	3.098	3.158	3.222	Continuing	TBD
3587 Air Traffic Control Systems	3.670	8.293	6.867	3.585	3.098	3.158	3.222	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 included the Mobile Approach Control System (MACS) which would have replaced 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. However, the MACS program was cancelled on 16 May 07 due to cost, schedule and technical issues. Additional funding has been added in FY08/FY09 to conduct an Analysis of Alternatives (AoA) and develop requirements and acquisition documents for a follow-on program to replace the existing 1970/80 vintage deployable Radar Approach Control Systems (RAPCONs). Funding is also provided for the Terminal Surveillance and Approach System (TSAS) upgrade to the Transportable Transponder Landing System (TTLS) which will provide a rapidly deployable, all weather, precision, terminal air traffic control capability under instrument flight rules (IFR) conditions and a quick disconnect panel and switchgear for the Edwards AFB Traffic Control (TRACON) Center. This project also funds the Air Traffic Control and Landing Systems (ATCALS) Transformation initiative which combines organizational realignments, process improvements, and investments in technology to update 20+ year old fixed and deployable ATCALS equipment. These investments will result in significant manpower and operations / maintenance savings over the next 20 years. The first phase of this initiative includes development of a deployable Instrument Landing System (ILS) and updates to fixed and deployable precision and non-precision approach control equipment such as, but not limited to, Tactical Air Navigation (TACAN), Very High Frequency Omnidirectional Range (VOR), and Air Traffic Control Radios. These efforts are key to ensuring Air Force Air Traffic Systems work collaboratively to safely and efficiently provide air traffic control (ATC) services, as well as net-centric operations within the National Airspace System (NAS) and in host nations overseas. Over the next 15 years, the Federal Aviation Administration (FAA) plans to implement new or improved capabilities into the NAS in an evolutionary manner. Included in the FAA improvements are upgrades to the Notice To Airman (NOTAM) program. The NOTAM program provides timely information regarding the status of airfield equipment and operations, as well as the status of enroute navigational aids. Finally, the ATCALS program will participate in the development, testing, and implementation of international standards (to include North Atlantic Treaty Organization (NATO) standardization agreements) to ensure joint, Allied, and coalition interoperability.

FY 2010 and beyond will see additional capabilities being planned to enable the concept of Free Flight throughout the NAS. Since the Air Force must provide the same level of air traffic service to the military and flying public, funds are required to conduct interoperability and architecture studies and analyses on a wide range of aviation concepts. Pre-planned product improvements (P3I) complement similar activities associated with other safety of flight and airspace access programs such as Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM), implementation of Automatic Dependent Surveillance-Broadcast (ADS-B) and development of remote ATC Tower capabilities.

This program is in budget activity 7, Operational System Development, because it upgrades currently fielded systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	3.467	4.672	4.686
(U)	Current PBR/President's Budget	3.670	8.293	6.867
(U)	Total Adjustments	0.203		
(U)	Congressional Program Reductions		-0.046	
	Congressional Rescissions		-0.053	
	Congressional Increases		3.720	
	Reprogrammings	0.203		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

FY2008 Congressional add - $3.0M for Terminal Surveillance and Approach System (TSAS).

FY2008 Congressional add - $720K for Quick Disconnect Panel and Switchgear for Edwards AFB TRACON.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3587 Air Traffic Control Systems	3.670	8.293	6.867	3.585	3.098	3.158	3.222	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 included the Mobile Approach Control System (MACS) which would have replaced 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. However, the MACS program was cancelled on 16 May 07 due to cost, schedule and technical issues. Additional funding has been added in FY08/FY09 to conduct an Analysis of Alternatives (AoA) and develop requirements and acquisition documents for a follow-on program to replace the existing 1970/80 vintage deployable Radar Approach Control Systems (RAPCONs). Funding is also provided for the Terminal Surveillance and Approach System (TSAS) upgrade to the Transportable Transponder Landing System (TTLS) which will provide a rapidly deployable, all weather, precision, terminal air traffic control capability under instrument flight rules (IFR) conditions and a quick disconnect panel and switchgear for the Edwards AFB Traffic Control (TRACON) Center. This project also funds the Air Traffic Control and Landing Systems (ATCALS) Transformation initiative which combines organizational realignments, process improvements, and investments in technology to update 20+ year old fixed and deployable ATCALS equipment. These investments will result in significant manpower and operations / maintenance savings over the next 20 years. The first phase of this initiative includes development of a deployable Instrument Landing System (ILS) and updates to fixed and deployable precision and non-precision approach control equipment such as, but not limited to, Tactical Air Navigation (TACAN), Very High Frequency Omnidirectional Range (VOR), and Air Traffic Control Radios. These efforts are key to ensuring Air Force Air Traffic Systems work collaboratively to safely and efficiently provide air traffic control (ATC) services, as well as net-centric operations within the National Airspace System (NAS) and in host nations overseas. Over the next 15 years, the Federal Aviation Administration (FAA) plans to implement new or improved capabilities into the NAS in an evolutionary manner. Included in the FAA improvements are upgrades to the Notice To Airman (NOTAM) program. The NOTAM program provides timely information regarding the status of airfield equipment and operations, as well as the status of enroute navigational aids. Finally, the ATCALS program will participate in the development, testing, and implementation of international standards (to include North Atlantic Treaty Organization (NATO) standardization agreements) to ensure joint, Allied, and coalition interoperability.

FY 2010 and beyond will see additional capabilities being planned to enable the concept of Free Flight throughout the NAS. Since the Air Force must provide the same level of air traffic service to the military and flying public, funds are required to conduct interoperability and architecture studies and analyses on a wide range of aviation concepts. Pre-planned product improvements (P3I) complement similar activities associated with other safety of flight and airspace access programs such as Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM), implementation of Automatic Dependent Surveillance-Broadcast (ADS-B) and development of remote ATC Tower capabilities.

This program is in budget activity 7, Operational System Development, because it upgrades currently fielded systems.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305114F Air Traffic Control/Approach/Landing System (ATCALS)	PROJECT NUMBER AND TITLE: 3587 Air Traffic Control Systems

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

		FY 2007	FY 2008	FY 2009
(U)	Perform Transportable Transponder Landing System (TTLS) Demonstrations	1.880		
(U)	Terminal Surveillance and Approach System (TSAS) ATCALS		3.000	
(U)	FAA NOTAMs Program	1.587		
(U)	Begin AoA and develop requirements & acquisition documentation for deployable RAPCON system replacement	0.203	0.500	0.398
(U)	Begin ATCALS Transformation Development		4.073	6.469
(U)	TRACON Quick Connect Panel and Switchgear		0.720	
(U)	Total Cost	3.670	8.293	6.867

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E									
(U)	Other APPN									
(U)	APAF - BA 5 (PE 35114F) Weapon System Code CO2900			31.877					Continuing	TBD
(U)	OPAF - BA 3 (PE 0305114F) Weapon System Code 833010	7.658	8.762	9.832	17.066	0.593	24.254	8.618	Continuing	TBD
(U)	OPAF, BA 3, PE 0305114F), Weapon System Code 838010	18.855	9.988	3.393	19.456	24.760	23.793	22.613	Continuing	TBD
(U)	OPAF, BA 3, (PE 0305114F, Weapon System Code 833020	62.212	50.037	47.224	53.819	48.610	50.056	67.757	Continuing	TBD
(U)	OPAF, BA 5, (PE 0305137F) Weapon System Code 86190A Initial Spares	5.414	5.461	5.504	5.817	5.896	6.011	6.129	Continuing	TBD
(U)	OPAF - BA 3 (PE 0305114F) Weapon System Code 86190A Initial Spares	2.775	3.256	0.887	0.916	0.934	0.951	0.970	Continuing	TBD

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Transportable Transponder Landing System (TTLS)	C/FFP	Adv Nav & Positioning Corp; Hood River, OR	4.517	1.880	Sep-07					0.000	6.397	6.397
											0.000	
NOTAMs Program	GSA T&M	TBD	0.000	1.587	Feb-08					0.000	1.587	1.587
											0.000	
Mobile Approach Control System (MACS)	Various	Various	52.744							0.000	52.744	52.744
											0.000	
Terminal Surveillance and Approach System (TSAS) ATCALS	C/FFP	Adv Nav & Positioning Corp; Hood River, OR				3.000	Jun-08			0.000	3.000	3.000
											0.000	
TRACON Quick Connect Panel and Swtichgear	TBD	TBD				0.720	May-08			0.000	0.720	0.720
											0.000	
Begin AoA and develop requirements & acquisition documentation for deployable RAPCON replacement system	TBD	TBD		0.203	Jan-08	0.500	Mar-08	0.398	Feb-09	Continuing	TBD	TBD
											0.000	
ATCALS Transformation	TBD	TBD				4.073	Jun-08	6.469	Mar-09	Continuing	TBD	TBD
Subtotal Product Development			57.261	3.670		8.293		6.867		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			57.261	3.670		8.293		6.867		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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

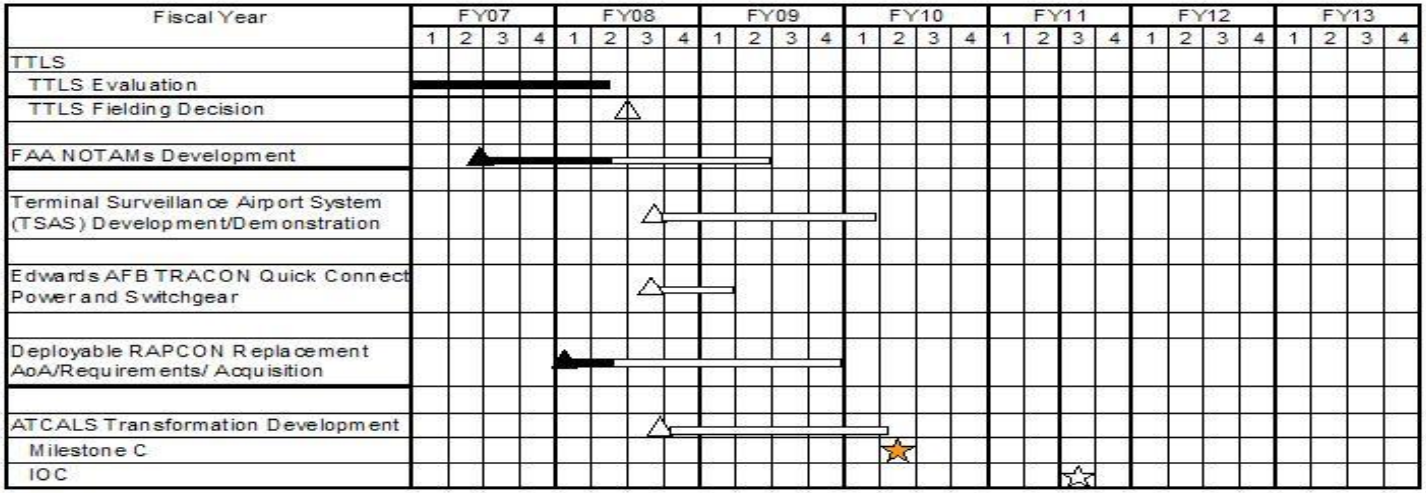

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305114F Air Traffic Control/Approach/Landing System (ATCALS)**	PROJECT NUMBER AND TITLE **3587 Air Traffic Control Systems**

(U)	**Schedule Profile**	FY 2007	FY 2008	FY 2009
(U)	Complete TTLS System Evaluation		2Q	
(U)	Begin FAA NOTAM Upgrade/Development	2Q		
(U)	Begin Terminal Surveillance Airport System (TSAS) Development/Demonstration		3Q	
(U)	Complete Edwards AFB TRACON Quick Connect Power and Switchgear Acquisition/Installation			1Q
(U)	Complete AoA and Develop Requirement & Acquisition Documentation for Deployable RAPCON Replacement			4Q
(U)	Begin ATCALS Transformation Development		3Q	

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PE NUMBER: 0305116F
PE TITLE: AERIAL TARGETS

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305116F AERIAL TARGETS

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	4.041	7.329	34.777	51.753	45.893	44.512	21.460	Continuing	TBD
5136	Target Systems Development	4.041	7.329	34.777	51.753	45.893	44.512	21.460	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-35, 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 FY09, the Air Force Subscale Aerial Target (AFSAT) program will continue to evaluate and develop product improvements to improve reliability, reduce cost and provide needed enhancements to the performance, payload capability, and payload capacity to support growth initiatives that will continue throughout the Future Years Defense Program (FYDP). FY09 funding will support the continuation of risk reduction activities and continue the development effort for the QF-16 full scale aerial target leading to a planned production effort in approximately FY14.

This program is in budget activity 7 - RDT&E Operational System Development because it provides aerial targets, target payloads, and target control systems in support of operational and RDT&E testing.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	5.183	7.376	26.603
(U)	Current PBR/President's Budget	4.041	7.329	34.777
(U)	Total Adjustments	-1.142	-0.047	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.047	
	Congressional Increases			
	Reprogrammings	-1.036		
	SBIR/STTR Transfer	-0.106		
(U)	Significant Program Changes:			
	FY09 8.584M change for QF-16 .			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5136 Target Systems Development	4.041	7.329	34.777	51.753	45.893	44.512	21.460	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-35, 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 FY09, the Air Force Subscale Aerial Target (AFSAT) program will continue to evaluate and develop product improvements to improve reliability, reduce cost and provide needed enhancements to the performance, payload capability, and payload capacity to support growth initiatives that will continue throughout the Future Years Defense Program (FYDP). FY09 funding will support the continuation of risk reduction activities and continue the development effort for the QF-16 full scale aerial target leading to a planned production effort in approximately FY14.

This program is in budget activity 7 - RDT&E Operational System Development because it provides aerial targets, target payloads, and target control systems in support of operational and RDT&E testing.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continue Aerial Targets basic operating support.	0.377	1.000	1.000
(U) Continue system acquisition and engineering support to include studies, upgrades for the target control system, the weapon scoring system, payload systems and other aerial targets support systems.	0.096	0.100	0.100
(U) Initiate planning activities and trade studies to support follow-on full scale Aerial Target.	2.877		
(U) Continue QF-16 development program.		2.000	29.055
(U) Continue product improvement program for the Air Force Subscale Aerial Target (AFSAT) program to include payload and propulsion improvements, radar augmentation, alternate launch methods and other objective requirements/enhancements.	0.691	4.229	4.622
(U) Total Cost	4.041	7.329	34.777

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	PE35116F: Appn: Aircraft Procurement, AF(APAF), Program Title: Aerial Targets	73.512	77.079	70.576	73.034	76.279	38.480	92.952	Continuing	TBD
(U)	Initial Spares	0.383	0.476	0.518	0.532	0.538	0.549	0.559	Continuing	TBD
(U)	Munitions	3.819	0.000	4.106	4.206	4.262	4.346	4.432	Continuing	TBD
(U)	Electronic Attack Pods	4.994	5.537	5.148	5.380	5.552	5.661	5.772	Continuing	TBD

(U) D. Acquisition Strategy

The acquisition strategy is competitive, with cost plus, fixed price and time and materials contracts.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
AFSAT P3I Efforts	FFP, T&M, CPIF	Composite Engineering Inc., Sacramento CA		0.691	Feb-07	4.229	Jan-08	4.622	Jan-09		9.542	
QF-16 Risk Reduction and Trade Studies	FFP, T&M, CPXX	TBD		2.066							2.066	
QF-16 Development						2.000		29.055			31.055	
Subtotal Product Development			0.000	2.757		6.229		33.677		0.000	42.663	0.000
Remarks: Pre-planned product improvements for the AFSAT Subscale Aerial Target and New Full Scale Aerial Target (QF-16) Development												
(U) Support												
Mission Support	Various	Various		0.377		1.000		1.000			2.377	
Subtotal Support			0.000	0.377		1.000		1.000		0.000	2.377	0.000
Remarks:												
(U) Test & Evaluation												
Continue system acquisition and engineering support to include studies, upgrades for the target control system, the weapon scoring system, payload systems and other aerial targets support systems				0.096		0.100		0.100			0.296	
Subtotal Test & Evaluation			0.000	0.096		0.100		0.100		0.000	0.296	0.000
Remarks:												
(U) Management												
System Acq and Engineering Support	Various	Various		0.811							0.811	
Subtotal Management			0.000	0.811		0.000		0.000		0.000	0.811	0.000
Remarks:												
(U) Total Cost			0.000	4.041		7.329		34.777		0.000	46.147	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305116F AERIAL TARGETS	PROJECT NUMBER AND TITLE: 5136 Target Systems Development

FOR OFFICIAL USE ONLY

AFSAT Contract Efforts

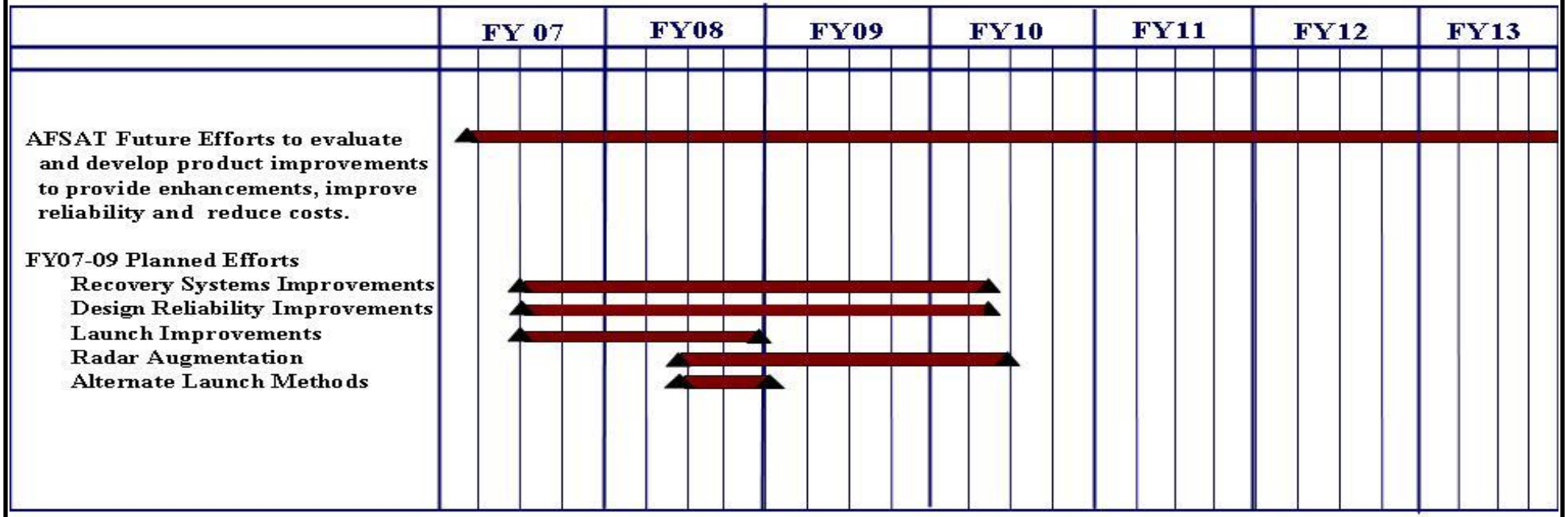

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305116F AERIAL TARGETS	PROJECT NUMBER AND TITLE: 5136 Target Systems Development

FOR OFFICIAL USE ONLY

Proposed QF-16 Schedule FY08-FY16

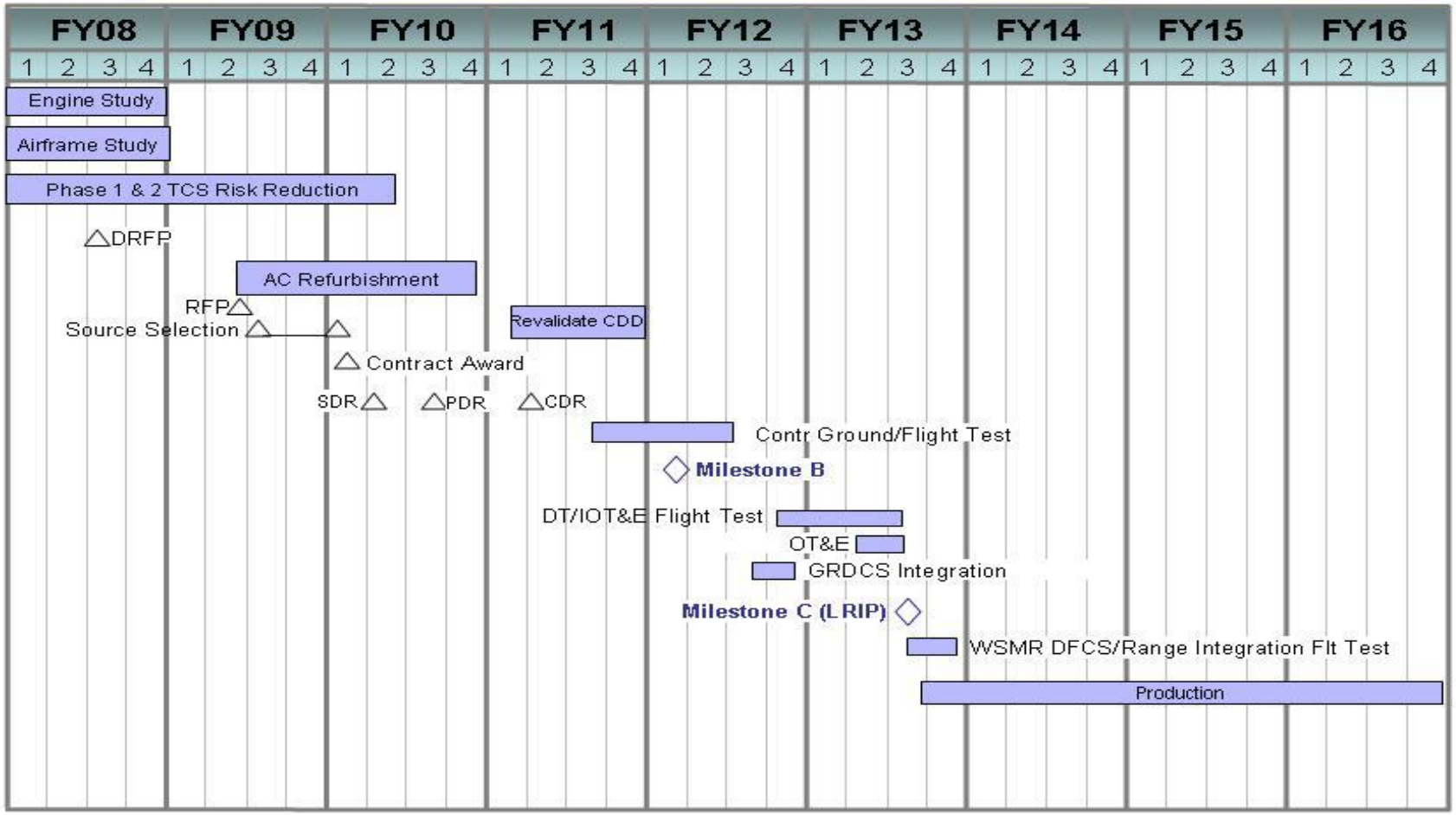

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305116F AERIAL TARGETS**	PROJECT NUMBER AND TITLE **5136 Target Systems Development**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Launch Improvement Study	4Q		
(U) Radar Augmentation		2Q	
(U) Combo IR/RCS Pod			2Q
(U) Alternate Launch Method Study		2Q	
(U) AST Risk Reduction, Trade Studies	2Q		
(U) AST Development Effort			3Q

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PE NUMBER: 0305128F
PE TITLE: Security And Investigative Activities

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305128F Security And Investigative Activities

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.493	0.825	0.786	0.796	0.801	0.815	0.833	Continuing	TBD
1931	TECH SURVEIL COUNTER MEAS EQPT	0.493	0.825	0.786	0.796	0.801	0.815	0.833	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 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305128F Security And Investigative Activities

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.507	0.829	0.832
(U)	Current PBR/President's Budget	0.493	0.825	0.786
(U)	Total Adjustments	-0.014		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.014		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
1931	TECH SURVEIL COUNTER MEAS EQPT	0.493	0.825	0.786	0.796	0.801	0.815	0.833	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 2008
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 2007	FY 2008	FY 2009
(U)	Next Generation Technical Surveillance Countermeasures (TSCM) receiver	0.243	0.260	0.270
(U)	Continue development of Computer Crimes Investigative (CCI) Equipment & Software	0.008	0.300	0.273
(U)	Next Generation TSCM receiver continuing development	0.242	0.265	0.243
(U)	Total Cost	0.493	0.825	0.786

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Other Procurement/Technical Surveillance Countermeasures Equipment 3080/WSC 846030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U)	Other Procurement/Heavily Armored Vehicle 3080/WSC 821700	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 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Sandia Natl Lab	MIPR			0.485	Mar-07	0.296	Mar-08	0.386	Mar-09	Continuing	TBD	TBD
AFWIC	MIPR			0.005	Mar-07	0.250	Mar-08	0.200	Mar-09	Continuing	TBD	TBD
Other Agency	MIPR			0.003	Apr-07	0.279	Apr-08	0.200	Apr-09	Continuing	TBD	TBD
											0.000	
Subtotal Product Development			0.000	0.493		0.825		0.786		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) AF Infrastructure Protection Studies												
Subtotal AF Infrastructure Protection Studies												
Remarks:												
(U)												
Subtotal			0.000	0.000		0.000		0.000				
Remarks: Subtotal Subtotal												
(U)												
Subtotal			Cycle!	Cycle!		Cycle!		Cycle!			0.000	
(U) Total Cost			0.000	0.493		0.825		0.786		Continuing	TBD	TBD
Remarks:												

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305128F Security And Investigative Activities	PROJECT NUMBER AND TITLE: 1931 TECH SURVEIL COUNTER MEAS EQPT

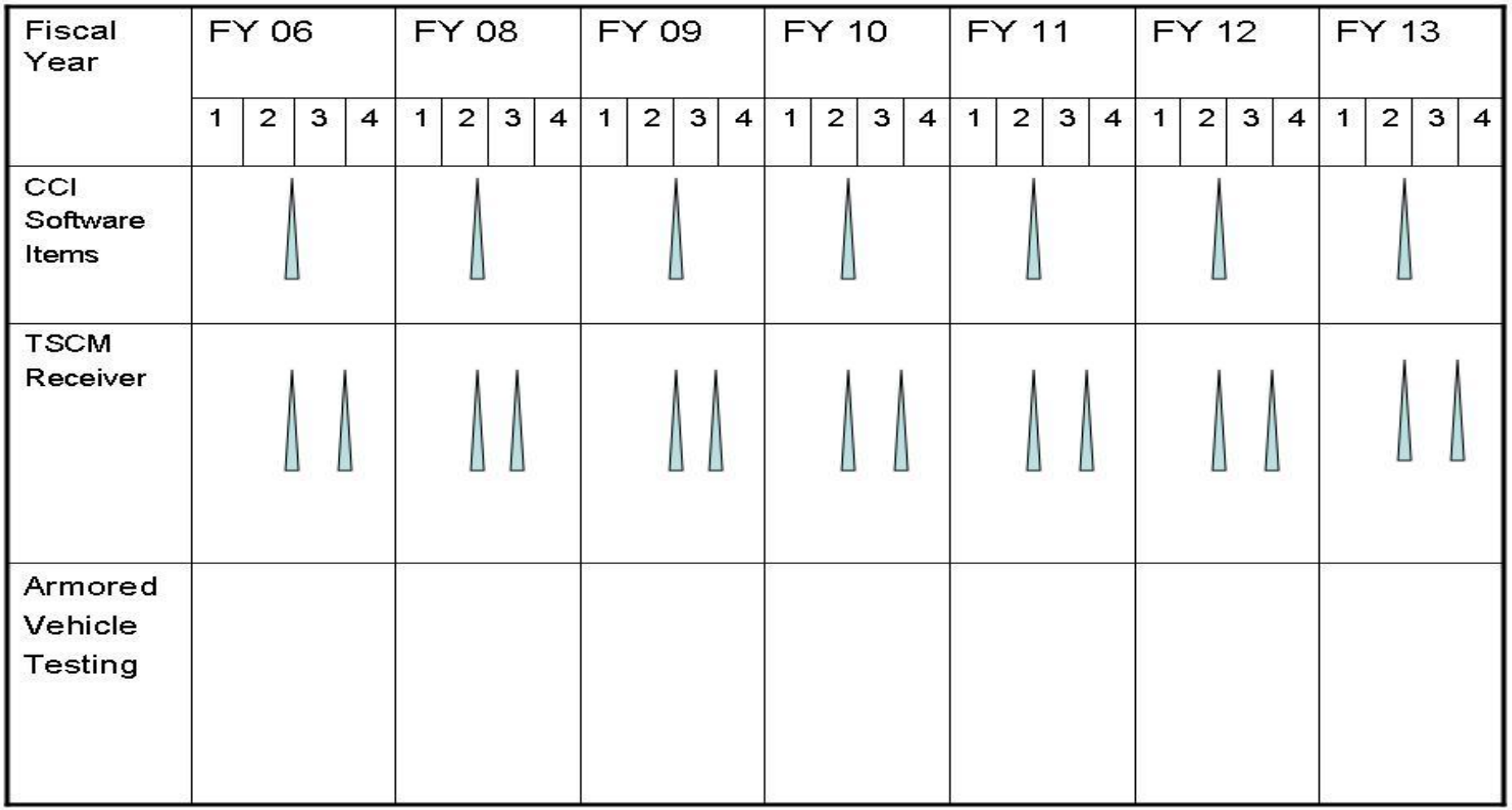

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305128F Security And Investigative Activities	PROJECT NUMBER AND TITLE: 1931 TECH SURVEIL COUNTER MEAS EQPT

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) TSCM Receiver	2-4Q	2-4Q	2-4Q
(U) CCI Software/Equipment	2-3Q	2-3Q	2-3Q

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PE NUMBER: 0305146F
PE TITLE: Defense Joint Counter Intelligence Program

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305146F Defense Joint Counter Intelligence Program

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.000	0.000	0.039	0.040	0.041	0.042	0.043	0.000	0.000
1931	TECH SURVEIL COUNTER MEAS EQPT	0.000	0.000	0.039	0.040	0.041	0.042	0.043	0.000	0.000

(U) A. Mission Description and Budget Item Justification

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

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.000	0.000	0.000
(U)	Current PBR/President's Budget	0.000	0.000	0.039
(U)	Total Adjustments	0.000		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

Funding for the Air Force CounterIntellignce (CI) mission.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305146F Defense Joint Counter Intelligence Program	PROJECT NUMBER AND TITLE: 1931 TECH SURVEIL COUNTER MEAS EQPT	

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
1931	TECH SURVEIL COUNTER MEAS EQPT	0.000	0.000	0.039	0.040	0.041	0.042	0.043	0.000	0.000
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	funds manpower authorizations, support equipment, necessary facilities and associated costs.			0.039
(U)				
(U)				
(U)	Total Cost	0.000	0.000	0.039

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	PE35128F, Security/Investigative Activties	0.507	0.829	0.793	0.804	0.809	0.823	0.841	Continuing	TBD

(U) D. Acquisition Strategy

Accomplished jointly within the DoD, Counterintelligence, and Law Enforcement communities with the various government laboratories, and major defense contractors to identify locations with the ability to develop investigative tools unique to our mission needs.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305146F Defense Joint Counter Intelligence Program**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Technical Services	various	various	0.000	0.000		0.000		0.039		Continuing	TBD	
Subtotal Product Development			0.000	0.000		0.000		0.039		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	0.000		0.000		0.039		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305146F Defense Joint Counter Intelligence Program	PROJECT NUMBER AND TITLE 1931 TECH SURVEIL COUNTER MEAS EQPT

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305146F Defense Joint Counter Intelligence Program	PROJECT NUMBER AND TITLE: 1931 TECH SURVEIL COUNTER MEAS EQPT

(U) Schedule Profile

FY 2007	FY 2008	FY 2009

(U) N/A

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PE NUMBER: 0305160F
PE TITLE: Defense Meteorological Satellite Program

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305160F Defense Meteorological Satellite Program

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.936	0.000	0.000	0.000	0.000	0.000	0.000	0.000	912.077
4758 DMSP Program	0.936	0.000	0.000	0.000	0.000	0.000	0.000	0.000	912.077

(U) A. Mission Description and Budget Item Justification

The Defense Meteorological Satellite Program (DMSP) is a fully operational program supporting a broad range of strategic and tactical national security users that require timely and accurate global weather information. DMSP is a critically important tool enabling commanders to effectively employ weapon systems and protect DoD resources in any operational battlespace. DMSP is DoD's only assured source of global weather data providing visible and infrared cloud cover imagery (1/3 nautical miles (nm) constant resolution) and other meteorological, oceanographic, land surface, and space environmental data. At least two satellites (one in each of two orbit planes) are required in sun-synchronous, 450nm polar-orbit at all times (sun-synchronous means the satellites cross the equator at the same local sun time on each of their 14 orbits/day).

DMSP F-15 was the first Block 5D3 spacecraft (with legacy sensors) and was launched on a Titan-II booster in Dec 99. Premature attitude determination gyro failures on DMSP F-15 exposed a fleet-wide life-limiting problem with the attitude determination gyros that will fly on all remaining DMSP satellites. Mini-Inertial Measurement Units (MIMUs) are being integrated to DMSPs F-17 through F-20 to reduce risk of mission failures due to gyro problems. DMSP F-16 was launched in Oct 03 aboard the last Titan II booster and is the first 'full-up' Block 5D3 (spacecraft bus plus sensors). Operational imperatives drove a need to launch DMSP F-16 before it could be integrated with a MIMU to provide attitude determination system redundancy. DMSP F-16 flies a new series of highly capable microwave and ultraviolet sensors to perform comprehensive environmental sensing. A number of systemic problems were identified during those sensors' calibration and validation period that will be addressed prior to the launch of all remaining satellites. The program office will implement a service life extension program on F19 and F20 to increase projected lifetime from 4 to 5 years. The Spacecraft Integration & Test (SIT) contract for spacecraft support and the Independent Verification and Validation contract for test flight software were both awarded in Jun 02. DMSP's consolidated sensors support and services follow-on contract was awarded in Nov 04. DMSP F-17 was launched on a Delta IV booster on 4 Nov 06. DMSP F-18's launch is scheduled for 3rd Quarter FY08 on an Atlas V.

This program is in Budget Activity 7, Operational Systems Development, because it supports the current operational DMSP constellation.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305160F Defense Meteorological Satellite Program

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.969		
(U)	Current PBR/President's Budget	0.963		
(U)	Total Adjustments	-0.006		
(U)	Congressional Program Reductions	-0.002		
	Congressional Rescissions	-0.004		
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305160F Defense Meteorological Satellite Program	PROJECT NUMBER AND TITLE: 4758 DMSP Program	

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4758 DMSP Program	0.936	0.000	0.000	0.000	0.000	0.000	0.000	0.000	912.077
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(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).

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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 2007	FY 2008	FY 2009
(U) Continue system integration and test, studies, and related support activities	0.500		
(U) Continue EELV interface design (transition to EELV)	0.463		
(U) Total Cost	0.963	0.000	0.000

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305160F Defense Meteorological Satellite Program	PROJECT NUMBER AND TITLE: 4758 DMSP Program

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									
(U) Missile Procurement/PE 0305160F (P-24)	86.376	127.350	101.136	102.580	95.301	86.300	78.899	12.782	3,069.577

Related RDT&E:

PE 0305178F, National Polar-orbiting Operational Environmental Satellite System (NPOESS)

PE 0305160N, Navy Meteorological and Oceanographic Sensor-Space (METOC) (provides funds for Navy unique studies)

(U) D. Acquisition Strategy

Support and services contracts for the spacecraft, sensors, ground systems, and supporting software have been awarded to various contractors. No major milestone decisions remain. Production of DMSP satellites has been completed. Remaining effort is to continue spacecraft and sensor integration and test and successfully launch remaining DMSP satellites.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Lockheed -Martin	SS/CPAF										0.000	
Lockheed-Martin	SS/CPAF										0.000	
Northrop-Grumman (CSS&S)	SS/CPAF										0.000	
Lockheed-Martin	C/CPAF										0.000	
Lockheed-Martin	C/CPAF			0.963	Oct-06						0.963	
Harris (SSMIS/STT SW)	C/CPAF										0.000	
Det 11/GSA (Mark IVB P3I)	MIPR										0.000	
Lockheed-Martin (Titan II Msn Unique Studies)	SS/CPAF										0.000	
Boeing (EELV Msn Unique Studies & Services)	SS/CPAF										0.000	
Aerojet	SS/CPAF										0.000	
Aerojet	C/CPAF/FFP										0.000	
Aerojet (SSM/TW/IS S&S & Model + SSMIS)	SS/CPAF										0.000	
Raytheon, formerly Hughes (SSMI Spt & Svc)	SS/CPFF										0.000	
AFRL	MIPR/PD										0.000	
NRL	MIPR/Var										0.000	
APL	MIPR/Var										0.000	
SMC (Det 3 SSSG/NPOESS)	FCA/MIPR										0.000	
Sandia	MIPR/Var										0.000	
NOAA											0.000	
Other	Various										0.000	
Historical Satellite Blocks	Various										0.000	
NONE											0.000	
Subtotal Product Development			0.000	0.963		0.000		0.000		0.000	0.963	0.000
Remarks:												
(U) Support												
FFRDC	AF 277										0.000	
PRC/BD Systems/TASS	C/CPAF										0.000	
Program Mgmt											0.000	
Litigation Support											0.000	
Other	Various										0.000	
Historical Satellite Blocks	Various										0.000	
NONE											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
NONE											0.000	
NONE											0.000	

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305160F Defense Meteorological Satellite Program**	**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	0.000	0.963	0.000	0.000	0.000	0.963	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305160F Defense Meteorological Satellite Program	PROJECT NUMBER AND TITLE: 4758 DMSP Program

DMSP Schedule

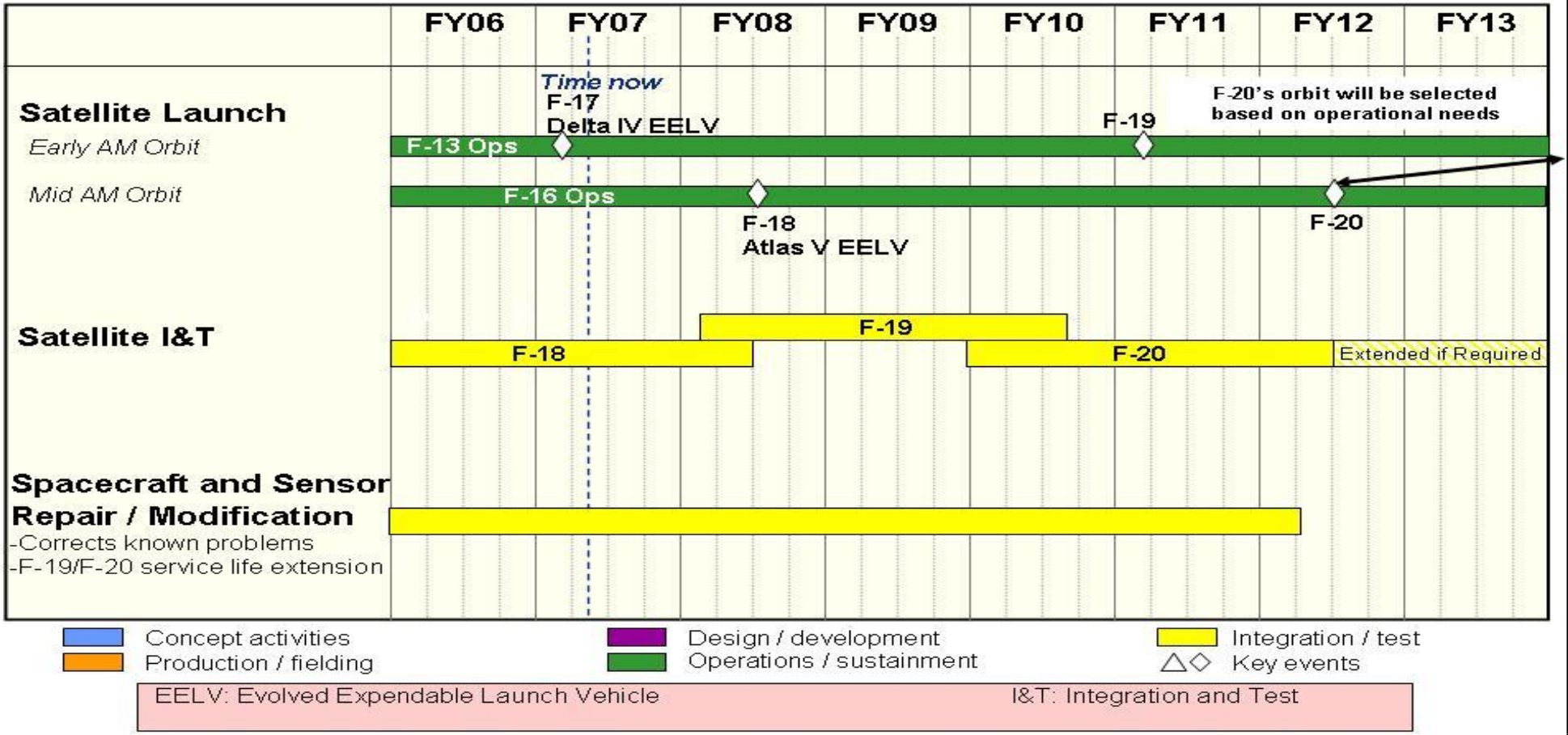

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305160F Defense Meteorological Satellite Program**	PROJECT NUMBER AND TITLE **4758 DMSP Program**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) F-17 Satellite Launch	1Q		
(U) F-18 Satellite Launch		3Q	

PE NUMBER: 0305164F
PE TITLE: NAVSTAR Global Positioning System User Equipment Space

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305164F NAVSTAR Global Positioning System User Equipment Space

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	130.254	154.581	127.513	156.797	186.304	89.658	88.796	Continuing	TBD
3028 Navstar GPS	130.254	154.581	127.513	156.797	186.304	89.658	88.796	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Global Positioning System (GPS) is a space-based radio positioning, navigation, and time distribution system. GPS User Equipment (UE) consists of standardized receivers, antennas, antenna electronics, etc., grouped together in sets to derive navigation and time information transmitted from GPS satellites. These receiver sets are used by DoD. RDT&E funds UE development and testing, studies and engineering to assist UE aircraft integration, software upgrades, product improvement studies, commercial GPS UE test and evaluation, and mission support.

Due to increasing military GPS dependence and emerging Electronic Warfare (EW) threat, the Navigation Warfare (Navwar) program was established to address EW solutions for GPS. Key elements of GPS Modernization include protecting U.S. military and allies' use of GPS, preventing hostile exploitation of GPS, and preserving civil use of GPS outside the area of operations (AO). Military GPS User Equipment (MGUE) will continue the proof of concept work accomplished by the Modernized User Equipment (MUE) effort which laid the foundation for the next generation of air, ground and space based GPS UE that will receive Y-code, Military (M)-code, and Coarse Acquisition code (YMCA).

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

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	133.574	93.267	67.001
(U)	Current PBR/President's Budget	130.254	154.581	127.513
(U)	Total Adjustments	-3.320		
(U)	Congressional Program Reductions		-1.886	
	Congressional Rescissions			
	Congressional Increases		63.200	
	Reprogrammings			
	SBIR/STTR Transfer	-3.320		

(U) Significant Program Changes:

FY08: $63.2M increase for Modernized User Equipment (MUE); FY09: $60.5M increase for MUE

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3028 Navstar GPS	130.254	154.581	127.513	156.797	186.304	89.658	88.796	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 (AO). Military GPS User Equipment (MGUE) will continue the proof of concept work accomplished by the Modernized User Equipment (MUE) effort which laid the foundation for the next generation of air, ground and space based GPS UE that will receive Y-code, Military (M)-code, and Coarse Acquisition code (YMCA).

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continue Advanced UE Technology efforts	9.454	9.600	9.500
(U) Continue Selective Availability Anti-Spoofing Module (SAASM)/GPS Receiver Applications Module(GRAM-SAASM) development	2.500	4.100	0.700
(U) Continue Integration, Test and Evaluation	2.300	2.050	2.500
(U) Continue System Engineering	1.100	7.300	13.000
(U) Continue Program Support	24.100	31.511	20.077
(U) Continue Modernized User Equipment (MUE/MGUE)	90.800	100.020	81.736
(U) Total Cost	130.254	154.581	127.513

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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) Operations and Maintenance (PE 0305164F, BA 1 - Operating Forces, SAG 11M, 13D)	2.711	5.100	6.102	6.829	4.266	4.366	4.471	Continuing	TBD
(U) Aircraft Procurement (PE 0305164F, BA 7, Aircraft Support Equipment, BP19)	9.831	12.508	15.837	19.530	20.027	22.176	21.537	Continuing	TBD
(U) Other Procurement (PE 0305164F, BP 83 - Electronics & Telecommunications Equipment, WSC 836730, P-62)	5.704	8.047	6.007	5.805	5.300	2.096	2.091	Continuing	TBD

(U) D. Acquisition Strategy

The GPS Wing acquisition strategy is to continue the development of GPS user equipment (UE) to support current warfighter activities and execute concept definition and technology risk reduction programs that will define and mature technologies needed for GPS Modernization. The GPS UE program will continue Selective Availability Anti-Spoofing Module (SAASM) receiver development /production and work with platforms/users to identify requirements and upgrade paths for GPS enhancements. Additionally, several anti-jam technology risk reduction efforts will be pursued to mature technologies and prepare for technology insertion to combat the potential threat that U.S. forces may be denied the use of GPS signals.

The Modernized User Equipment (MUE) program forms the foundation (Spiral 0) for the Military GPS User Equipment effort. The MGUE effort continues the Y-Code/M-code/Coarse Acquisition (YMCA) proof of concept development. MGUE meets ASD/NII GPS User Equipment policy memo and JROC capability development document requirements.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Rockwell (MAGR)	C/FPIF/FFP / CPAF		19.293	0.000		0.000		0.000		0.000	19.293	
DOE Sandia (SAASM)	MIPR	Kirtland AFB, NM	46.081	1.900	Jan-07	1.900	Jan-08	0.600	Jan-09	Continuing	TBD	
NAWC (SAASM)	MIPR		0.599	0.000		0.000		0.000		0.000	0.599	
Various (SAASM/GB-GRAM)	Various	Various	30.544	0.600	Jan-07	2.200	Jan-08	0.100	Jan-09	Continuing	TBD	
Various (Modernized UE)	Various	Various	151.290	90.800	Jan-07	100.020	Jan-08	81.736	Jan-09	Continuing	TBD	
Alliant Techsys Inc (SAASM) & Multiple NAVWAR PRDAs	C/CPFF & C/CPAF		18.222	0.000		0.000		0.000		0.000	18.222	
Holloman AFB (Various Integration)	Project Order	46th TG, Holloman AFB, NM	6.704	0.180	Jan-07	0.300	Jan-08	0.700	Jan-09	Continuing	TBD	
SPAWAR (Various Integration)			0.286	0.000		0.000		0.000		0.000	0.286	
General Dynamics (Various)	Time and Materials		1.810	0.000		0.000		0.000		0.000	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	28.108	0.000		0.000		0.000		0.000	28.108	
Raytheon (MAGR2K) (GRAM-SAASM)	PRDA		31.395	0.000		0.000		0.000		0.000	31.395	
Advanced UE Tech Invest	Various		4.646	0.000		0.000		0.000		0.000	4.646	
Receiver Technology	Various	AFRL - WPAFB, OH & KAFB, NM, SPAWAR, CECOM	17.758	1.804	Dec-06	0.800	Dec-07	2.200	Dec-08	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	62.431	7.650	Dec-06	8.800	Dec-07	7.300	Dec-07	Continuing	TBD	
Subtotal Product Development			512.648	102.934		114.020		92.636		Continuing	TBD	0.000
Remarks:												
(U) Support												
Overlook Sys (OASD/C3I)	C/CPFF	OASD, Arlington, VA	27.897	0.000		0.000		0.000		0.000	27.897	
Various	Various	Various	0.000	24.100	Jan-07	31.511	Jan-08	20.077	Jan-09		75.688	
Aerospace Corp (Technical Supt)	CPFF	Aerospace, Los Angeles, CA	25.996	0.000		0.000		0.000		Continuing	TBD	
PRC (Technical Supt)	Time and		0.714	0.000		0.000		0.000		0.000	0.714	

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305164F NAVSTAR Global Positioning System User Equipment Space**	**3028 Navstar GPS**

	Materials												
Miscellaneous (SE/Program Spt/Joint Navar Center (JNWC))	Various	Various	103.355	1.100	Jan-07	7.300	Jan-08	13.000	Jan-09	Continuing	TBD	
Various (Other Navwar Studies)	Various	Various	7.883	0.000		0.000		0.000		0.000	7.883	
Subtotal Support			165.845	25.200		38.811		33.077		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	21.803	2.120	Jan-07	1.750	Jan-08	1.800	Jan-09	Continuing	TBD	
Subtotal Test & Evaluation			53.790	2.120		1.750		1.800		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			732.283	130.254		154.581		127.513		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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

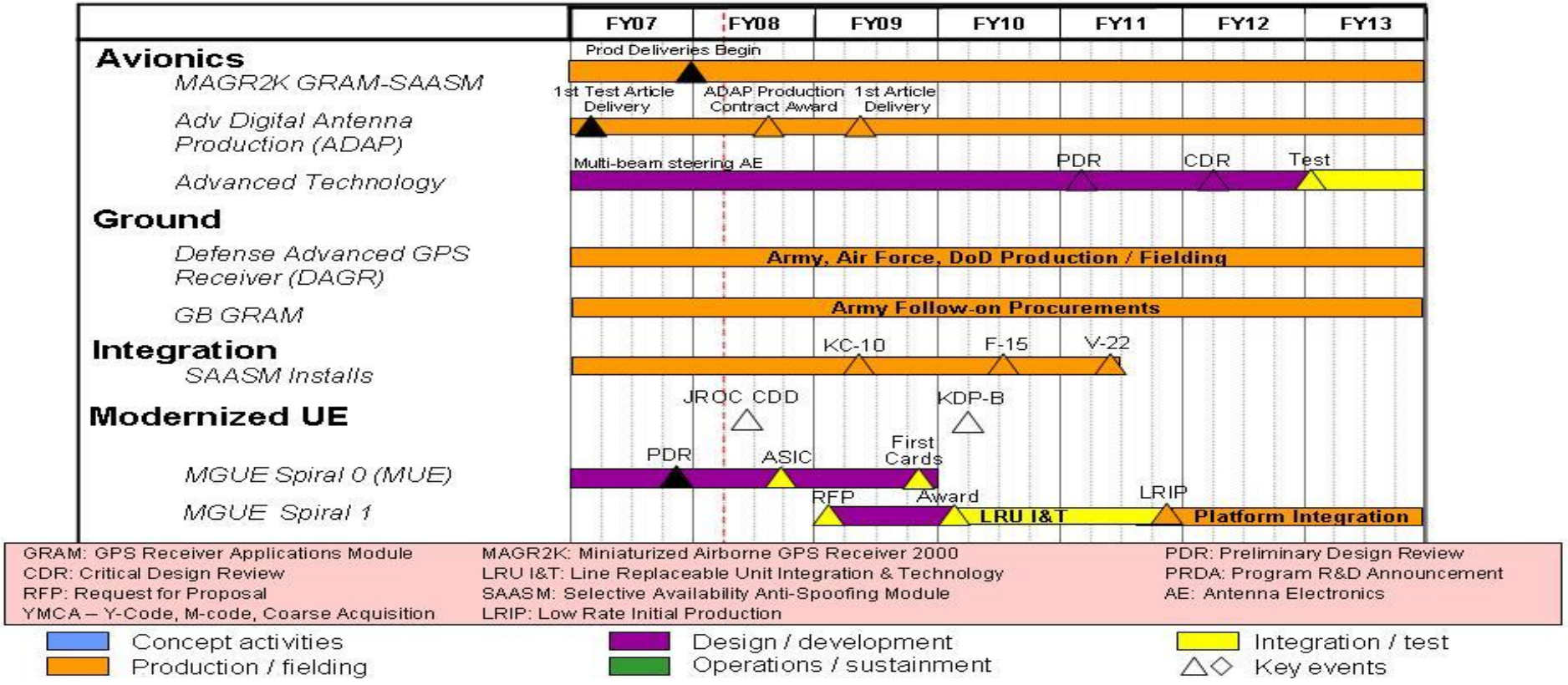

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305164F NAVSTAR Global Positioning System User Equipment Space**	PROJECT NUMBER AND TITLE **3028 Navstar GPS**

(U)	**Schedule Profile**	FY 2007	FY 2008	FY 2009
(U)	MUE System Requirements Review (SRR)	1Q		
(U)	MUE System Design Review (SDR)	2Q		
(U)	MUE Preliminary Design Review (PDR)	4Q		
(U)	ADAP First Production Order		3Q	
(U)	MUE ASIC Complete		3Q	
(U)	MUE Critical Design Review (CDR)		4Q	
(U)	Military GPS User Equipment (MGUE) Spiral 1 RFP release			1Q
(U)	ADAP First Article Delivery			2Q

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PE NUMBER: 0305165F
PE TITLE: NAVSTAR GPS (Space)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305165F NAVSTAR GPS (Space)

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	160.555	119.089	91.277	56.335	35.414	35.699	36.417	Continuing	TBD
3030 NAVSTAR GPS (Space & Control)	160.555	119.089	91.277	56.335	35.414	35.699	36.417	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 for GPS Block II satellites. It includes, but not limited to: satellite development, training simulators, Integrated Logistics Support (ILS) products, ground control segment development, procurement, and operation; sustaining engineering; space and ground segments upgrades; and R&D efforts to support GPS Block II system deployment including efforts to provide anti-jam capability through increased Military(M)-Code signal power.

GPS Block IIR-M satellites are currently being launched. GPS Block IIF satellites are being developed to include a second and third civil signal (L2C and L5) and a new military signal (M-code).

Operational Control System (OCS) will deliver control segment capabilities to support Block IIF satellites as well as the existing constellation of Block IIA/IIR/IIR-M satellites. The full capabilities inherent in the modernized Block IIR-M and IIF satellites will be provided in increment 1 of the next generation GPS control segment (OCX) which is funded in Program Element 0603421F, 0603427F and 0603423F.

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

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	176.721	120.931	92.626
(U)	Current PBR/President's Budget	160.555	119.089	91.277
(U)	Total Adjustments	-16.166	-1.842	
(U)	Congressional Program Reductions		-1.842	
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings	-10.000		
	SBIR/STTR Transfer	-6.166		
(U)	Significant Program Changes:			

FY07: $10M reprogramming for higher Air Force priorities

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3030 NAVSTAR GPS (Space & Control)	160.555	119.089	91.277	56.335	35.414	35.699	36.417	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 for GPS Block II satellites. It includes, but not limited to: satellite development, training simulators, Integrated Logistics Support (ILS) products, ground control segment development, procurement, and operation; sustaining engineering; space and ground segments upgrades; and R&D efforts to support GPS Block II system deployment including efforts to provide anti-jam capability through increased Military(M)-Code signal power.

GPS Block IIR-M satellites are currently being launched. GPS Block IIF satellites are being developed to include a second and third civil signal (L2C and L5) and a new military signal (M-code).

Operational Control System (OCS) will deliver control segment capabilities to support Block IIF satellites as well as the existing constellation of Block IIA/IIR/IIR-M satellites. The full capabilities inherent in the modernized Block IIR-M and IIF satellites will be provided in increment 1 of the next generation GPS control segment (OCX) which is funded in Program Element 0603421F, 0603427F and 0603423F.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continue system engineering, spectrum/frequency management and program operations, to include Systems Engineering and Integration	27.742	26.381	21.139
(U) Continue IIF satellite development	16.259	2.400	0.000
(U) Continue IIR Satellite development/L-5 Signal	5.971	0.000	0.000
(U) Continue Operational Control Segment (OCS) development/modernization	110.583	90.308	70.138
(U) Total Cost	160.555	119.089	91.277

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) PE 0603421F Global Positioning System (Project 644993; BA-4; R-38)	291.556	482.845	0.000	0.000	0.000	0.000	0.000	0.000	774.401
(U) PE 0305265F GPS III Space	0.000	0.000	420.342	284.973	262.810	299.210	247.075	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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)

	Segment (Project 67A019; BA-4; R-XX)									
(U)	PE 0603423F Global Positioning System III - Operational Control Segment (Project 64A021; BA-04; R-XX)	0.000	0.000	2.975	236.734	359.524	330.812	310.996	Continuing	TBD
(U)	PE 0603427F GPS Operational Control Segment Backwards Compatibility (Project 64A022; BA-04; R-XX)	0.000	0.000	304.360	212.962	0.000	0.000	0.000	0.000	517.322
(U)	Other APPN									
(U)	Operations and Maintenance: PE 0305165F, BA-01; SAG 11M,13D	62.936	77.264	83.326	92.168	98.214	100.103	102.492	Continuing	TBD
(U)	Missile Procurement: PE 0305165F; BA-05; P-22, 23	84.576	207.826	110.443	167.801	355.160	66.553	297.178	Continuing	TBD
(U)	Missile Procurement: PE 0305265F; BA-04; P-XX	0.000	0.000	0.000	0.000	139.484	650.029	482.004	Continuing	TBD
(U)	Other Procurement: PE 0305165F, BP 83, WSC 836790, P-70; WSC 836740, P-71; BP 86, WSC 86190A, P-62	11.087	11.599	25.111	10.802	18.215	27.624	20.470	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).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Applied Research Labs	MIPR	Various	3.649	0.000		0.000		0.000		0.000	3.649	
OCS Development & IIF Modernization (F0470196C0025)	FPAF/CPAF/CPFF	Boeing, Seal Beach, CA	1,165.742	107.819	Nov-06	88.281	Nov-07	69.208	Nov-08	Continuing	TBD	1,944.179
IIF Development (F047019C0025)	FPAF/CPAF/CPFF	Boeing, Seal Beach, CA	54.813	16.259	Nov-06	2.400	Nov-07	0.000		0.000	73.472	77.600
IIR Modernization Development (F0470100C0006)	CPIF	Lockheed Martin, King of Prussia, PA	74.786	5.971		0.000		0.000		0.000	80.757	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	8.119	2.764	Nov-06	2.027	Nov-07	0.930	Nov-08	Continuing	TBD	TBD
EELV Mission Unique Svcs & Clock Development	MIPR/Other SPO Contracts	NRL & Contractors	26.477	0.000		0.000		0.000		Continuing	TBD	TBD
Stewardship	MIPR	Various	13.333	0.000		0.000		0.000		Continuing	TBD	TBD
Accuracy Improvement Initiative (AII)	FPA/CPAF/CPFF	Boeing, Seal Beach, CA	10.000	0.000		0.000		0.000		0.000	10.000	
Subtotal Product Development			1,388.686	132.813		92.708		70.138		Continuing	TBD	TBD
Remarks:												
(U) Support												
System Engineering/Support	Various	FFRDC (Aerospace/Mitre), SETA	42.534	19.030	Nov-06	18.958	Nov-07	14.700	Nov-08	Continuing	TBD	TBD
GPS Modernization Tech Spt	Various	Various	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			89.014	19.030		18.958		14.700		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Flex Power Testing (F0470100C0006)	FPAF/CPAF/CPFF	Lockheed Martin, King of Prussia, PA & various gov't activities	4.588	0.000		0.000		0.000		Continuing	TBD	TBD
Subtotal Test & Evaluation			4.588	0.000		0.000		0.000		Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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										
	Management Support	Various	FFRDC								
		SETA & FFRDCs	(Aerospace) & SETA	19.947	8.712	Nov-06	7.423	6.439	Continuing	TBD	TBD
	Subtotal Management			19.947	8.712		7.423	6.439	Continuing	TBD	TBD
	Remarks:										
(U)	Total Cost			1,502.235	160.555		119.089	91.277	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305165F NAVSTAR GPS (Space)	PROJECT NUMBER AND TITLE 3030 NAVSTAR GPS (Space & Control)

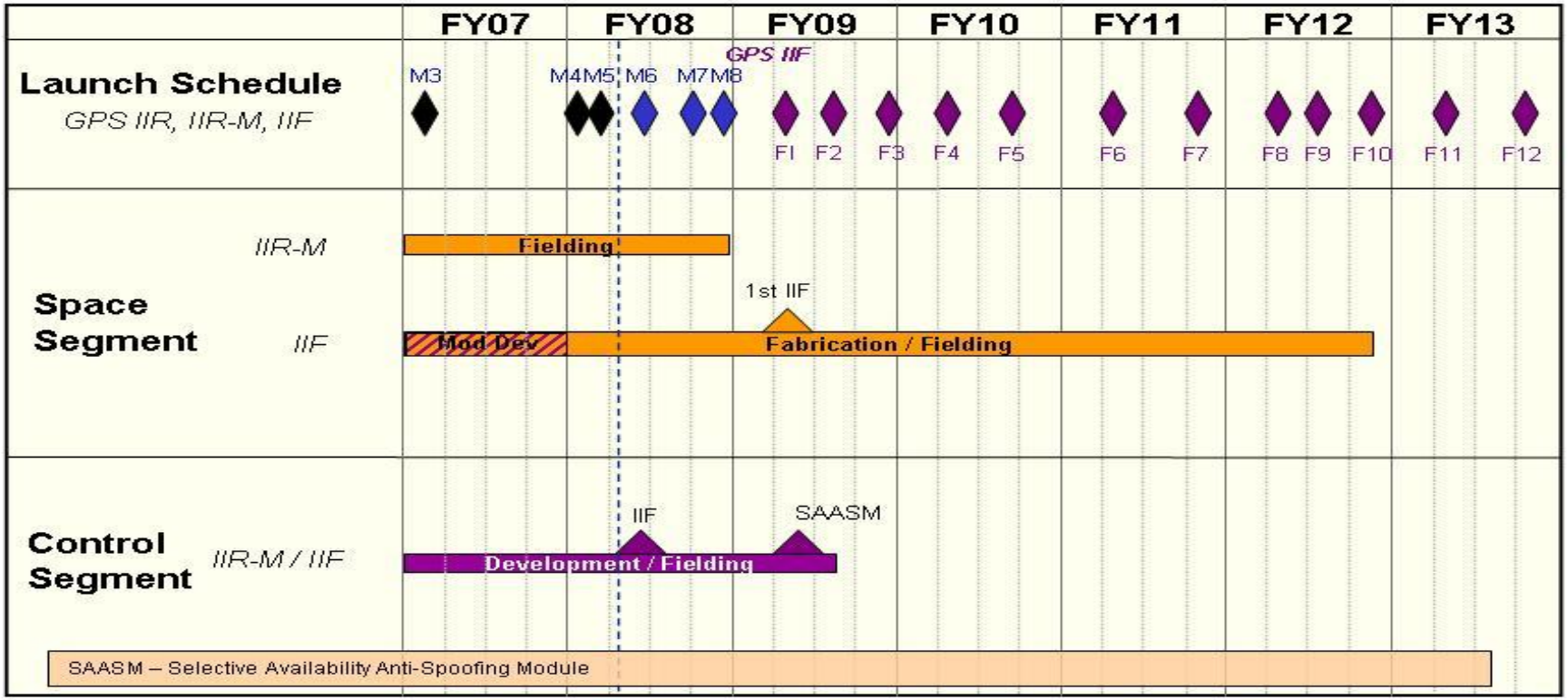

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305165F NAVSTAR GPS (Space)	PROJECT NUMBER AND TITLE: 3030 NAVSTAR GPS (Space & Control)

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) Launch, Anomaly resolution & Disposal Operations (LADO) release 1 delivery to site	1Q		
(U) SAASM development Formal Qualification Test (FQT)	3Q		
(U) IIF flight software development complete	4Q		
(U) SAASM system test complete		3Q	
(U) GPS Block IIF development complete		4Q	
(U) LADO release 2 complete		4Q	
(U) SAASM capability complete			2Q

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PE NUMBER: 0305173F
PE TITLE: Space & Missile Test & Evaluation Center

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305173F Space & Missile Test & Evaluation Center

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	2.526	3.070	1.985	1.660	1.685	1.718	1.752	Continuing	TBD
A014	R&D Space and Missile Operations	2.526	3.070	1.985	1.660	1.685	1.718	1.752	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The RDT&E efforts within this program focuses on the Multi-Mission Satellite Operations Center (MMSOC), which Research and Development (R&D) Space and Missile Operations (RDSMO) program started in FY07. The main objective of MMSOC is to transition R&D space vehicle technology with residual military utility to operational status for immediate real world support and to perform initial operational utility assessment for future acquisition programs. MMSOC is a multiple-mission operation system that uses standard software to (1) perform satellite command and control (C2) in support of launch requirements; (2) Develop/test tactics, techniques, procedures and concepts in order to conduct residual operations for R&D satellites; (3) provide a satellite C2 spiral evolution resource for RDT&E of new systems and concepts; and (4) deliver new operational flexibility for currently-flying assigned satellites. MMSOC leverages demonstrated RDT&E experience to expand the capabilities and proven technologies currently in use by other RDSMO facilities. MMSOC also supports all RDSMO-sustained space vehicles through existing resources. In addition, it adds the capability to rapidly support operational systems.

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 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305173F Space & Missile Test & Evaluation Center

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	4.657	3.089	2.014
(U)	Current PBR/President's Budget	2.526	3.070	1.985
(U)	Total Adjustments	-2.131		
(U)	Congressional Program Reductions		-0.190	
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings	-2.000		
	SBIR/STTR Transfer	-0.131		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305173F Space & Missile Test & Evaluation Center	PROJECT NUMBER AND TITLE: A014 R&D Space and Missile Operations	

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
A014	R&D Space and Missile Operations	2.526	3.070	1.985	1.660	1.685	1.718	1.752	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The RDT&E efforts within this program focuses on the Multi-Mission Satellite Operations Center (MMSOC), which Research and Development (R&D) Space and Missile Operations (RDSMO) program started in FY07. The main objective of MMSOC is to transition R&D space vehicle technology with residual military utility to operational status for immediate real world support and to perform initial operational utility assessment for future acquisition programs. MMSOC is a multiple-mission operation system that uses standard software to (1) perform satellite command and control (C2) in support of launch requirements; (2) Develop/test tactics, techniques, procedures and concepts in order to conduct residual operations for R&D satellites; (3) provide a satellite C2 spiral evolution resource for RDT&E of new systems and concepts; and (4) deliver new operational flexibility for currently-flying assigned satellites. MMSOC leverages demonstrated RDT&E experience to expand the capabilities and proven technologies currently in use by other RDSMO facilities. MMSOC also supports all RDSMO-sustained space vehicles through existing resources. In addition, it adds the capability to rapidly support operational systems.

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 2007	FY 2008	FY 2009
(U) Multi-Mission Satellite Operations Center (MMSOC) development/integration	2.526	3.070	1.985
(U) Total Cost	2.526	3.070	1.985

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) OPAF, Electronics & Telecom Equipment (BA 03, PE	3.741	7.714	10.045	3.498	3.550	3.621	3.692	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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)

0305173F, P-48)

(U) D. Acquisition Strategy

The AF uses the competitively-awarded Engineering, Development, and Sustainment (EDS) Contract, managed by Space and Missile System Center, Space Development & Test Wing (formerly Detachment 12), to modernize and sustain RDSMO on a non-interference basis as it continues to support RDT&E and other designated users. The AF will use the competitively-awarded EDS Follow-on Contract to develop MMSOC.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Engineering, Development, and Sustainment (EDS) Follow-on Contract	C/CPAF	TBD/Kirtland, Schreiver AFB		0.966	Dec-06	1.469	Nov-07	0.845	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.966		1.469		0.845		Continuing	TBD	TBD
Remarks:												
(U) Support												
Program Support (SETA, SPO ops)	Various	Various		1.006	Dec-06	1.301	Dec-07	0.840	Dec-08	Continuing	TBD	TBD
Subtotal Support			0.000	1.006		1.301		0.840		Continuing	TBD	TBD
Remarks:												
(U) Product Development												
System Test and Engineering (STEC) Contract	C/CPAF	Kirtland, AFB		0.554	Dec-06	0.300	Nov-07	0.300	Oct-08	Continuing	TBD	
Subtotal Product Development			0.000	0.554		0.300		0.300		Continuing	TBD	0.000
Remarks:												
(U) Total Cost			0.000	2.526		3.070		1.985		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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

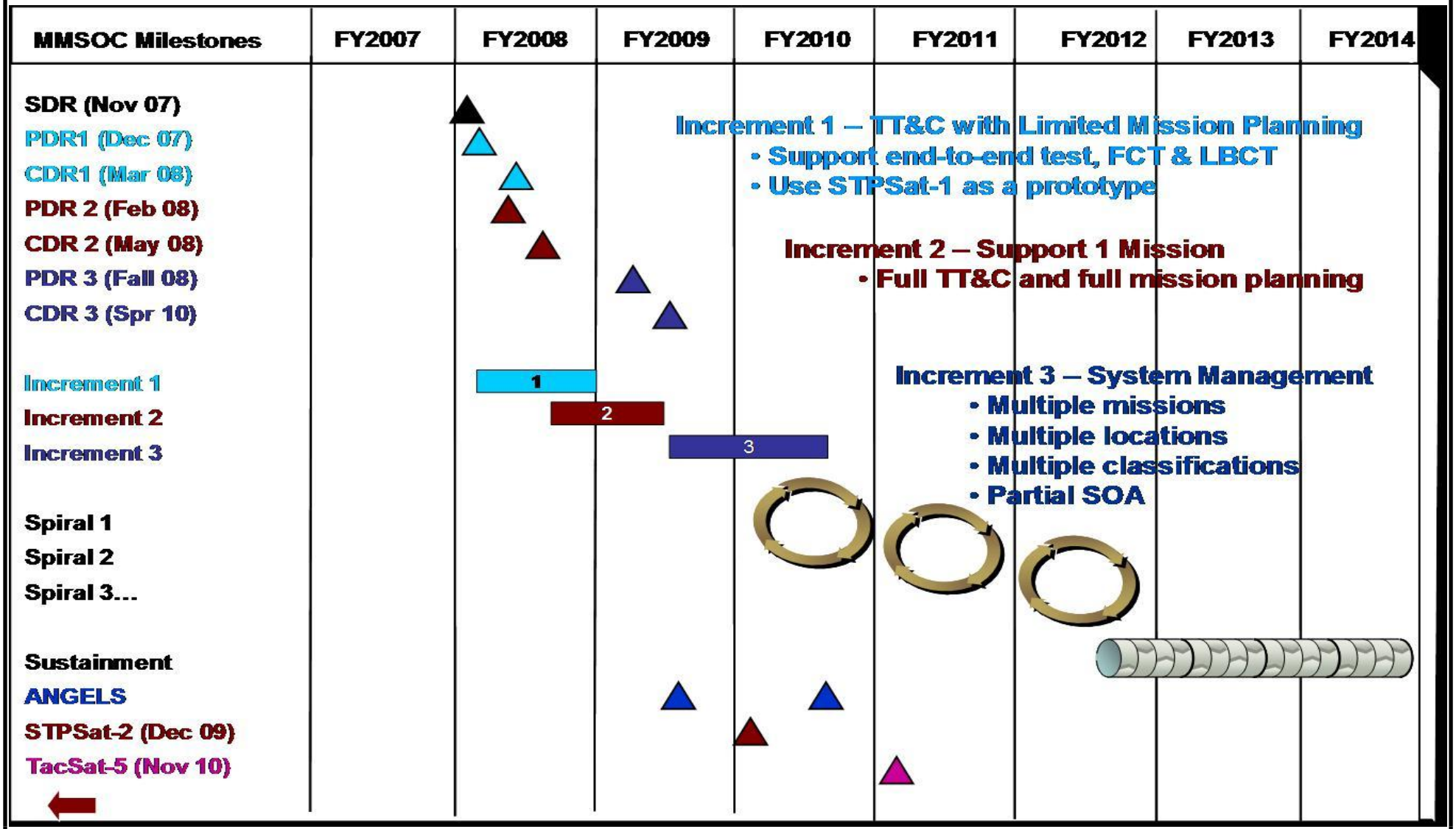

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305173F Space & Missile Test & Evaluation Center	PROJECT NUMBER AND TITLE: A014 R&D Space and Missile Operations

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) SDR		1Q	
(U) Increment 1-TT&C with Limited Mission Planning		4Q	
(U) Increment 2-Support 1 Mission			2Q

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PE NUMBER: 0305174F
PE TITLE: SPACE WARFARE CENTER

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305174F SPACE WARFARE CENTER

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.703	1.667	3.003	3.055	3.085	3.145	3.208	Continuing	TBD
A011	Space Analysis and Application Development	0.703	1.667	3.003	3.055	3.085	3.145	3.208	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Located at Schriever Air Force Base, Colorado, the Space Innovation and Development Center develops, evaluates, tests, and integrates space application and utility concepts, as well as new technologies, while providing combat effects to warfighters, such as aid in mission planning of GPS aided/guided munitions. Its innovation, education, and training activities foster solutions to operational deficiencies and enhance the integration of space systems into Air Force operations, thereby enabling service and joint warfighters to realize the full potential of existing and planned space capabilities.

The Space Analysis and Application Development project develops and modifies modeling and simulation tools that Air Force Space Command's Space Analysis Center uses for operations research, military utility analyses, tradeoff studies, and other evaluations of space mission areas to guide planning, programming, requirements generation, analyses of alternatives, and other activities. Development activities incorporate changes in fielded and projected space operational capabilities, as well as technical improvements, into the group's software tools to ensure their data and technology remain current.

This effort is in Budget Activity 7, Operational System Development, because it develops and modifies software models for fielded analysis systems.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.723	1.678	3.047
(U)	Current PBR/President's Budget	0.703	1.667	3.003
(U)	Total Adjustments	-0.020	-0.011	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.011	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.020		
(U)	Significant Program Changes:			
	None			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
A011	Space Analysis and Application Development	0.703	1.667	3.003	3.055	3.085	3.145	3.208	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 Innovation and Development Center develops, evaluates, tests, and integrates space application and utility concepts, as well as new technologies, while providing combat effects to warfighters, such as aid in mission planning of GPS aided/guided munitions. Its innovation, education, and training activities foster solutions to operational deficiencies and enhance the integration of space systems into Air Force operations, thereby enabling service and joint warfighters to realize the full potential of existing and planned space capabilities.

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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 2007	FY 2008	FY 2009
(U) Model modification	0.324	0.803	1.438
(U) Verification of model changes	0.152	0.332	0.602
(U) Validation of results	0.227	0.532	0.963
(U) Total Cost	0.703	1.667	3.003

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, Air Force (Weapon System Code 832070, Intelligence Communications Equipment)*	0.540	0.425	0.462	0.474	0.481	0.488	0.495	Continuing	TBD

*Additional SIDC Other Procurement, Air Force funding (not shown) supports efforts unrelated to Space Analysis Center development activities

(U) D. Acquisition Strategy

This effort was awarded under a fixed price contract.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Develop/modify software tools and models	C/FP	Various	1.157	0.703	Jan-07	1.667	Apr-08	3.003	Apr-09	Continuing	TBD	
Subtotal Product Development			1.157	0.703		1.667		3.003		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			1.157	0.703		1.667		3.003		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305174F SPACE WARFARE CENTER	PROJECT NUMBER AND TITLE A011 Space Analysis and Application Development

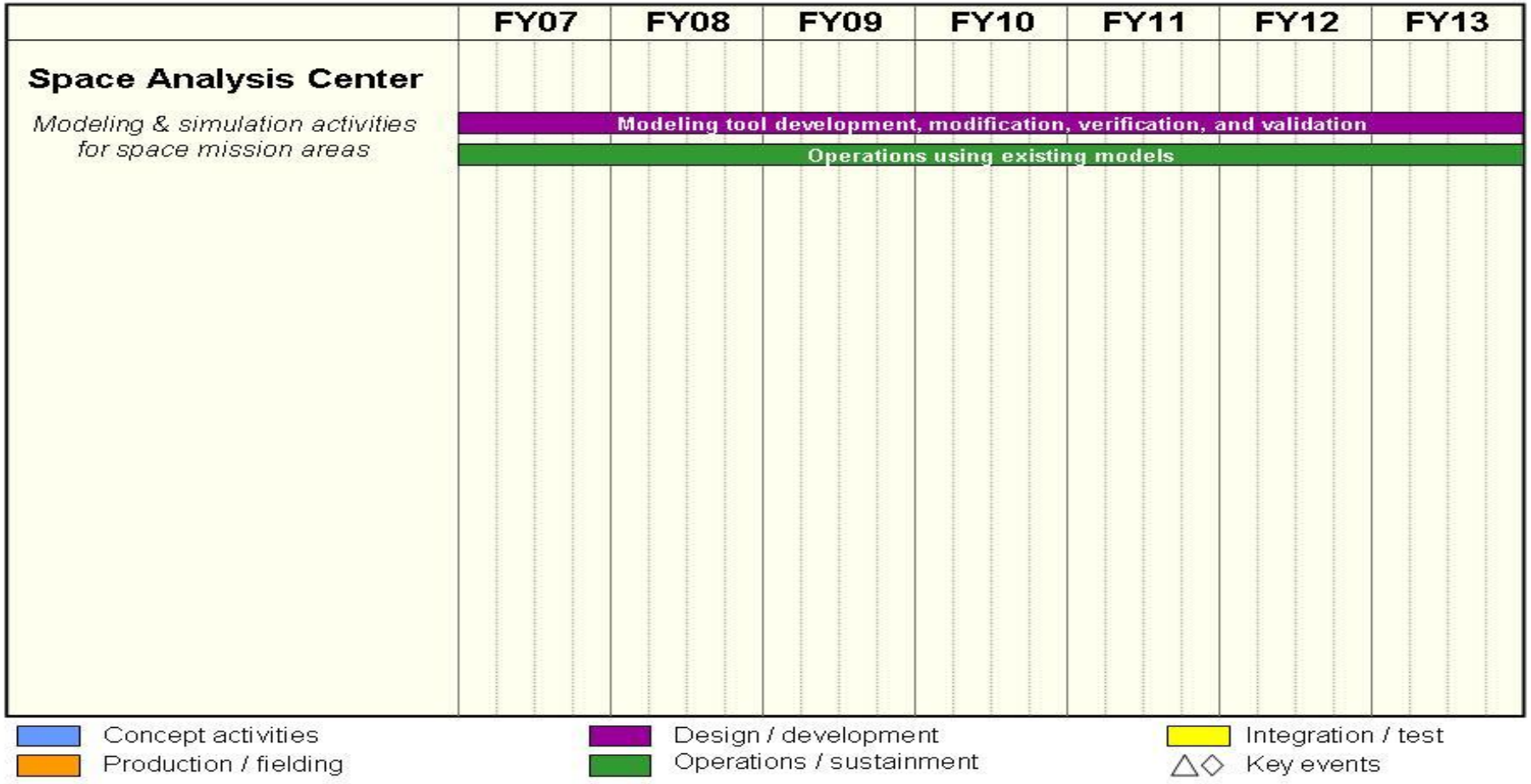

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305174F SPACE WARFARE CENTER	PROJECT NUMBER AND TITLE: A011 Space Analysis and Application Development

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(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 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305182F Spacelift Range System

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	45.633	27.095	12.376	10.157	10.276	10.476	10.686	Continuing	TBD
4137	Launch and Test Range System (LTRS) Modernization	45.633	27.095	12.376	10.157	10.276	10.476	10.686	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Eastern Range (ER) at Patrick Air Force Base (AFB)/Cape Canaveral Air Force Station, FL, and the Western Range (WR) at Vandenberg AFB, CA, make up the Spacelift Range System (SLRS). They provide tracking, telemetry, communications, flight analysis, and other capabilities necessary to safely conduct: national security, civil, and commercial spacelift operations; ballistic missile and missile defense evaluations; and aeronautical and guided weapons tests. Reliability of aging range equipment is a major issue. It forces the AF to use redundant assets during launches to ensure range availability, increasing operations and maintenance costs.

The AF is addressing range deficiencies through two contracts. First, the Range Standardization and Automation (RSA) Phase IIA contract modernizes the control/display and communications segments at both ranges. Systems being modernized include: weather; communications (voice, video, data, and timing; network management system; and digital telemetry); planning and scheduling; and flight operations and analysis. Second, the SLRS Contract (SLRSC) modernizes command, telemetry, and radar instrumentation at both ranges and supports activation of the WR Operations Control Center. It also provides overall systems engineering and architecture management, follow-on modernization of the control/display and communications segments, and system level testing to complete the modernization effort. Some examples of the most recent deliveries on these two contracts include: automated planning and network management systems; digital telemetry systems; and optical system upgrades. RSA IIA ends in mid FY09 using OPAF funding. FY09 funds continue the SLRSC modernization, system engineering, testing and architectural management efforts.

These upgrades to fielded systems are categorized as Budget Activity 7, Operational Systems Development.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	38.900	27.300	12.559
(U)	Current PBR/President's Budget	45.633	27.095	12.376
(U)	Total Adjustments	6.733	-0.205	
(U)	Congressional Program Reductions	-0.003	-0.032	
	Congressional Rescissions		-0.173	
	Congressional Increases			
	Reprogrammings	7.000		
	SBIR/STTR Transfer	-0.264		
(U)	Significant Program Changes:			

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305182F Spacelift Range System

FY07: AF added $7M to address RSA IIA developmental and operational acceptance issues

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4137	Launch and Test Range System (LTRS) Modernization	45.633	27.095	12.376	10.157	10.276	10.476	10.686	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)/Cape Canaveral Air Force Station, FL, and the Western Range (WR) at Vandenberg AFB, CA, make up the Spacelift Range System (SLRS). They provide tracking, telemetry, communications, flight analysis, and other capabilities necessary to safely conduct: national security, civil, and commercial spacelift operations; ballistic missile and missile defense evaluations; and aeronautical and guided weapons tests. Reliability of aging range equipment is a major issue. It forces the AF to use redundant assets during launches to ensure range availability, increasing operations and maintenance costs.

The AF is addressing range deficiencies through two contracts. First, the Range Standardization and Automation (RSA) Phase IIA contract modernizes the control/display and communications segments at both ranges. Systems being modernized include: weather; communications (voice, video, data, and timing; network management system; and digital telemetry); planning and scheduling; and flight operations and analysis. Second, the SLRS Contract (SLRSC) modernizes command, telemetry, and radar instrumentation at both ranges and supports activation of the WR Operations Control Center. It also provides overall systems engineering and architecture management, follow-on modernization of the control/display and communications segments, and system level testing to complete the modernization effort. Some examples of the most recent deliveries on these two contracts include: automated planning and network management systems; digital telemetry systems; and optical system upgrades. RSA IIA ends in mid FY09 using OPAF funding. FY09 funds continue the SLRSC modernization, system engineering, testing and architectural management efforts.

These upgrades to fielded systems are categorized as Budget Activity 7, Operational Systems Development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Complete RSA Phase IIA development, test, and evaluation of planning/ scheduling; communications; weather; and flight operations/analysis systems. Complete integration of systems into WR Operations Control Center.	34.121	13.100	
(U) Continue SLRSC systems engineering, instrumentation modernization, and systems integration. Continue development, test, and evaluation of command destruct, telemetry, and radar instrumentation and local control interfaces. Continue activation of operational centers in WR Operations Control Center.	9.785	13.495	11.876
(U) Provide program support, to include System Program Office operations, SETA, FFRDC, and Systems Engineeing and Integration.	0.759	0.500	0.500
(U) Funds added by Congress for California Space Authority (CSA) to continue California Space Infrastructure Program.	0.968		
(U) Total Cost	45.633	27.095	12.376

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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) C. Other Program Funding Summary ($ in Millions)

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) OPAF (Spacelift Range System Space, P-65, BA 03)	117.310	121.321	101.983	104.164	105.444	107.520	109.648	Continuing	TBD
(U) OPAF (Spares and Repair Parts, P-103, BA 05)	2.793	2.912	2.957	3.000	3.047	3.106	3.167	Continuing	TBD

(U) D. Acquisition Strategy

The AF is using two competitively awarded, complementary contracts, managed by the Space and Missile Systems Center, to modernize the ranges on a minimal-interference basis as they continue to support operational launches and tests.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
RSA Phase IIA	C/CPAF	Lockheed Martin, Santa Maria, CA	288.401	34.121	Oct-06	13.100	Oct-07			0.000	335.622	349.469
SLRSC	C/CPAF	ITT Industries, Cape Canaveral, FL	135.116	9.785	Oct-06	13.495	Oct-07	11.876	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			423.517	43.906		26.595		11.876		Continuing	TBD	TBD
Remarks:												
(U) Support												
SPO Program Support (FFRDC, SETA, SPO Ops)	Various	Various	35.112	0.759	Oct-06	0.500	Oct-07	0.500	Oct-08	Continuing	TBD	TBD
California Space Infrastructure Program	Various	Various	33.385	0.968						Continuing	TBD	TBD
Subtotal Support			68.497	1.727		0.500		0.500		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			492.014	45.633		27.095		12.376		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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

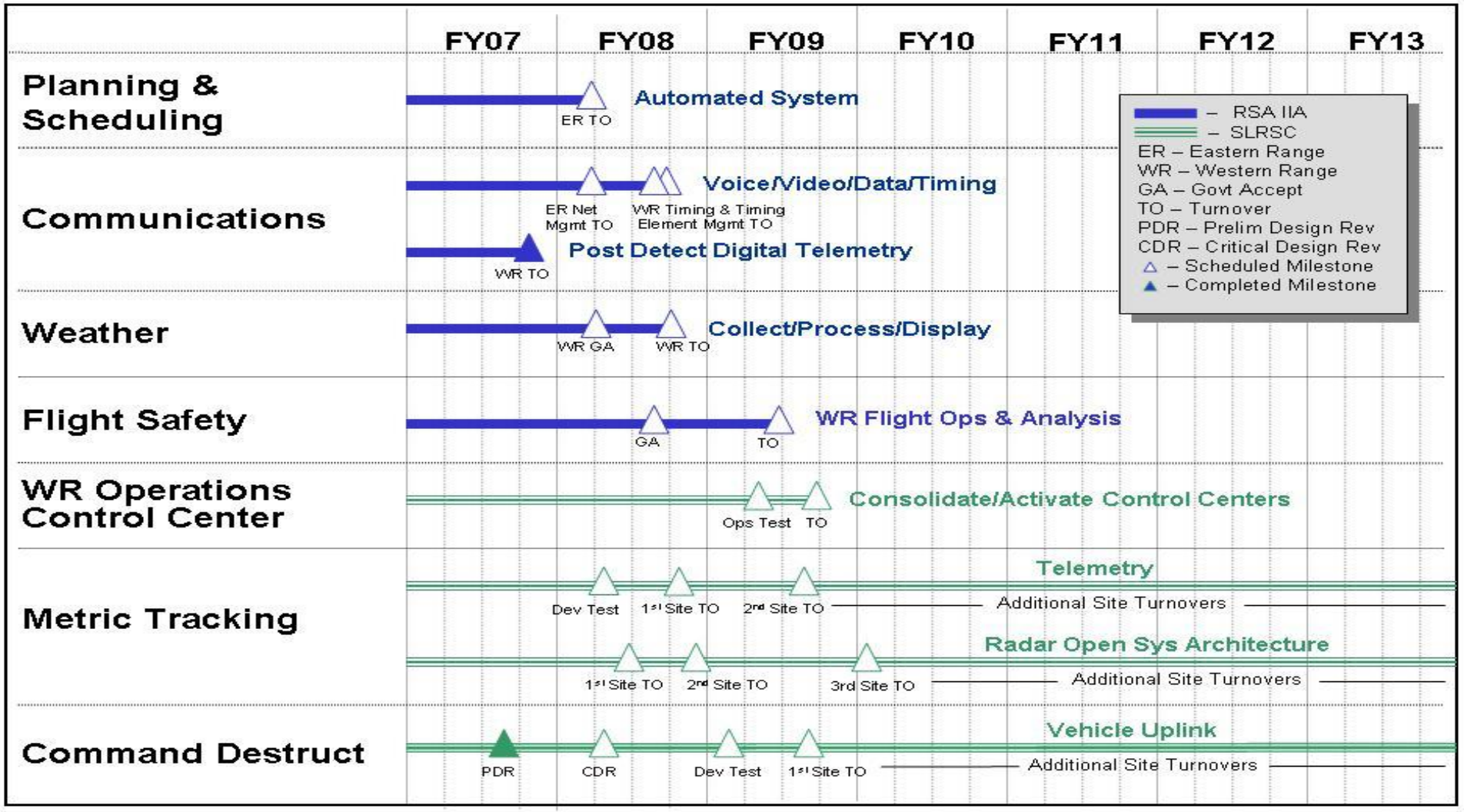

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305182F Spacelift Range System**	PROJECT NUMBER AND TITLE **4137 Launch and Test Range System (LTRS) Modernization**

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) RSA Phase IIA			
(U) - Planning & Scheduling ER Operational (Ops) Turnover		1Q	
(U) - Communications (Post Detect Digital Telemetry) WR Ops Turnover	4Q		
(U) - Communications (Net Mgmt System) ER Final Ops Turnover		1Q	
(U) - Communications (Timing) WR Final Ops Turnover		3Q	
(U) - Communications (Timing Element Mgmt System) WR Final Ops Turnover		3Q	
(U) - Weather WR Final Govt Acceptance		2Q	
(U) - Weather WR Final Ops Turnover		4Q	
(U) - Flight Safety (WR Flight Ops & Analysis) Govt Acceptance		3Q	
(U) - Flight Safety (WR Flight Ops & Analysis) Ops Turnover			2Q
(U) - Contract Closeout			3Q
(U) SLRS Contract			
(U) - WR Ops Control Center (WROCC) Operational Test Complete			2Q
(U) - WR Ops Control Center (WROCC) Final Turnover			3Q
(U) - Metric Tracking (Telemetry) Developmental Test Complete		2Q	
(U) - Metric Tracking (Telemetry) 1st Site Turnover		4Q	
(U) - Metric Tracking (Telemetry) 2nd Site Turnover			3Q
(U) - Metric Tracking (Radar Open System Architecture) 1st Site Turnover		2Q	
(U) - Metric Tracking (Radar Open System Architecture) 2nd Site Turnover		4Q	
(U) - Command Destruct (Vehicle Uplink) Preliminary Design Review	3Q		
(U) - Command Destruct (Vehicle Uplink) Critical Design Review		2Q	
(U) - Command Destruct (Vehicle Uplink) Developmental Test Complete			1Q
(U) - Command Destruct (Vehicle Uplink) 1st Site Turnover			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 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305193F INTEL SPT TO INFO OPS

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	1.290	5.927	1.237	1.261	1.289	1.316	1.349	Continuing	TBD
4871 Information Operations Technology	1.290	5.927	1.237	1.261	1.289	1.316	1.349	Continuing	TBD

In FY07, $2.495M for the Joint Integrative Analysis and Planning Capability (JIAPC) was reprogrammed to a DoD PE.

Beginning in FY08 the funding for the JIAPC was transferred to PE 33166D managed by JFCOM.

In FY08, Congress added $4.8M for a classified program.

(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 situation 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; develops appropriate response options and detailed courses-of-action in defense of protected networks; catalogs foreign GNO specific intrusion threat information to DoD's command and control infrastructure in near real-time to include intentions and capabilities. JTID is interoperable with law enforcement and allied communities of interest.

This program is funded under BA-7, Operational Systems Development, because it supports intelligence efforts that involve engineering development.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	3.785	1.134	1.247
(U)	Current PBR/President's Budget	1.290	5.927	1.237
(U)	Total Adjustments	-2.495	4.793	
(U)	Congressional Program Reductions	0.000		
	Congressional Rescissions	0.000	0.007	
	Congressional Increases		4.800	
	Reprogrammings	-2.495		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

Beginning in FY08, the funding for JIAPC was transferred to PE 0303166D managed by JFCOM.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305193F INTEL SPT TO INFO OPS**

In FY08, Congress added $4.8M for a classified program.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4871	Information Operations Technology	1.290	5.927	1.237	1.261	1.289	1.316	1.349	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 situation 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; develops appropriate response options and detailed courses-of-action in defense of protected networks; catalogs foreign GNO specific intrusion threat information to DoD's command and control infrastructure in near real-time to include intentions and capabilities. JTID is interoperable with law enforcement and allied communities of interest.

This program is funded under BA-7, Operational Systems Development, because it supports intelligence efforts that involve engineering development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continue modifications to near real-time database that contains foreign CNO specific threat information to DoD's command and control infrastructure, to include intentions and capabilities. Continue development of tools for production of automated intelligence reports on computer network attacks against US systems in accordance with CJCSM 6510.03. Continue to develop better incident assessments and analysis modules to improve means of supplying appropriate response options and courses-of-action in defense of DoD networks.	1.290	5.927	1.237
(U) Total Cost	1.290	5.927	1.237

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

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

(U) D. Acquisition Strategy

The 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.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
JTID CNO Analyses	T&M	Northrop Grumman IT-TASC, Lorton VA		1.290	Dec-06	5.927	Dec-07	1.237	Dec-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	1.290		5.927		1.237		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	1.290		5.927		1.237		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305193F INTEL SPT TO INFO OPS	PROJECT NUMBER AND TITLE: 4871 Information Operations Technology

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Exhibit R-4, RDT&E Program Schedule Profile	Date: August 2007	
Appropriation/Budget Activity	PE 35193F	Project Name: JTID

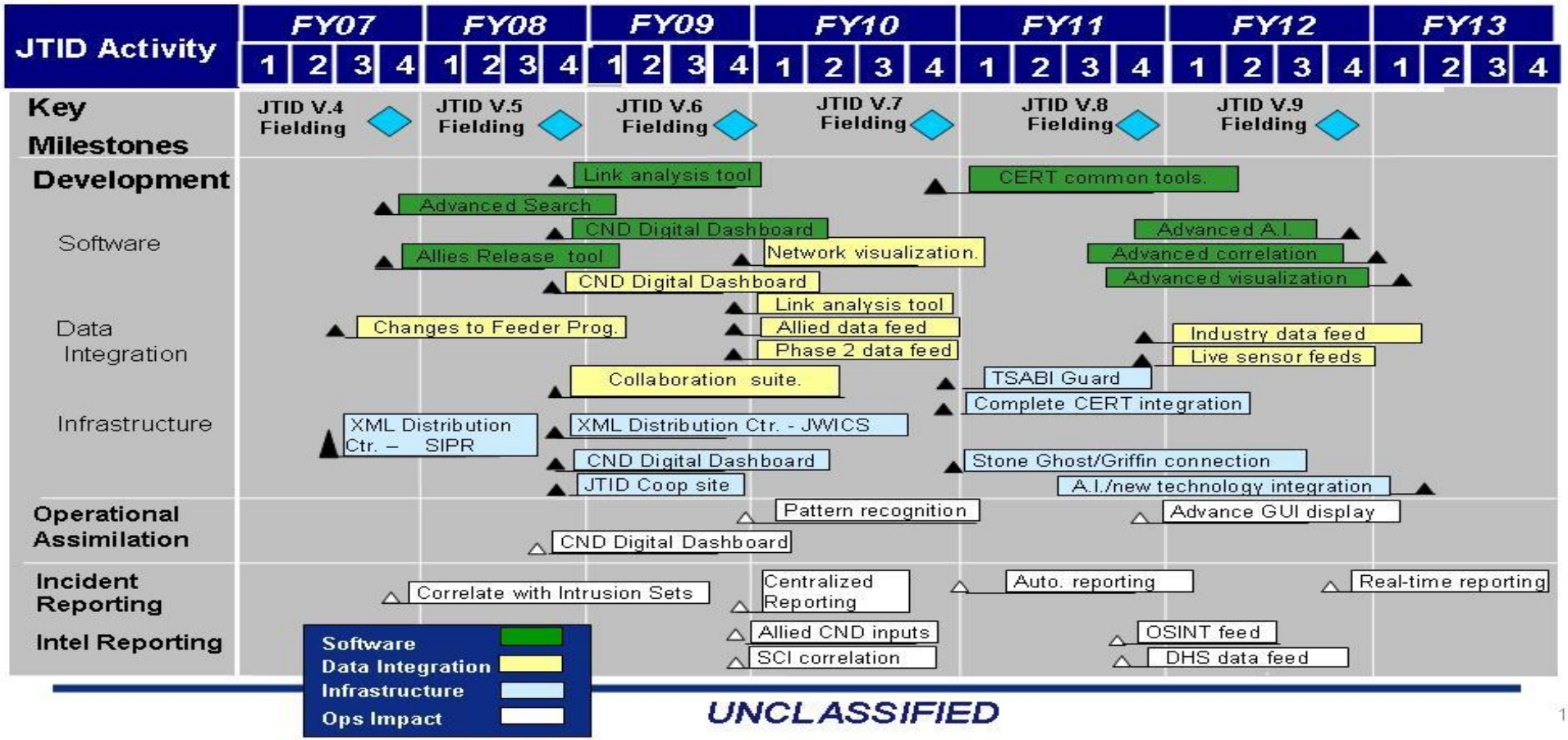

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305193F INTEL SPT TO INFO OPS	PROJECT NUMBER AND TITLE: 4871 Information Operations Technology

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Fielding of V.4	4Q		
(U) Fielding of V.5		4Q	
(U) Fielding of V.6			4Q

PE NUMBER: 0305206F
PE TITLE: Airborne Reconnaissance Systems

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	51.842	64.441	149.752	235.372	228.121	151.980	75.926	Continuing	TBD
4818	Imaging and Targeting Support	15.594	26.774	110.518	195.334	187.651	110.757	33.882	Continuing	TBD
4819	Common Data Link (CDL)	34.757	35.922	37.577	38.443	38.931	39.654	40.443	Continuing	TBD
5092	JTC/SIL MUSE	1.491	1.745	1.657	1.595	1.539	1.569	1.601	Continuing	TBD

FY2008 funding totals do not include $1.52M FY2008 GWOT requirements still pending Congressional consideration.

FY06, Project Number 675038, Network Centric Collaborative Targeting (NCCT) ACTD was completed and program developments were transfered to PE 0305221F, as Project 675197.

(U) A. Mission Description and Budget Item Justification

The Airborne Reconnaissance Systems program coordinates the development of advanced airborne reconnaissance system technologies (sensors, data links, targeting networks and products, and quick reaction capabilities) in support of multiple airborne reconnaissance platforms, both manned and unmanned. Its objective is to develop, demonstrate, and rapidly transition advanced, interoperable, multi-platform solutions to reduce the find, fix, target, and track kill chain timeline. This program also coordinates the development of common collection, processing, and dissemination solutions for near-real time intelligence, surveillance, and reconnaissance (ISR).

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

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	52.624	64.869	67.003
(U)	Current PBR/President's Budget	51.842	64.441	149.752
(U)	Total Adjustments	-0.782	-0.428	
(U)	Congressional Program Reductions		-0.016	
	Congressional Rescissions		-0.412	
	Congressional Increases			
	Reprogrammings	-0.782		
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4818	Imaging and Targeting Support	15.594	26.774	110.518	195.334	187.651	110.757	33.882	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The purpose of the Imaging and Targeting Support (I&TS) program is to develop and demonstrate next-generation, persistent, wide area surveillance and common imagery reconnaissance sensor capabilities (radar and electro-optical systems) for multiple airborne platforms, and sensor products to aid in rapid targeting (geolocation models, sensor-based exploitation tools, sensor networking capabilities). Developmental efforts pursued are improved sensor capabilities (such as hyperspectral imagery [HSI], measurement and signature intelligence [MASINT], polarimetric imaging, ground moving target indication, foliage penetration, and other radar and electro-optical modes), increased geolocation accuracy, advanced sensor data correlation, automated target detection, network centric warfare, and other Intelligence, Surveillance, and Reconnaissance (ISR) and associated Tasking Processing Exploitation and Dissemination (TPED) capabilities to reduce both target search and kill chain timelines; as well as, supporting traditional intelligence activities. I&TS will increase interoperability among developed systems by developing common standards and tools. I&TS focuses on the following thrust areas:

Development and integration of common radar and electro-optical sensors (Synthetic Aperture Radar [SAR], Low Frequency SAR, Electro-Optical [EO], Infrared [IR], HSI, Low Light, Laser Radar [LADAR]) and their operational modes (High Resolution Imagery, Moving Target Indication, Persistent Surveillance, Wide Area Surveillance, Spectral Identification) for multiple airborne platforms.

Development and demonstration of advanced airborne tactical sensor and associated TPED processing algorithms and tools (automatic registration, automatic and assisted target detection, network centric warfare). Development of integrated multi-sensor capabilities to detect and identify obscured targets (OT). Development and implementation of imagery standards (Common Ground Moving Target Indicator (GMTI), National Imagery Transmission Format (NITF)). These efforts focus on reducing the find, fix and track elements of the time critical targeting kill-chain timeline while improving operator and decision-maker efficiency and effectiveness.

Enhancement of Imagery Intelligence (IMINT) product quality. Monitoring and enhancement of IMINT product quality (radar and EO/IR imagery, GMTI data, and spectral information) and timeliness throughout the image chain (from sensor to user).

Funding increase beginning in FY09 will meet Combatant Commander (COCOM) Wide Area Airborne Surveillance (WAAS) urgent operational need and will be managed by the Air Force through the 645th Aeronautical Systems Group (AESG, aka BIG SAFARI), Reconnanissance Systems Wing, Aeronautical Systems Center, Air Force Material Command.

Starting in FY09, provide a temporary Air Force funding repository for DARPA Blackswift program. Blackswift is an unmanned, hypersonic, on-demand, large-area ISR and strike vehicle. A separate Program Element will be established later this year.

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-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE 4818 Imaging and Targeting Support

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Continue development and delivery of sensor models for airborne reconnaissance platforms.	0.157	0.000	0.000
(U)	Continue efforts to transition HSI technology, such as the Spectral Infrared Imaging Technology Transition Testbed (SPIRITT) sensor and the Hyperspectral Collection and Analysis System (HyCAS) into airborne reconnaissance platforms.	7.650	8.630	6.000
(U)	Develop Obscured Target (OT) sensor capabilities (e.g. foliage penetration synthetic aperture radar (FOPEN SAR) and target identification (ID) laser radar (LADAR)).	3.379	5.590	5.070
(U)	Continue Obscured Target Roadmap Study	1.075	0.250	0.000
(U)	Develop automatic and assisted target detection algorithms and tools.	0.000	0.500	3.500
(U)	Procure 4 ACES Hy Sensors, integrate onto the MQ-1 Predator UAS, and provide training and support for these systems.	0.000	10.182	10.233
(U)	Continue image quality base lining and assessment efforts for airborne reconnaissance platforms.	2.000	0.000	0.000
(U)	Initiate development of wide area airborne surveillance (sensors, platforms, and associated TPED) capability, using manned and unmanned testbeds.	0.000	0.000	34.000
(U)	Provide a temporary repository for AF funds supporting DARPA Blackswift unmanned, hypersonic ISR and Strike vehicle.	0.000	0.000	50.000
(U)	Mission Support	1.333	1.622	1.715
(U)	Total Cost	15.594	26.774	110.518

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Joint Capability Technology Demonstration (0604648D8Z, OSD)			2.000	6.000	6.000	7.000	7.000	0.000	28.000
(U)	AF RDT & E (PE 63203F, AFRL)	3.500	1.500	0.000	0.000	0.000	0.000	0.000	0.000	5.000

-Air Force Research Lab is contributing to SPIRITT HSI sensor development, including a longwave infrared (LWIR) hyperspectral channel.

(U) D. Acquisition Strategy

Acquisition strategy is to maximize commercial and national development efforts and investment through multiple contracting methods; including the use of Engineering Change Proposals (ECP) to modify existing contracts and new contracts that were awarded both competitively or on a sole source basis.

In response to an urgent operational need the WAAS program will be executed by the 645 AESG (BIG SAFARI program office) using an incremental 'baseline'

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305206F Airborne Reconnaissance Systems**	PROJECT NUMBER AND TITLE **4818 Imaging and Targeting Support**

strategy to mitigate risk, find affordable end-to-end architecture solutions and field needed capabilities quickly.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305206F Airborne Reconnaissance Systems**

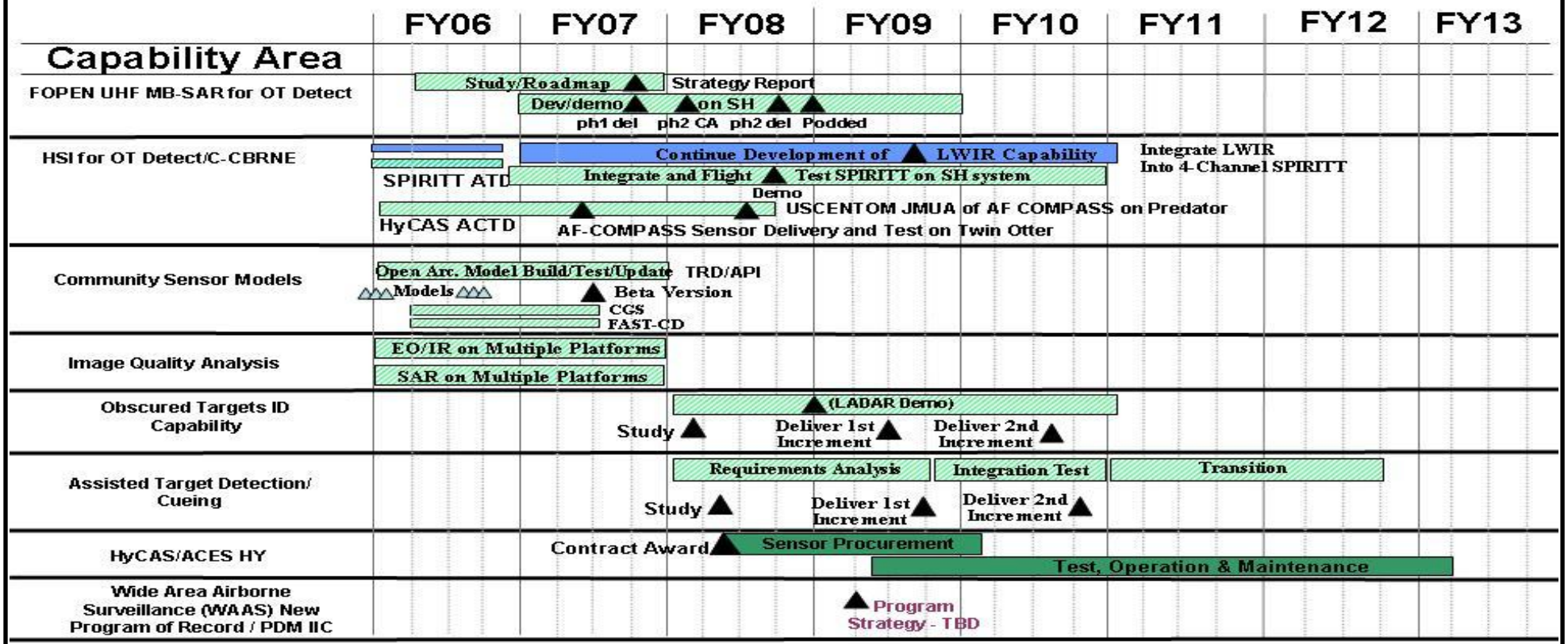
PROJECT NUMBER AND TITLE: **4818 Imaging and Targeting Support**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
BAE Systems (SPIRITT)	C/CPFF	Greenlawn, NY	24.573	5.900	Oct-06	6.530	Jan-08	6.000	Jan-09	Continuing	TBD	TBD
General Atomics (HYCAS)	SS/CPFF	Rancho Bernardo, CA		0.238	Dec-07						0.238	0.350
Essex Corp (OT-SAR)	Phase III SBIR	Columbia, MD	0.750	2.354	Feb-07	4.420	Feb-08	3.000	Jan-09	Continuing	TBD	10.524
ITT Space Systems (Image Quality)	SS/CPFF	Rochester, NY	3.840	1.000	Dec-06						4.840	4.840
General Dynamics (Image Quality)	SS/CPFF	Ypsilanti, MI	3.450	1.000	Nov-06						4.450	4.450
Georgia Tech Research Institute (GTRI)	SS/CPFF	Dayton, OH	0.200	0.471	Nov-06	0.250	Jan-08				0.921	0.921
Lockheed Martin ADP (SPIRITT)	SS/CPFF	Palmdale, CA	0.000	0.925	Nov-06	1.200	Feb-08				2.125	2.125
											0.000	
Others (including new WAAS program of record and Blackswift funding for DARPA)	Various	Various		2.373	Mar-07	12.752	Mar-08	99.803	Mar-09	Continuing	TBD	TBD
Subtotal Product Development			32.813	14.261		25.152		108.803		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	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		1.333	Oct-06	1.622	Oct-07	1.715	Oct-08	Continuing	TBD	TBD
Subtotal Management			0.000	1.333		1.622		1.715		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			32.813	15.594		26.774		110.518		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

DATE: February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0305206F Airborne Reconnaissance Systems	4818 Imaging and Targeting Support



ATD: Advanced Technology Demo
HSI: Hyperspectral Information
FOPEN: Foliage Penetration
MS: Milestone
CONEMP: Concept of Employment
SPIRITT: Spectral Infrared Remote Imaging Transition Testbed
HyCAS: Hyperspectral Collection and Analysis System
TRD: Technical Requirements Document
API: Application Program Interface

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305206F Airborne Reconnaissance Systems**	PROJECT NUMBER AND TITLE **4818 Imaging and Targeting Support**

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) ITS: Community Sensor Model Deliveries	2Q		
(U) ITS: Demonstrate SPIRITT in C-130 Pod		4Q	
(U) ITS: SPIRITT Long Wave Hyperspectral Integration			3Q
(U) ITS: Obscured Target Sensor Capabilities Study Strategy Report	2Q		
(U) Obscured Target UHF SAR Phase 1 Enhancement Delivery	3Q		
(U) Obscured Target UHF SAR Phase 2 Enhancement Contract Award		1Q	
(U) Obscured Target UHF SAR Phase 2 Enhancement Delivery		4Q	
(U) ITS: Deliver Podded MB SAR Capability		4Q	
(U) ITS: Demonstrate LADAR Sensor for OT Identification			2Q
(U) ACES Hy Contract Award		2Q	
(U) WAAS: Initiate WAAS program development			2Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4819 Common Data Link (CDL)	34.757	35.922	37.577	38.443	38.931	39.654	40.443	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Common Data Link (CDL) provides an interoperable joint command, control, and communications capability for manned/unmanned Intelligence, Surveillance, and Reconnaissance (ISR) assets. As the CDL Executive Agent (EA), the Air Force oversees acquisition of developmental datalinks and update of the CDL specification. CDL Military Intelligence Program (MIP) funds are used to ensure design configuration, commonality, and interoperability among the service's ISR platforms. Updates to the CDL specification and developmental systems impact approximately 500 DoD airborne and ground ISR systems with CDL capabilities.

The CDL program is working to comply with OSD mandates for Software Communications Architecture (SCA) waveform development, Internet Protocol Version 6 (IPv6), and software re-programmable cryptographic (COMSEC) equipment.

The CDL design permits existing and future reconnaissance assets to operate worldwide, providing sensor data directly via point-to-point or point-to-multipoint broadcast to ground sites and airborne platforms. It also provides the capability to relay data via air-to-air or satellite links when the asset and ground site are not within line-of-sight. CDL provides bandwidth to accommodate numerous sensors collecting Signals Intelligence (SIGINT) and Imagery Intelligence (IMINT) (including video) data.

Concept, technology, and developmental efforts support continuous improvements and implementation of line-of-sight and network Command and Control, Intelligence, Surveillance, and Reconnaissance (C2ISR) capabilities. CDL's modular design provides for future technology insertion and reduces non-recurring engineering and life-cycle costs to the user. (Note: the term A-series refers to full data rate/network capable CDL systems and T-Series refers to less capable, lower data rate CDL systems.)

This program is categorized as Budget Activity 07 because it provides for development of technologies and capabilities in support of operational system development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continued evolutionary development of T-Series CDL terminals and waveforms (e.g. Team Portable, Mini CDL, and Joint Tactical Edge Network) for use on C2ISR platforms (e.g. Guardrail Legacy Replacement, Airborne Reconnaissance Low, P-3, Predator, Reaper, other tactical and small UAVs) and man portable systems.	5.782	12.206	11.093
(U) Continued development of A-Series terminals and waveforms (e.g. MR-TCDL and SCA/IPv6 compliant waveforms) for integration into ISR platforms and programs such as ACS, Apache, DCGS-A and Objective Gateway.	14.363	10.116	8.991
(U) Continued Multi-Platform-Common Data Link (MP-CDL) (A-Series) development of wideband integrated common data link to support Multi-Platform Radar Technology Insertion Program (MP-RTIP) and network centric communications development.	6.205	0.000	0.000
(U) Continued configuration control of CDL architecture, standards, specification, and modules.	2.108	2.563	2.683
(U) Continued development of COMSEC replacement and transition to development of software reprogrammable COMSEC.	3.262	0.228	0.910

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007	FY 2008	FY 2009
(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 interoperability certification and spectrum management requirements to include OSD mandates.	0.732	8.909	11.943
(U)	CDL technical and engineering support.	2.305	1.900	1.957
(U)	Total Cost	34.757	35.922	37.577

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) None									

(U) D. Acquisition Strategy

The CDL Executive Agent, supported by the 653rd Electronics System Group (ELSG) in concert with other program offices and laboratories, provides for development of common, interoperable wideband ISR data links as mandated by Assistant Secretary of Defense (Networks and Information Integration) (ASD(NII)) policy. Platforms are responsible for CDL procurement, integration, and installation. Acquisition strategy varies by contract. When possible contracts are awarded under full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
L-3 Communications	C & S; CPAF, CPFF, CPIF	Salt Lake City, UT		18.569	Jan-07	13.137	Jan-08	5.486	Jan-09	Continuing	TBD	TBD
Rockwell Collins						4.259	Jan-08	3.424	Jan-09	Continuing	TBD	TBD
Harris Corp	C & S; CPFF	Melbourne, FL		1.167	Jan-07						1.167	
SATCOM Interop/Other Govt Orgs	S; MIPR, CPIF	Multiple		0.100	Jan-07	0.450	Jan-08	2.058	Jan-09	Continuing	TBD	
L-3 COMCEPT	C; CPFF	Rockwall, TX									0.000	21.619
ITT	C; IDIQ	Beavercreek, OH									0.000	4.500
Cubic	C, CPFF	San Diego, CA		3.117	Jan-07	2.200	Jan-08	1.900	Jan-09	Continuing	TBD	TBD
Raytheon								2.239	Apr-09	Continuing	TBD	TBD
TBD (pending competitve selection for test set vendor)								7.000	Apr-09	Continuing	TBD	TBD
Viasat	CPIF	San Diego CA		1.167	Jan-07	0.000	Jan-08				1.167	
Other	S; MIPR, CPFF	Multiple		3.500	Jan-07	6.600	Jan-08	5.839	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	27.620		26.646		27.946		Continuing	TBD	TBD
Remarks:												
(U) Support												
Various	C & S; CPFF, MIPR	Multiple		5.434	Jan-07	5.380	Jan-08	5.582	Jan-09	Continuing	TBD	TBD
Subtotal Support			0.000	5.434		5.380		5.582		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
JITC	MIPR	Fort Huachuca, AZ		0.309	Jan-07	0.800	Jan-08	0.824	Jan-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.309		0.800		0.824		Continuing	TBD	TBD
Remarks:												
(U) Management												
Various	MIPR	Multiple		1.394	Jan-07	3.096	Jan-08	3.225	Jan-09	Continuing	TBD	TBD
Subtotal Management			0.000	1.394		3.096		3.225		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	34.757		35.922		37.577		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE: 4819 Common Data Link (CDL)

Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2008**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305206F Airborne Reconnaissance Systems**	**4819 Common Data Link (CDL)**

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) Multi-Role TCDL Development	1-4Q	1-4Q	1-4Q
(U) Team Portable CDL Development	1-4Q	1-4Q	1-4Q
(U) Mini-CDL Developement	1-4Q	1-4Q	1-4Q
(U) Joint Tactical Edge Network CDL Development			1-4Q
(U) MP-CDL Development	1-4Q		
(U) Configuration Control and Specification Updates	1-4Q	1-4Q	1-4Q
(U) Crypto Modernization	1-4Q		
(U) COMSEC Replacement Module Development	1-4Q	1-2Q	
(U) CDL Test Equipment	1-4Q	1-4Q	1-4Q
(U) Radar CDL (R-CDL)		1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5092 JTC/SIL MUSE	1.491	1.745	1.657	1.595	1.539	1.569	1.601	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 Systems (UAS) programs within the services. The mission includes Service-specific and Joint UAS and Intelligence Surveillance Reconnaissance (ISR) programs throughout DoD. The JTC/SIL provides a Government test bed for rapid prototyping, technology insertion and transition, systems engineering, modeling/simulation, training and Command Control Communications Computers and Intelligence (C4I) optimization. The cornerstone of its diverse tool set is the Multiple Unified Simulation Environment (MUSE), which is the Department's simulation/training system of choice for ISR systems, sensors, and platforms. The MUSE is also known as the Air Force Synthetic Environment for Reconnaissance and Surveillance (AFSERS) in its Air Force application.

The Services and Warfighting Commanders have a requirement for the capability to train with a system that provides a real-time simulation environment containing multiple intelligence systems that can be integrated with larger force-on-force simulations. The MUSE creates a realistic operational environment which supports the ability to assess military utility, architecture and Concept of Operations (CONOPS) development, Tactics, Techniques, and Procedures (TTP) development and refinement, the conduct of emerging concepts experimentation and C4I optimization within warfighting exercises and experiments. The MUSE/AFSERS is the only capability within the Department that allows all Services to train with UAS and ISR assets in a Joint training environment. The MUSE also creates a realistic operational environment that supports an embedded training capability for multiple Program Managers. These tools help to minimize acquisition and life cycle cost and schedule impacts.

The MUSE is currently in use within all services and unified commands simulating PREDATOR, GLOBAL HAWK, HUNTER, Shadow 200 and PIONEER UASs, national and commercial satellite collectors, P-3 and the U-2. During warfighting exercises, the JTC/SIL integrates realistic high-fidelity imagery simulations, emulating the C4I construct. For those assets normally not available for training, the JTC/SIL provides surrogate systems and interfaces. Distributed training environments, virtually linking participants from various locations worldwide, are routinely supported within the MUSE architecture. The MUSE/AFSERS is also used as a Mission Rehearsal Tool for current on-going combat operations.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Laboratory sustainment	0.334	0.334	0.334
(U) Air Force Synthetic Environment for Reconnaissance and Surveillance (AFSERS) development	0.657	0.911	0.823
(U) Maintenance, Licenses and equipment purchases	0.500	0.500	0.500
(U) Total Cost	1.491	1.745	1.657

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other									

The program receives approximately $2.3 per year from the Army (PE 0305204A) and $1.7M per year from the Navy (PE P0305204N) thru FY2009.

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
JTC/SIL	MIPR	Redstone Arsenal, Huntsville, AL		1.491	Jan-07	1.745	Jan-08	1.657	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	1.491		1.745		1.657		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	1.491		1.745		1.657		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305206F Airborne Reconnaissance Systems**	PROJECT NUMBER AND TITLE **5092 JTC/SIL MUSE**

JTC/SIL Schedule

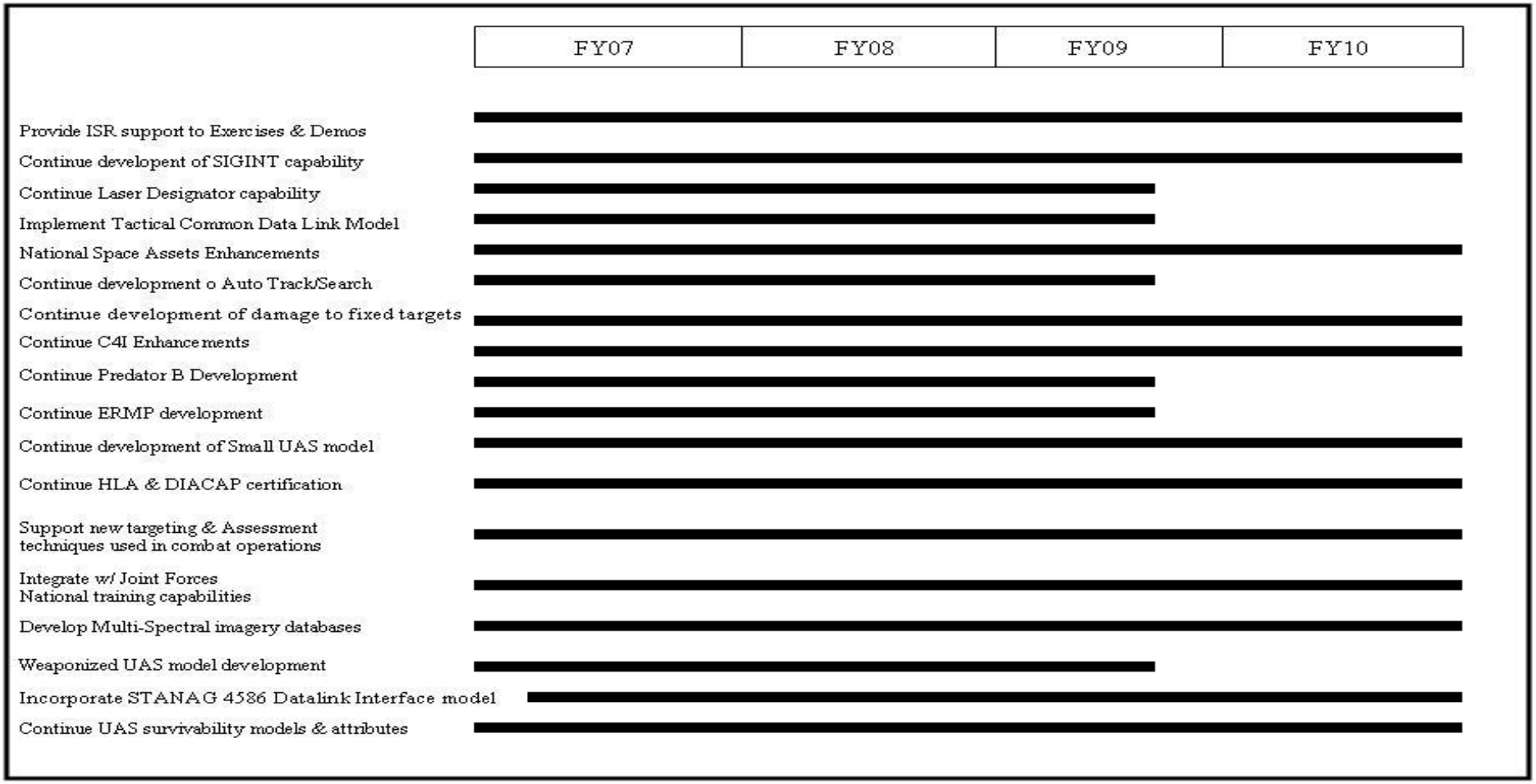


Exhibit R-4a, RDT&E Schedule Detail

DATE: February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0305206F Airborne Reconnaissance Systems	5092 JTC/SIL MUSE

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Provide ISR support to exercises and demonstrations	1-4Q	1-4Q	1-4Q
(U) Continue development of SIGINT platforms	1-4Q	1-4Q	1-4Q
(U) Complete Laser Designator capability	1-4Q	1-4Q	1-4Q
(U) National space assets enhancements	1-4Q	1-4Q	1-4Q
(U) Continue development of aut track	1-4Q	1-4Q	1-4Q
(U) Continue development of damage to fixed targets	1-4Q	1-4Q	1-4Q
(U) Continue C4I enhancements	1-4Q	1-4Q	1-4Q
(U) Continue Predator B (Reaper) development	1-4Q	1-4Q	1-4Q
(U) Continue extended range multi-purpose model development	1-4Q	1-4Q	1-4Q
(U) Continue development of Small UAV model	1-4Q	1-4Q	1-4Q
(U) Continue HLA, DITSCAP certification, & DIACAP transition	1-4Q	1-4Q	1-4Q
(U) Support new targeting and assessment techniques used in combat operations	1-4Q	1-4Q	1-4Q
(U) Develop multi-spectral imagery databases	1-4Q	1-4Q	1-4Q
(U) Integrate with Joint Forces national training capabilities	1-4Q	1-4Q	1-4Q
(U) Implement Tactical Common Data Link model	1-4Q	1-4Q	1-4Q
(U) Incorporate STANAG 4586 Datalink interface standard	1-4Q	1-4Q	1-4Q
(U) Continue UAS survivability models & attributes	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0305207F
PE TITLE: Manned Reconnaissance System

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305207F Manned Reconnaissance System

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	37.015	21.387	12.819	13.130	13.318	13.572	13.842	Continuing	TBD
4754 COBRA BALL	37.015	21.387	12.819	13.130	13.318	13.572	13.842	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Note 1: FY07 GWOT Supplemental Add of $20.54M was provided for a quick reaction capability to exploit personal communication devices.
Note 2: FY08 funding does not include any GWOT Supplemental requested amounts.

The RC-135 Operational Systems Development and enhancement activities project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the RC-135 and its mission systems - both air and ground. Extensive utilization of commercial-off the-shelf (COTS) based solutions allows rapid fielding of needed capabilities through continuous technology refresh cycles and vanishing-vendor logistics mitigation efforts.

The results of these efforts provide for preliminary assessments of technical feasibility, operability, or military utility as well as specific engineering implementations for integration into the various systems baseline configurations.

These activities are managed by the Air Force through the 645th Aeronautical System Group (645th AESG, a.k.a. BIG SAFARI Program Office), 303rd 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 FY09-FY13 include support for three distinct RIVET JOINT configurations [Baselines 8, 9 & 10], two distinct COMBAT SENT configurations [Baselines 3 & 4] and three distinct COBRA BALL configurations [Baselines 2, 3 & 4]. SEE CLASSIFIED Congressional budget exhibits.

The world-wide challenge of keeping pace against technologically agile targets used by both nation and non-nation-state adversaries and the rapid evolution of COTS technologies demands a responsive and adaptive acquisition strategy for fielding 'baseline capabilities' that are logistically supportable at all locations. The BIG SAFARI program office uses an incremental 'baseline' strategy to mitigate risk, find affordable solutions and field needed capabilities.

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

This program effort is equivalent to RDT&E budget activity 7, Operational Systems Development, because it involves Air Force R&D necessary to field essential operational capabilities.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305207F Manned Reconnaissance System

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	16.669	12.672	12.819
(U)	Current PBR/President's Budget	37.015	21.387	12.819
(U)	Total Adjustments	20.346	8.715	
(U)	Congressional Program Reductions		-0.185	
	Congressional Rescissions			
	Congressional Increases	20.540	8.900	
	Reprogrammings	-0.194		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

FY07 Reprogramming of $3.6M: Revises initial appropriation amount to correct MIP appropriation error.

FY07 GWOT Supplemental Add: $20.54M provided for a quick reaction capability to exploit personal communication devices

FY08 Congressional Adds totaling $8.9M includes: $6.4M for a RIVET JOINT Network Interface Growth, and $2.5M for COBRA BALL Sensor Gimbal Stabilization

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4754 COBRA BALL	37.015	21.387	12.819	13.130	13.318	13.572	13.842	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Note 1: FY07 GWOT Supplemental Add of $20.54M was provided for a quick reaction capability to exploit personal communication devices.
Note 2: FY08 funding does not include any GWOT Supplemental requested amounts.

The RC-135 Operational Systems Development and enhancement activities project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the RC-135 and its mission systems - both air and ground. Extensive utilization of commercial-off the-shelf (COTS) based solutions allows rapid fielding of needed capabilities through continuous technology refresh cycles and vanishing-vendor logistics mitigation efforts.

The results of these efforts provide for preliminary assessments of technical feasibility, operability, or military utility as well as specific engineering implementations for integration into the various systems baseline configurations.

These activities are managed by the Air Force through the 645th Aeronautical System Group (645th AESG, a.k.a. BIG SAFARI Program Office), 303rd 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 FY09-FY13 include support for three distinct RIVET JOINT configurations [Baselines 8, 9 & 10], two distinct COMBAT SENT configurations [Baselines 3 & 4] and three distinct COBRA BALL configurations [Baselines 2, 3 & 4]. SEE CLASSIFIED Congressional budget exhibits.

The world-wide challenge of keeping pace against technologically agile targets used by both nation and non-nation-state adversaries and the rapid evolution of COTS technologies demands a responsive and adaptive acquisition strategy for fielding 'baseline capabilities' that are logistically supportable at all locations. The BIG SAFARI program office uses an incremental 'baseline' strategy to mitigate risk, find affordable solutions and field needed capabilities.

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

This program effort is equivalent to RDT&E budget activity 7, Operational Systems Development, because it involves Air Force R&D necessary to field essential operational capabilities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continues Non-Recurring Engineering (NRE) for the development and installation of improved mission capabilities - see classified submission.	10.069	12.487	12.819
(U) Congressional Add: COMBAT SENT Tactical ELINT System modernization study (two year effort)	3.000		
(U) Congressional Add: RIVET JOINT Reachback	5.000		

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007	FY 2008	FY 2009
(U)	Congressional Add: Apertures for Modern Threat Environments	10.000		
(U)	Congressional Add: RC-135 Processing Forward Network	5.346		
(U)	Congressional Add: Advanced IR technologies for COBRA BALL	3.600		
(U)	Congressional Add: RIVET JOINT Network Interface Growth		6.400	
(U)	Congressional Add: COBRA BALL Sensor Gimbal Stabilization		2.500	
(U)	Total Cost	37.015	21.387	12.819

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	PE 0305207F, APAF	137.994	135.110	143.083	156.539	159.488	223.248	227.686	Continuing	TBD
(U)	PE 0305207F, OPAF	23.609	22.380	22.924	23.468	23.835	24.358	24.892	Continuing	TBD
(U)	PE 0305207F, O&M	417.185	343.338	298.188	234.905	289.145	331.648	246.543	Continuing	TBD

(U) D. Acquisition Strategy

The RC-135 RIVET JOINT, COBRA BALL, and COMBAT SENT aircraft are maintained and upgraded by the 645th AESG (BIG SAFARI Program Office) through an evolutionary acquisition strategy.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
L-3 Communications	CPFF/CPIF /FFP	L-3 Com, Greenville TX		37.015	Nov-06	21.387	Nov-07	12.819	Nov-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	37.015		21.387		12.819		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	37.015		21.387		12.819		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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 09

FY07	FY08	FY09	FY10	FY11	FY12	FY13
*COMBAT SENT TAC ELINT System Modernization Study						
*RIVET JOINT Reachback	*RIVET JOINT Network Interface Growth					
*Apertures for Modern Threats	*COBRA BALL Sensor Gimbal Stablization					
*Processing Forward Network						
** Mission Sensors	Mission Sensors	Mission Sensors	Mission Sensors	Mission Sensors	Mission Sensors	Mission Sensors
$37.02M	$21.39M	$12.82M	$13.13M	$13.31M	$13.57M	$13.84M

* Congressional Adds

** See CLASSIFIED for detailed breakout

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(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 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305208F Distributed Common Ground Systems

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	124.007	107.048	107.834	122.796	43.028	42.709	42.371	Continuing	TBD
4826	Common Imagery Ground / Surface Systems	124.007	94.590	96.487	110.357	31.841	31.477	31.185	Continuing	TBD
5265	Common Imagery Processor (CIP)	0.000	12.458	11.347	12.439	11.187	11.232	11.186	0.000	0.000

(U) A. Mission Description and Budget Item Justification

The DoD Distributed Common Ground/Surface System (DCGS) Program is a cooperative effort between the Services and National Agencies to provide world-wide ground/surface systems capable of receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance sensors/platforms and commercial sources. The DCGS program is developing a family of systems capable of supporting all levels of conflict, interoperable with reconnaissance platforms and sensors, and integrated into the Joint Command, Control, Communication, Computer, and Intelligence (C4I) environment. The program integrates architectures and standards from DCGS Imagery architecture for Imagery Intelligence (IMINT), Joint Interoperable Operator Network (JION) for Signals Intelligence (SIGINT), and Joint Airborne Measurement and Signature Intelligence (MASINT) Architecture (JAMA) for MASINT, and all-source analyses to Combat Air Forces and Combatant Commanders. The Air Force has been charged with developing, upgrading and managing the DCGS Integration Backbone (DIB) for all the Services to provide common DCGS enterprise services and interoperability at the data level.

AF DCGS provides the Air Force ground systems capable of tasking intelligence sensors, and receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance platforms and commercial sources. AF DCGS is a 'system of systems' interconnected by a robust communications structure to provide data sharing capabilities between intelligence collectors, exploiters, producers, disseminators, and users. AF DCGS has five core locations: two CONUS based and three OCONUS. Several other AF DCGS systems are distributed among Air Force operational units at Numbered Air Force and Air National Guard locations, to support the Joint Task Force commander and the Air Operations Center (AOC). The CONUS based systems are capable of reach back operations via data link relay and satellite relay connectivity to forward operating sensors.

AF DCGS provides critical data and significant support for Time Sensitive Targeting (TST) operations. This support will be enhanced with integration of software tools, and, data interfaces to the AOC and the transformation of AF DCGS to a net-centric, service oriented architecture. By converting from a stovepipe system of systems to a web based integrated net centric Intelligence, Surveillance, and Reconnaissance (ISR) management capability AF DCGS will provide the Joint Forces Air Component Commander (JFACC) the capability to:
1) Dynamically visualize and command ISR assets and the information in the AOC
2) Quickly and effectively synchronize AF DCGS ISR operations, collection capabilities, and information with the AOC's combat objectives to improve the TST process and reduce timelines.
AF DCGS is also being integrated into the Network Centric Collaborative Targeting (NCCT) network.

Using the DIB, AF DCGS modernization will transform AF DCGS from its existing proprietary system to a net centric service oriented architecture. This

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems

modernization effort, implemented in Block 10.2, will deliver a net centric DCGS capability for the Air Force. Block 10.2 will spiral the necessary technologies and tools into its architecture to provide increased capabilities and meet emerging and urgent user operational needs. These spirals will also integrate COTS and GOTS fact-of-life version upgrades to provide current technologies and achieve necessary application and services. Increment 2, the next phase in AF DCGS transformation will continue this net centric modernization of focusing on SIGINT modernization and the integration of data fusion, and automated tools. Increment 2 will perform technology evaluations and develop the required acquisition plans and studies/analysis to begin development in support of a contract award in FY09.

The DIB was developed with the Block 10.2 upgrade and in accordance with DoD direction is being managed and upgraded by the Air Force to meet emerging DCGS architecture and standards for Joint and Coalition interoperability.

AF DCGS will also modernize its network management and interface capabilities by upgrading and migrating its network to a standardized interface configuration which is easy to expand and adapt to new technologies while growing capacity requirements. Efforts will also focus on network management systems and the ability to manage critical bandwidths to meet operational surges and distributed ops requirements.

The Common Imagery Processor (CIP) is the common sensor processing element within DCGS IMINT architecture. The function of the CIP is to accept airborne imagery data, process it into an exploitable image, and output the image to other elements within DCGS. Efforts continue to upgrade the CIP baseline to maintain currency with upgraded/new sensors.

The DCGS-I Testbed is a mobile test enviornment, which is used by Service and Agency program offices to test interoperability interfaces with new sensors, applications, and net centric operations. This testbed also supports the integration and testing of DoD DCGS components prior to introduction into the operational environment. Upgrades to the DCGS-I Testbed will ensure it maintains currency with existing interface standards.

AF DCGS participates in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability.

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

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	125.267	107.117	118.647
(U)	Current PBR/President's Budget	124.007	107.048	107.834
(U)	Total Adjustments	-1.260	-0.069	
(U)	Congressional Program Reductions		-0.186	
	Congressional Rescissions		-0.683	
	Congressional Increases		0.800	
	Reprogrammings	-1.260		
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems

-Congressional Increase of $3.3M for Ohio Air National Guard activities and $1.7M for AF DCGS Formal Training Unit in FY07.

-Congressional Increase of $800K for Advanced Architecture Designs supporting U.S. Army Net Centric Warfare in FY08.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4826	Common Imagery Ground / Surface Systems	124.007	94.590	96.487	110.357	31.841	31.477	31.185	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 architecture for Imagery Intelligence (IMINT), Joint Interoperable Operator Network (JION) for Signals Intelligence (SIGINT), and Joint Airborne Measurement and Signature Intelligence (MASINT) Architecture (JAMA) for MASINT, and all-source analyses to Combat Air Forces and Combatant Commanders. The Air Force has been charged with developing, upgrading and managing the DCGS Integration Backbone (DIB) for all the Services to provide common DCGS enterprise services and interoperability at the data level.

AF DCGS provides the Air Force ground systems capable of tasking intelligence sensors, and receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance platforms and commercial sources. AF DCGS is a 'system of systems' interconnected by a robust communications structure to provide data sharing capabilities between intelligence collectors, exploiters, producers, disseminators, and users. AF DCGS has five core locations: two CONUS based and three OCONUS. Several other AF DCGS systems are distributed among Air Force operational units at Numbered Air Force and Air National Guard locations, to support the Joint Task Force commander and the Air Operations Center (AOC). The CONUS based systems are capable of reach back operations via data link relay and satellite relay connectivity to forward operating sensors.

AF DCGS provides critical data and significant support for Time Sensitive Targeting (TST) operations. This support will be enhanced with the integration of software tools, and, data interfaces to the AOC and the transformation of AF DCGS to a net-centric, service oriented architecture. By converting from a stovepipe system of systems to a web based integrated net centric Intelligence, Surveillance, and Reconnaissance (ISR) management capability. AF DCGS will provide the Joint Forces Air Component Commander (JFACC) the capability to:
1) Dynamically visualize and command ISR assets and the information in the AOC
2) Quickly and effectively synchronize AF DCGS ISR operations, collection capabilities, and information with the AOC's combat objectives to improve the TST process and reduce timelines.
AF DCGS is also being integrated into the Network Centric Collaborative Targeting (NCCT) network.

Using the DIB, AF DCGS modernization will transform AF DCGS from its existing proprietary system to a net centric service oriented architecture. This modernization effort, implemented in Block 10.2, will deliver a net centric DCGS capability for the Air Force. Block 10.2 will spiral the necessary technologies and

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305208F Distributed Common Ground Systems**	PROJECT NUMBER AND TITLE **4826 Common Imagery Ground / Surface Systems**

tools into its architecture to provide increased capabilities and meet emerging and urgent user operational needs. These spirals will also integrate COTS and GOTS fact-of-life version upgrades to provide current technologies and achieve necessary application and services. Increment 2, the next phase in AF DCGS transformation will continue this net centric modernization of focusing on SIGINT modernization and the integration of data fusion, and automated tools. Increment 2 will perform technology evaluations and develop the required acquisition plans and studies/analysis to begin development continues in support of a contract award in FY08.

The DIB was developed with the Block 10.2 upgrade and in accordance with DoD direction is being managed and upgraded by the Air Force to meet emerging DCGS architecture and standards for Joint and Coalition operability.

AF DCGS will also modernize its network management and interface capabilities by upgrading and migrating its network to a standardized interface configuration which is easy to expand and adapt to new technologies while growing capacity requirements. Efforts will also focus on network management systems and the ability to manage critical bandwidths to meet operational surges and distributed ops requirements.

The Common Imagery Processor (CIP) is the common sensor processing element within the DCGS IMINT architecture. The function of the CIP is to accept airborne imagery data, process it into an exploitable image, and output the image to other elements within DCGS. Efforts continue to upgrade the CIP baseline to maintain currency with upgraded/new sensors.

The DCGS-I Testbed is a mobile test enviornment, which is used by Service and Agency program offices to test interoperability interfaces with new sensors, applications, and net centric operations. This testbed also supports the integration and testing of DoD DCGS components prior to introduction into the operational environment. Upgrades to the DCGS-I Testbed will ensure it maintains currency with existing interface standards.

AF DCGS participates in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability.

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

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2007	FY 2008	FY 2009
(U)	Continue evolving DCGS architectures and standards for commonality and interoperability across intelligence disciplines to include NATO interoperability and management of DCGS Enterprise Integrated Process Team (IPT) for USD(I)	2.018	2.723	2.831
(U)	Continue DCGS-I testbed development and upgrades.	6.549	4.550	3.550
(U)	Continue evolving CIP and its associated architecture to keep pace with growing sensor baseline of new and upgraded sensors. Continue investigation and implementation of advanced processing tools. (Funding moved to Project 5265 beginning in FY08.)	9.527		
(U)	Continue commercial imagery integration.	2.680	2.700	2.700
(U)	Continue AF DCGS Block 10.2 upgrades to provide required tools for AF DCGS support to the JTF Commander and below.	60.758	37.362	15.815

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Continued development efforts for Increment 2, integrate advance technology with the DCGS Integration Backbone (DIB) to accelerate integration of advanced Multi-INT exploitation fusion tools.	11.547	25.755	61.391
(U)	Improve DIB interoperability.	1.000	1.000	1.000
(U)	Upgrade and manage the DIB.	5.342	7.800	6.200
(U)	Upgrade AF DCGS communication architecture and network.	19.605	11.900	3.000
(U)	Provide Ohio Air National Guard MASINT Exploitation Capability	3.287		
(U)	Provide FTU support	1.694		
(U)	Provide Advanced Architecture Design support to U.S. Army Net Centric Warfare		0.800	
(U)	Total Cost	124.007	94.590	96.487

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	OPAF (PE 0305208F)	221.524	197.905	251.805	203.350	175.930	187.787	175.186		TBD

(U) D. Acquisition Strategy

The Air Force uses an evolutionary acquisition approach with blocks (increments) and spirals to develop, field, and upgrade the AF DCGS weapon system and structure contracts for the improved capabilities through full and open competition to the maximum extent possible.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U)	Product Development												
	Block 10.2 Spiral Upgrades	C/Multiple	Raytheon, Garland, TX		24.156	Dec-06	16.571	May-08	6.692	Dec-08	Continuing	TBD	TBD
	Block 10.2 Spiral GFE	C/Multiple	Multiple		25.112	Jan-07	17.898	Feb-08	3.656	Jan-09	Continuing	TBD	TBD
	DIB Management and Migration	C/Multiple	Multiple		5.342	Dec-06	7.800	Dec-07	6.200	Dec-08	Continuing	TBD	TBD
	DIB Interoperability	C/Multiple	Multiple		1.000	Feb-07	1.000	Feb-08	1.000	Feb-09	Continuing	TBD	TBD
	Increment 2	TBD	TBD				5.193	Mar-08	6.078	Jan-09	Continuing	TBD	TBD
	Increment 2 Tech Dev	C/Multiple	Multiple		11.548	Jan-07	20.562	Jan-08	55.313	Jan-09	Continuing	TBD	TBD
	Communications Capability Upgrade	C/Multiple	Multiple		25.800	Jan-07	11.900	Jan-08	3.000	Jan-09	Continuing	TBD	TBD
	Common Imagery Processor Software Development	C/CPFF	Northrup Grumman, Baltimore, MD		9.528	Dec-06						9.528	TBD
	MASINT Capabilities into DCGS	Multiple	Riverside Research Institute, Fairfax, VA		5.000	Jan-07					0.000	5.000	TBD
	Commercial Imagery Integration	Multiple	Par Gov't Systems, Rome NY		2.680	Jan-07	2.700	Jan-08	2.700	Jan-09	Continuing	TBD	TBD
	Subtotal Product Development			0.000	110.166		83.624		84.639		Continuing	TBD	TBD
	Remarks:												
(U)	Support												
	Other Non-Prime Gov't Contracts	TBD	TBD		10.283	Feb-07	7.230	Feb-08	7.926	Feb-09	Continuing	TBD	TBD
	SAIC	SS/ IDIQ	McLean, VA		2.714	Mar-07	2.850	Mar-08	2.992	Mar-09	Continuing	TBD	TBD
	Various				0.844	Oct-06	0.886	Oct-07	0.930	Oct-08	Continuing	TBD	TBD
	Subtotal Support			0.000	13.841		10.966		11.848		Continuing	TBD	TBD
	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	124.007		94.590		96.487		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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 FY07-13

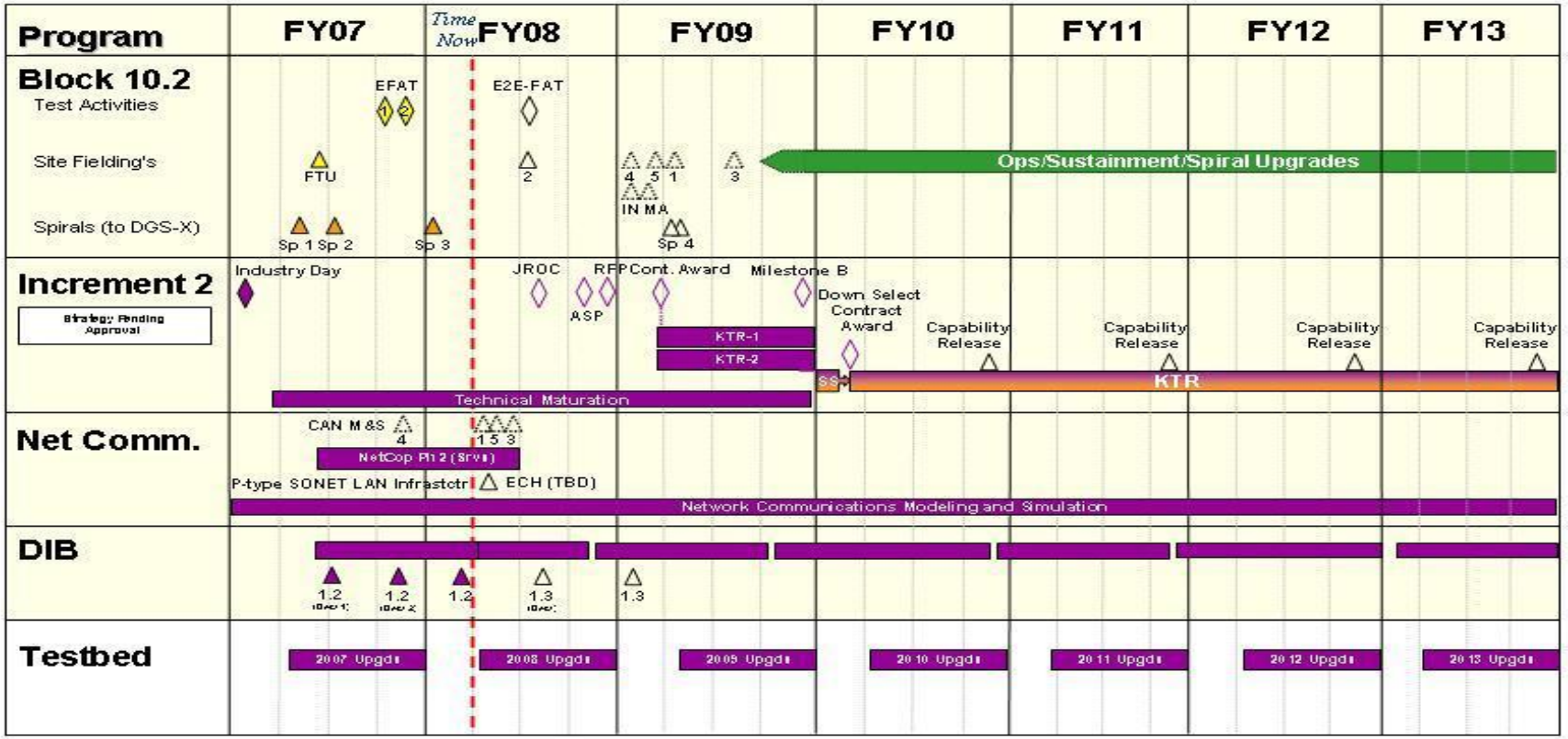

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE: 4826 Common Imagery Ground / Surface Systems

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Block 10.2 Spiral Delivery	2-3Q	1Q	2Q
(U) Block 10.2 End-to-End Factory Acceptance Test		3Q	
(U) Block 10.2 Site Fielding		3Q	1-2Q
(U) Increment 2 Milestone B			4Q
(U) DCGS-I Testbed Upgrades	4Q	4Q	4Q
(U) DIB Version Release			1Q
(U) Network Comms: Campus Area Network Upgrade		2Q	

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305208F Distributed Common Ground Systems

PROJECT NUMBER AND TITLE: 5265 Common Imagery Processor (CIP)

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5265 Common Imagery Processor (CIP)	0.000	12.458	11.347	12.439	11.187	11.232	11.186	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

FY07 and prior year funding was under Project 4826 of PE 0305208F

(U) A. Mission Description and Budget Item Justification

The Common Imagery Processor (CIP) is a major interoperability initiative to develop a common sensor processing element within DCGS-Imagery architecture. The function of the CIP is to accept airborne imagery data, process it into an exploitable image, and output the image to other elements within DCGS-I. Efforts are underway to augment the CIP baseline to process data from upgraded/new sensors.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continue evolving CIP and its associated architecture to keep pace with growing sensor baseline: new and upgraded sensors. Continue investigation of and implementation of advanced processing tools. (Baseline capability includes Global Hawk, F/A-18, and U-2 sensors.)		12.458	11.347
(U) Total Cost	0.000	12.458	11.347

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) CIP funding under Project 4826	9.528								

(U) D. Acquisition Strategy

The Air Force uses an evolutionary acquisition approach with blocks (increments) and spirals to develop, field, and upgrade the AF DCGS weapon system and structure contracts for the improved capabilities through full and open competition to the maximum extent possible.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305208F Distributed Common Ground Systems**

PROJECT NUMBER AND TITLE: **5265 Common Imagery Processor (CIP)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
CIP Software Development	C/CPFF	Northrop Grumman, Baltimore MD				12.058	Dec-08	10.847	Dec-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		12.058		10.847		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												
303 Aeronautical Systems Wing (AESW)	Various	Wright-Patterson AFB, OH				0.400	Dec-08	0.500	Dec-09	Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.400		0.500		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	0.000		12.458		11.347		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE 5265 Common Imagery Processor (CIP)

CIP Schedule

Rapidly delivering war-winning capability

	06	FY2007				FY 2008				FY 2009			
	J-S	O-D	J-M	A-J	J-S	O-D	J-M	A-J	J-S	O-D	J-M	A-J	J--S
CIP Software Baseline Release		7.0											
Sensors	Spiral Development												
Processing	Spiral Development												
Standards	Spiral Development												
Architecture	Spiral Development												

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE: 5265 Common Imagery Processor (CIP)

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) CIP 7.0	1Q		
(U) CIP Software Release		1Q	
(U) CIP Software Release			1Q

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PE NUMBER: 0305219F
PE TITLE: PREDATOR DEVELOPMENT/FIELDING

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305219F PREDATOR DEVELOPMENT/FIELDING

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	77.885	33.781	24.773	21.039	20.722	21.117	21.538	Continuing	TBD
5143 Predator	77.885	33.781	24.773	21.039	20.722	21.117	21.538	Continuing	TBD

FY2007 funding total includes $20M in GWOT supplemental.
FY2007 includes funding for both the MQ-1 and MQ-9.
The MQ-9 Program moved to PE 0205219F in FY08. Historical MQ-9 accomplishments remain in this document.

(U) A. Mission Description and Budget Item Justification

The basic MQ-1 system consists of the aircraft, a control station, communications equipment, support equipment, simulator and training devices, Readiness Spares Packages (RSP), technical data/training, and personnel required to operate, maintain, and sustain the system. The system is designed to be modular and open-ended: mission-specific equipment is employed in a 'plug-and-play' mission kit concept allowing specific aircraft and control station configurations to be tailored to fit mission needs.

The MQ-1 aircraft is a single-engine, propeller-driven, remotely piloted aircraft (formerly called unmanned aerial vehicle) designed to operate over-the-horizon at medium altitude for long endurance sorties. The aircraft is designed to provide real-time Intelligence, Surveillance, Reconnaissance, and Target Acquisition (ISR TA), and attack roles to aggressively prosecute Time Sensitive Targets (TST). The MQ-1 will operate primarily at medium altitudes, integrating with joint aerospace, ground, and maritime forces as well as coalition and Allied forces, to execute combatant commander priority missions. The aircraft carries a Multi-spectral Targeting System (MTS) (a sensor turret that incorporates electro-optical (EO), Infra-Red (IR), laser designator, and IR illuminator) capable of transmitting real-time motion imagery throughout the operational theater. The program will develop and integrate Target Location Accuracy and Metric Sensor improvements. Additionally, the aircraft is multi-configurable to carry either a Synthetic Aperture Radar (SAR) or Hellfire laser-guided missiles. The MQ-1 system will continue to evolve and upgrade its capabilities (which may include SIGINT, hyper-spectral sensors, communications, Target Location Accuracy and other sensor packages) to satisfy capability shortfalls, new requirements and reliability and maintainability (R&M) and safety issues. The program will add a capability to use Ka-band MILSATCOM. Major changes will be classified as distinct blocks or Mission Design Series updates.

The Ground Control Station (GCS) functions as the aircraft cockpit and can control the aircraft either within line-of-sight (LOS) or beyond LOS (BLOS) via a combination of satellite relay and terrestrial communications. The GCS is either mobile to support forward operating locations or fixed at a facility to support Remote Split Operations (RSO). The GCS has the capability to perform mission planning; provide a means for manual and/or autonomous control, and a GCS configuration to allow control of multiple aircraft and payloads; allow personnel to launch, recover, and monitor aircraft, payloads, and system communications status; secure data links to receive payload sensor data and command links; monitor threats to the aircraft; display common operation picture; and provide support functions. Additionally, a Launch and Recovery GCS (LRGCS) allows for servicing, systems checks, maintaining, launching, and recovering aircraft under LOS control for hand-off to a mobile or fixed facility GCS. The GCS will continue to evolve and upgrade its capabilities to keep pace with MQ-1 aircraft capabilities and the missions they perform.

This program will participate in the development, testing, and implementation of various standards to pursue joint, Allied, and coalition interoperability. These include

FAA, Congressional, or OSD mandated standards; as well as international standards, including NATO standardization agreements.

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

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	67.885	22.296	15.864
(U)	Current PBR/President's Budget	77.885	33.781	24.773
(U)	Total Adjustments	10.000	11.485	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.215	
	Congressional Increases	20.000	11.700	
	Reprogrammings	-10.000		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

The MQ-9 Program moved to PE 0205219F in FY08.

Congress added $11.7M of RDT&E funding to MQ-1 PE in FY08: $5.0M for mulit-sensor detect, see, and avoid; $3.5M for Integrator Unmanned Aircraft System advanced concept development; and $3.2M for Center of Defense UAV Education.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305219F PREDATOR DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5143 Predator	

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5143 Predator	77.885	33.781	24.773	21.039	20.722	21.117	21.538	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

FY2007 funding total includes $20M in GWOT supplemental.
FY2007 includes funding for both the MQ-1 and MQ-9.
The MQ-9 Program moved to PE 0205219F in FY08. Historical MQ-9 accomplishments remain in this document.

(U) A. Mission Description and Budget Item Justification

The basic MQ-1 system consists of the aircraft, a control station, communications equipment, support equipment, simulator and training devices, Readiness Spares Packages (RSP), technical data/training, and personnel required to operate, maintain, and sustain the system. The system is designed to be modular and open-ended: mission-specific equipment is employed in a 'plug-and-play' mission kit concept allowing specific aircraft and control station configurations to be tailored to fit mission needs.

The MQ-1 aircraft is a single-engine, propeller-driven, remotely piloted aircraft (formerly called unmanned aerial vehicle) designed to operate over-the-horizon at medium altitude for long endurance sorties. The aircraft is designed to provide real-time Intelligence, Surveillance, Reconnaissance, and Target Acquisition (ISR TA), and attack roles to aggressively prosecute Time Sensitive Targets (TST). The MQ-1 will operate primarily at medium altitudes, integrating with joint aerospace, ground, and maritime forces as well as coalition and Allied forces, to execute combatant commander priority missions. The aircraft carries a Multi-spectral Targeting System (MTS) (a sensor turret that incorporates electro-optical (EO), Infra-Red (IR), laser designator, and IR illuminator) capable of transmitting real-time motion imagery throughout the operational theater. The program will develop and integrate Target Location Accuracy and Metric Sensor improvements. Additionally, the aircraft is multi-configurable to carry either a Synthetic Aperture Radar (SAR) or Hellfire laser-guided missiles. The MQ-1 system will continue to evolve and upgrade its capabilities (which may include SIGINT, hyper-spectral sensors, communications, Target Location Accuracy and other sensor packages) to satisfy capability shortfalls, new requirements and reliability and maintainability (R&M) and safety issues. The program will add a capability to use Ka-band MILSATCOM. Major changes will be classified as distinct blocks or Mission Design Series updates.

The Ground Control Station (GCS) functions as the aircraft cockpit and can control the aircraft either within line-of-sight (LOS) or beyond LOS (BLOS) via a combination of satellite relay and terrestrial communications. The GCS is either mobile to support forward operating locations or fixed at a facility to support Remote Split Operations (RSO). The GCS has the capability to perform mission planning; provide a means for manual and/or autonomous control, and a GCS configuration to allow control of multiple aircraft and payloads; allow personnel to launch, recover, and monitor aircraft, payloads, and system communications status; secure data links to receive payload sensor data and command links; monitor threats to the aircraft; display common operation picture; and provide support functions. Additionally, a Launch and Recovery GCS (LRGCS) allows for servicing, systems checks, maintaining, launching, and recovering aircraft under LOS control for hand-off to a mobile or fixed facility GCS. The GCS will continue to evolve and upgrade its capabilities to keep pace with MQ-1 aircraft capabilities and the missions they perform.

This program will participate in the development, testing, and implementation of various standards to pursue joint, Allied, and coalition interoperability. These include

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305219F PREDATOR DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5143 Predator

FAA, Congressional, or OSD mandated standards; as well as international standards, including NATO standardization agreements.

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

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	* MQ-1/MQ-9 Pre-planned Product Improvement. Includes advanced capabilities (such as multiple aircraft control/operations), engine and landing gear upgrades, sensor and radar development/integration, quick reaction capabilities, payload development/integration, weaponization and experimentation, data link upgrades (including encryption and tactical common data link (TCDL)), mission planning, simulator/training devices, and ground station and communication equipment development/upgrades. * MQ-9 data is historical for FY07. FY08 and FY09 data is MQ-1-only.	15.315	15.102	9.591
(U)	MQ-1 Video Verification and Identification (VIVID)			
(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.	14.815		
(U)	Concept Studies (SAFTAS Contractor Support for UAS Task Force)	1.404		
(U)	Developmental and Operational Test support (includes SATCOM, Flight Test, Urgent Services)	10.068	5.523	5.042
(U)	Operator Simulator/Training	5.795	0.156	0.100
(U)	Field Support	1.300		
(U)	MQ-1 TLA/Metric Sensor	7.488	1.300	1.000
(U)	Sense and Avoid for Predator (Congressional Add)	1.000	5.000	
(U)	Selectively Targeted Skeet Munition (Congressional Add)	1.000		
(U)	Center for Defense UAV Education (Congressional Add)	3.000	3.200	
(U)	Scan Eagle Advanced Concepts Development (Congressional Add)	1.700		
(U)	Integrator UAS Advanced Concept Develpment (Congressional Add)		3.500	
(U)	ASIP - GWOT Supplemental	15.000		
(U)	Ka Migration			9.040
(U)	Total Cost	77.885	33.781	24.773

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305219F PREDATOR DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5143 Predator

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other APPN									
(U) Aircraft Procurement, AF (PE 0305219F)	676.148	276.120	378.703	247.736	149.131	131.817	109.904	Continuing	TBD
(U) Aircraft Modification, AF (PE 0305219F)	57.385	74.187	148.532	138.944	137.522	101.277	100.131	Continuing	TBD

(U) D. Acquisition Strategy

The MQ-1 Predator system will be acquired sole-source with General Atomics-ASI as the prime contractor.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
MQ-1/MQ-9 Development	SS/CPIF/CPFF	General Atomics-ASI, Rancho Bernardo CA		30.130	Feb-07	15.102	Feb-08	9.591	Feb-09	Continuing	TBD	TBD
Operator Simulator	CPFF	677 AESG, Wright-Patterson AFB OH		5.795	Dec-06	0.156	Feb-08	0.100	Feb-09	Continuing	TBD	15.955
Target Location Accuracy	Various	Raytheon, McKinney TX		7.488		1.300	May-08	1.000	Apr-09	Continuing	TBD	TBD
Congressional Adds and ASIP GWOT Supplemental	Various	Various		21.700	Nov-07	11.700				0.000	33.400	9.200
Ka Migration	CPFF	L3 Comm, Salt Lake City						9.040	Apr-09	Continuing	TBD	18.000
Subtotal Product Development			0.000	65.113		28.258		19.731		Continuing	TBD	TBD
Remarks:												
(U) Support												
Field Support	SS/T&M	ASC, Wright-Patterson AFB OH		1.300	Feb-07					Continuing	TBD	TBD
Subtotal Support			0.000	1.300		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Development and Operational Test Support	Various	Various		10.068	Feb-07	5.523	Jun-08	5.042	Feb-09	Continuing	TBD	TBD
Concept Studies	AF 616	Various		1.404	Feb-08						1.404	
Subtotal Test & Evaluation			0.000	11.472		5.523		5.042		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	77.885		33.781		24.773		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305219F PREDATOR DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE 5143 Predator

MQ-1 Predator Schedule

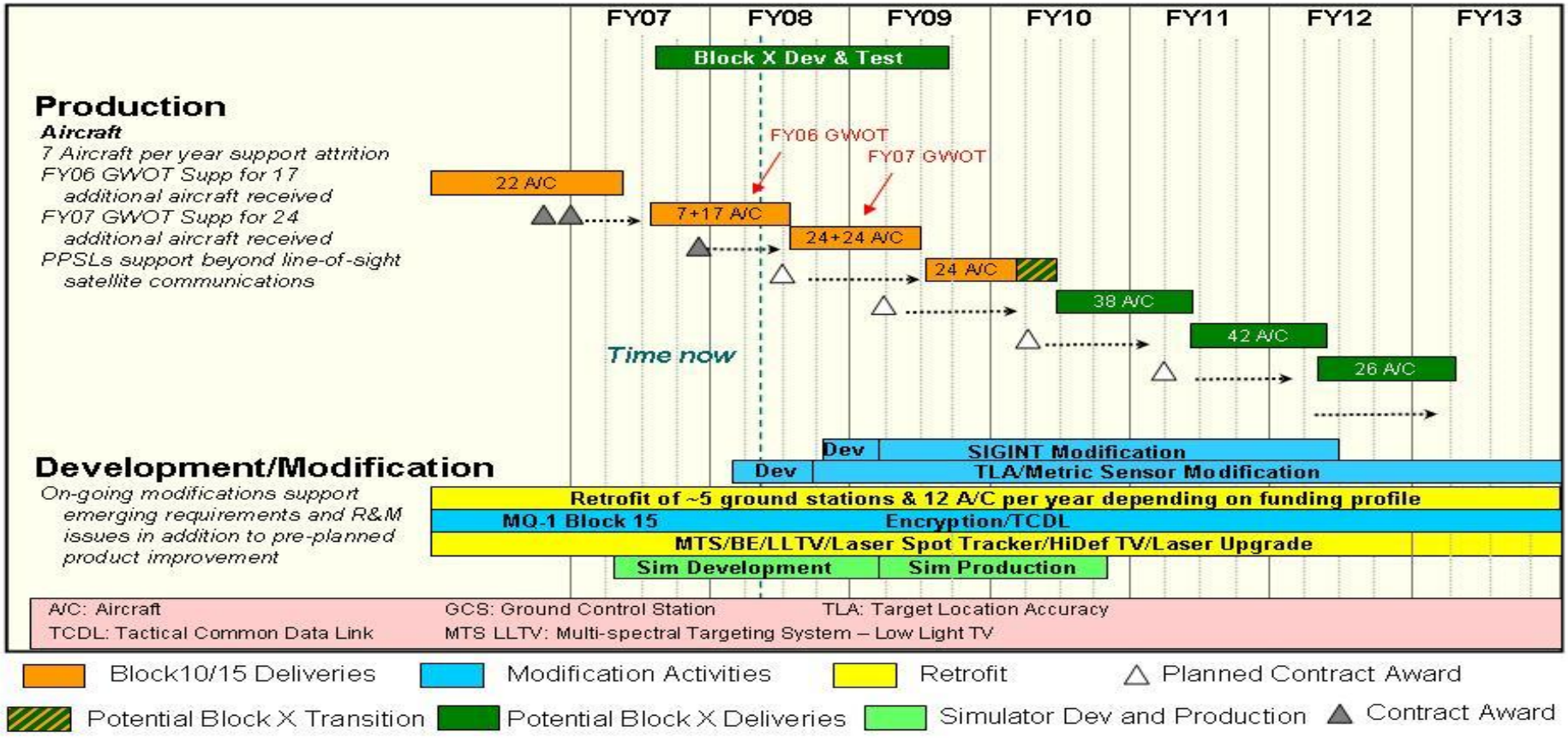

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305219F PREDATOR DEVELOPMENT/FIELDING**	PROJECT NUMBER AND TITLE **5143 Predator**

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) MQ-1 Simulator Development Complete			1Q
(U) MQ-9 Risk Reduction Complete	4Q		
(U) Improved Target Location Accuracy Development Complete		3Q	
(U) SIGINT Payload Integration Complete			1Q

PE NUMBER: 0305220F
PE TITLE: GLOBAL HAWK DEVELOPMENT/FIELDING

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	224.126	274.742	284.292	243.947	195.879	168.696	170.651	Continuing	TBD
5144 Global Hawk	224.126	274.742	284.292	243.947	195.879	168.696	170.651	Continuing	TBD

(U) Footnote: FY2008 funding totals do not include $0.8M FY2008 GWoT requirements still pending Congressional consideration

(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 compliments space and other airborne collectors during peacetime, crisis, and war-fighting scenarios.

This funding is procuring the highly capable Global Hawk System, which is comprised of aircraft, payloads, ground segment, and support segment. The aircraft is an autonomous, high altitude, long endurance, unmanned aircraft systems (UAS). The RQ-4A is an imagery-intelligence (IMINT) UAS designed to employ 2000 pounds of payload. The RQ-4A has one configuration known as the Block 10. The Block 10 employs an IMINT system comprised of a synthetic aperture radar (SAR) sensor and an electro-optical (EO) / infrared (IR) sensor. These three sensors are called the integrated sensor suite (ISS). The RQ-4B UAS is designed to employ 3000 pounds of payload and enable multi-intelligence (multi-INT) collecting. The RQ-4B has three configurations: Block 20, Block 30, and Block 40. The Block 20 will employ upgraded SAR and EO/IR sensors known as the enhanced ISS (EISS) in an IMINT only configuration. The Block 30 will employ the same EISS sensors as the Block 20 and will also integrate a wide spectrum signals intelligence (SIGINT) sensor called the Advanced Signals Intelligence Program (ASIP) sensor used simultaneously to create a multi-INT platform. The Block 40 will integrate the multi-platform radar technology insertion program (MP-RTIP) radar sensor, and currently plans to only carry the MP-RTIP sensor. The user will ultimately determine the optimal mix of quantities and payloads for each aircraft configuration based on operational requirements. The ground station (GS) includes the mission control element (MCE) and the launch and recovery element (LRE). The support segment includes aerospace ground equipment, tech orders, spares, support equipment, and training to enable operation of the Global Hawk System.

The Global Hawk program went through a Title 10, Section 2433 review in 2006, due to a unit cost breach (informally known as Nunn-McCurdy breach). The Department certified the program to Congress on June 5th, 2006. As a result of the review, the Department directed a program restructure to slow development, cap the low rate initial production (LRIP) at 5 per year, and reduce risk. LRIP will remain at 5 per year until successful completion of the initial operational test and evaluation (IOT&E).

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 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	247.726	298.501	317.764
(U)	Current PBR/President's Budget	224.126	274.742	284.292
(U)	Total Adjustments	-23.600	-23.759	
(U)	Congressional Program Reductions		-15.006	
	Congressional Rescissions		-1.753	
	Congressional Increases			
	Reprogrammings	-23.600	-7.000	
	SBIR/STTR Transfer			

(U) Significant Program Changes:

In FY2008, $15M was cut from the program due to perceived future execution shortfalls. An additional $7M was transferred to Global Hawk production budget to fund spares for systems currently employed in the Global War on Terror.

In FY2009, $31M was reprogrammed to the ASIP PE to fund development tasks for ASIP operational-level sustainment.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5144 Global Hawk	224.126	274.742	284.292	243.947	195.879	168.696	170.651	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) Footnote: FY2008 funding totals do not include $0.8M FY2008 GWoT requirements still pending Congressional consideration

(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 compliments space and other airborne collectors during peacetime, crisis, and war-fighting scenarios.

This funding is procuring the highly capable Global Hawk System, which is comprised of aircraft, payloads, ground segment, and support segment. The aircraft is an autonomous, high altitude, long endurance, unmanned aircraft systems (UAS). The RQ-4A is an imagery-intelligence (IMINT) UAS designed to employ 2000 pounds of payload. The RQ-4A has one configuration known as the Block 10. The Block 10 employs an IMINT system comprised of a synthetic aperture radar (SAR) sensor and an electro-optical (EO) / infrared (IR) sensor. These three sensors are called the integrated sensor suite (ISS). The RQ-4B UAS is designed to employ 3000 pounds of payload and enable multi-intelligence (multi-INT) collecting. The RQ-4B has three configurations: Block 20, Block 30, and Block 40. The Block 20 will employ upgraded SAR and EO/IR sensors known as the enhanced ISS (EISS) in an IMINT only configuration. The Block 30 will employ the same EISS sensors as the Block 20 and will also integrate a wide spectrum signals intelligence (SIGINT) sensor called the Advanced Signals Intelligence Program (ASIP) sensor used simultaneously to create a multi-INT platform. The Block 40 will integrate the multi-platform radar technology insertion program (MP-RTIP) radar sensor, and currently plans to only carry the MP-RTIP sensor. The user will ultimately determine the optimal mix of quantities and payloads for each aircraft configuration based on operational requirements. The ground station (GS) includes the mission control element (MCE) and the launch and recovery element (LRE). The support segment includes aerospace ground equipment, tech orders, spares, support equipment, and training to enable operation of the Global Hawk System.

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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-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5144 Global Hawk

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

		FY 2007	FY 2008	FY 2009
(U)	Continue modernization and related tasks, to satisfy Capabilities Description Document requirements.			
(U)	Aircraft	23.865	15.660	23.066
(U)	Payloads	40.954	40.608	37.580
(U)	Ground Segment	28.519	24.249	36.564
(U)	Communications	7.420	19.271	18.841
(U)	Support Segment	32.098	62.123	71.651
(U)	Block Load (System Engineering, Program Management, Flight test support, and software maintenance)	58.075	75.648	68.091
(U)	AFFTC	8.940	15.600	13.093
(U)	Other Government Costs & Mission Support	16.271	17.234	13.906
(U)	Multi-Platform Radar Technology Improvement Program (MP-RTIP) sensor adaptation	7.684		
(U)	Fielding Strategy Acceleration	0.300	4.349	1.500
(U)	Total Cost	224.126	274.742	284.292

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	* Airborne SIGINT Enterprise, AF RDT&E (PE 34260F)	10.480	10.817	41.917	34.598	20.495	11.708	11.944	Continuing	TBD
(U)	Joint Tactical Radio System, AF RDT&E (PE 27423F)	16.003	4.580	1.327	20.059	23.937	24.396	24.887	Continuing	TBD
(U)	Other APPN									
(U)	AF MILCON	49.450								
(U)	AF O&M	99.711	81.757	104.097	180.609	160.570	172.431	176.491	Continuing	TBD
(U)	AF MILPERS	29.851	42.541	54.530	59.500	61.253	73.984	87.111	Continuing	TBD
(U)	Aircraft Procurement, APPN 10 AF (HAE UAV)	442.614	580.892	712.151	516.988	533.490	558.673	475.061	Continuing	TBD
(U)	Aircraft Procurement, APPN 11 AF (HAE UAV)	7.507	25.756	103.939	109.850	127.453	109.553	57.047	Continuing	TBD
(U)	Other Procurement, 3080 (HAE UAV)		0.811	0.298						
(U)	Weapons System Initial Spares		6.953							

* Funds in the Global Hawk Development program were reprogrammed to the SIGINT Enterprise PE (FY09 $31.1M, FY10 $23.5M, FY11 $9.1M)

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305220F GLOBAL HAWK DEVELOPMENT/FIELDING**	PROJECT NUMBER AND TITLE **5144 Global Hawk**

(U) D. Acquisition Strategy

The Global Hawk program uses a modernization 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 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
EMD	SS/CPAF	Northrop Grumman Integrated Systems, San Diego, CA	458.775	186.988	Feb-07	237.107	Feb-08	251.375	Feb-09	Continuing	TBD	TBD
MP-RTIP Adaptation	SS/CPAF	Northrop Grumman Integrated Systems, El Segundo, CA	52.842	7.684	Jan-07					0.000	60.526	60.526
ASIP	SS/CPAF	Northrop Grumman Electronic Systems Laboratory, San Jose, CA	69.074							0.000	69.074	69.074
Subtotal Product Development			580.691	194.672		237.107		251.375		Continuing	TBD	TBD
Remarks:												
(U) Support												
Contractor Program Support	SS/CPFF	Northrop Grumman Integrated Systems, San Diego, CA	5.508	4.243	Jan-07	4.800	Jan-08	5.918	Jan-09	Continuing	TBD	TBD
Government Program Support	Various	Various Government Organizations	8.066	6.135	Dec-06	6.254	Dec-07	3.323	Dec-08	Continuing	TBD	TBD
Subtotal Support			13.574	10.378		11.054		9.241		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Flight Test & Evaluation	PO	AFFTC, Edwards	20.672	8.940	Jan-07	15.600	Jan-08	13.093	Jan-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			20.672	8.940		15.600		13.093		Continuing	TBD	TBD
Remarks:												
(U) Management												
A&AS	PR	Various Contractors, Dayton, OH	13.456	7.965	Nov-06	8.647	Nov-07	9.502	Nov-08	Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

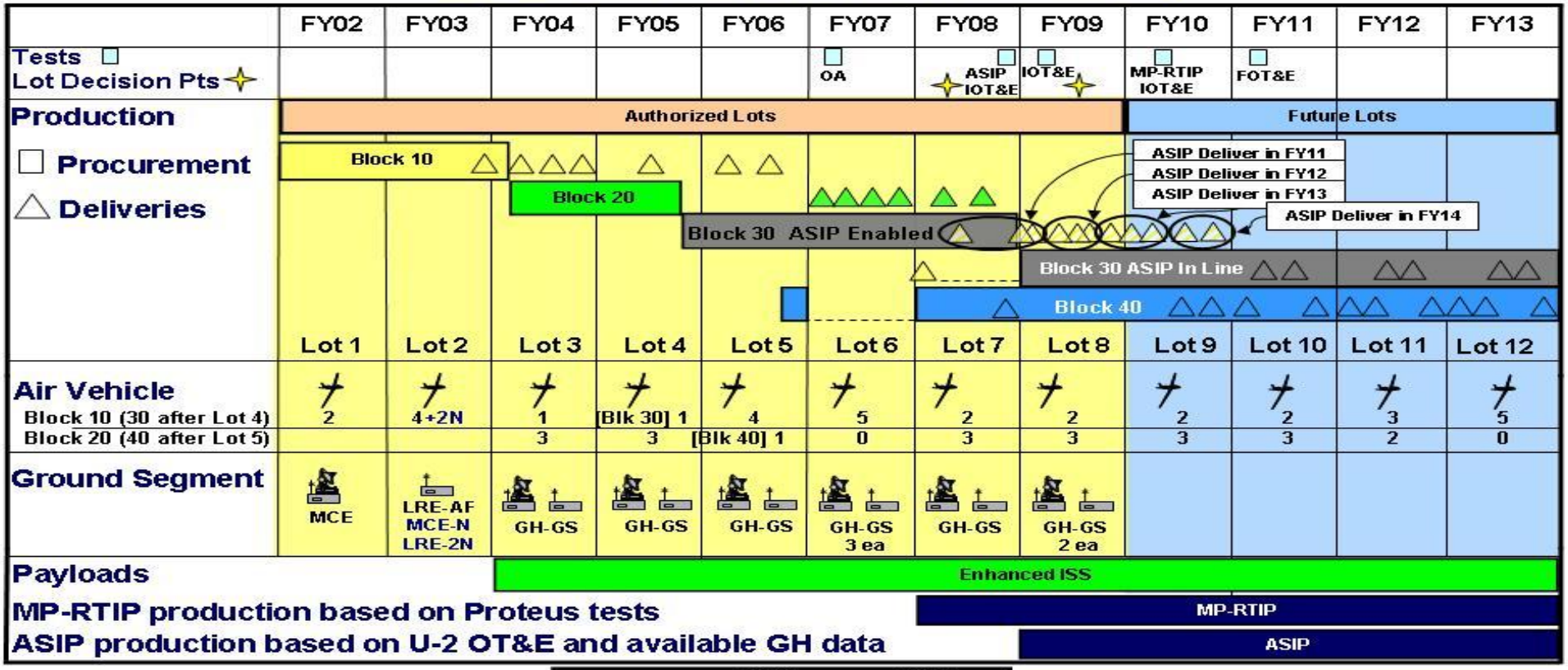
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305220F GLOBAL HAWK DEVELOPMENT/FIELDING**	**5144 Global Hawk**

	Other Government Organizations	Various	Various, Dayton, OH	8.300	2.171	2.334	1.081	Continuing	TBD	TBD
	Subtotal Management			21.756	10.136	10.981	10.583	Continuing	TBD	TBD
	Remarks:									
(U)	Total Cost			636.693	224.126	274.742	284.292	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5144 Global Hawk

Baselined Program

Dominant Air Power: Design For Tomorrow…Deliver Today



As of: 15 Oct 07

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305220F GLOBAL HAWK DEVELOPMENT/FIELDING**	PROJECT NUMBER AND TITLE **5144 Global Hawk**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) RQ-4B Block 20 First Flight	2Q		
(U) In-progress review	3Q		
(U) Block 40 Integration CDR		2Q	
(U) ASIP sensor delivers for integration with Block 30		1Q	
(U) Block 20 Operational Assessment		2Q	
(U) ASIP/Block 30 development test flights begin		2Q	
(U) Modernization Program Contract Award		2Q	
(U) Block 40 First Flight		4Q	
(U) Block 40 First Sensor Flight			1Q
(U) IOT&E			2Q

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PE NUMBER: 0305221F
PE TITLE: Network Centric Collaborative Targeting

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305221F Network Centric Collaborative Targeting

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	18.466	8.586	8.807	8.716	8.976	9.150	9.337	Continuing	TBD
5197 Core Technology	18.466	8.586	8.807	8.716	8.976	9.150	9.337	Continuing	TBD

In FY 2006, Project 675197, Network Centric Collaborative Targeting (NCCT), efforts were transferred from PE 0305206F, Airborne Reconnaissance Systems, Project 675038, NCCT, in order to transition NCCT capabilities from an Advanced Concept Technology Demonstration (ACTD) to an operational system fielding as a program of record.

In FY 2007, BPAC 675274, Information Operations Battle Management (IOBM) was added to the PE for all information operations related efforts to include Project SUTER Software suite development efforts. Previous years and current development efforts have been funding from programs outside this PE.

(U) A. Mission Description and Budget Item Justification

Network Centric Collaborative Targeting (NCCT) is the Air Force program of record for net-centric collaborative intelligence, surveillance and reconnaissance (ISR) operations. NCCT is a networked application that uses machine-to-machine interfaces and Internet Protocol (IP) connectivity to horizontally integrate Battle Management (BM)/Command and Control (C2)/ISR assets and systems to provide timely detection, identification, and geo-location of time-sensitive and high priority targets to combatant commanders and their forces. NCCT develops and deploys the capability to share multi-source, multi-INT sensor-level data, coordinate sensor activity, and provide rapidly correlated results between dissimilar BM/C2/ISR assets, systems and decision-making nodes. NCCT develops and refreshes software and hardware required for net-centric operations. NCCT supports participant program offices with development and fielding of BM/C2/ISR asset, system and decision-making node interfaces.

NCCT Core Technology develops the machine-to-machine hardware and software to horizontally integrate dissimilar BM/C2/ISR assets and systems to include, but is not limited to, RC-135 RIVET JOINT, RC-130 SENIOR SCOUT, E-8 Joint Surveillance and Target Attack Radar System (JSTARS), U-2/Deployable Common Ground System (DCGS), Falconer Air and Space Operations Center (AOC), and national systems. NCCT Core Technology includes, but is not limited to, network management software, operations interface, network messages and formats, correlation software and data rules of interaction, NCCT unique security hardware and software items, and platform specific Platform Interface Modules (PIMs). Core technology supports the Systems Integration Lab (SIL) used to test NCCT development, modification and PIMs. Core technology also supports Air Force and Joint experiments, demonstrations, and exercises as necessary.

Project SUTER Software (PSS) suite applies Air Force ISR, national agency, space, and Joint capabilities to bridge the gap between tomorrow's advanced networked threats and our ability to train and integrate our forces to fly and fight against these threats. Threat sensor and communication systems are being modified and fielded in compressed timelines as commercial advances are adopted in short (18 month or less) cycles. PSS attempts to lead turn threat networks by developing, fielding and rapidly transitioning concepts of operations (CONOPs); tactics, techniques and procedures (TTPs); Network Target Playbooks; and capabilities that address ISR and kinetic/non-kinetic networked options at all classification levels. Exercises provide an opportunity to train personnel in combined, distributed operations focused on the "Find, Fix, and Finish" process for high-value targets. Formal assessment and operator critiques, derived during constructive play and live fly/live fire events, will be used to make rapid fielding decisions. PSS will continue development to integrate latest generation, classified kinetic and non-kinetic weapons, advanced ISR and Joint/Coalition capabilities.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305221F Network Centric Collaborative Targeting

This program is categorized as Budget Activity 7 because it provides for development of technologies in support of operational system development. BPAC 675274 was established in FY 2007 for information operations and battle management purposes (IOBM) and to date has progressed to this point via funding from programs outside this PE.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	8.467	8.641	8.881
(U)	Current PBR/President's Budget	18.466	8.586	8.807
(U)	Total Adjustments	9.999		
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.084	
	Congressional Increases			
	Reprogrammings	10.237		
	SBIR/STTR Transfer	-0.238		

(U) Significant Program Changes:

$5.3M reprogrammed to maintain NCCT Core Technology schedule. $4.9M reprogrammed (flex-in for RCO initiative) for SAF Special Interest support to USSTRATCOM's XESSA initiative.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305221F Network Centric Collaborative Targeting	PROJECT NUMBER AND TITLE: 5197 Core Technology	

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5197 Core Technology	18.466	8.586	8.807	8.716	8.976	9.150	9.337	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Network Centric Collaborative Targeting (NCCT) is the Air Force program of record for net-centric collaborative intelligence, surveillance and reconnaissance (ISR) operations. NCCT is a networked application that uses machine-to-machine interfaces and Internet Protocol (IP) connectivity to horizontally integrate Battle Management (BM)/Command and Control (C2)/ISR assets and systems to provide timely detection, identification, and geo-location of time-sensitive and high priority targets to combatant commanders and their forces. NCCT develops and deploys the capability to share multi-source, multi-INT sensor-level data, coordinate sensor activity, and provide rapidly correlated results between dissimilar BM/C2/ISR assets, systems and decision-making nodes. NCCT develops and refreshes software and hardware required for net-centric operations. NCCT supports participant program offices with development and fielding of BM/C2/ISR asset, system and decision-making node interfaces.

NCCT Core Technology develops the machine-to-machine hardware and software to horizontally integrate dissimilar BM/C2/ISR assets and systems to include, but is not limited to, RC-135 RIVET JOINT, RC-130 SENIOR SCOUT, E-8 Joint Surveillance and Target Attack Radar System (JSTARS), U-2/Deployable Common Ground System (DCGS), Falconer Air and Space Operations Center (AOC), and national systems. NCCT Core Technology includes, but is not limited to, network management software, operations interface, network messages and formats, correlation software and data rules of interaction, NCCT unique security hardware and software items, and platform specific Platform Interface Modules (PIMs). Core technology supports the Systems Integration Lab (SIL) used to test NCCT development, modification and PIMs. Core technology also supports Air Force and Joint experiments, demonstrations, and exercises as necessary.

Project SUTER Software (PSS) suite applies Air Force ISR, national agency, space, and Joint capabilities to bridge the gap between tomorrow's advanced networked threats and our ability to train and integrate our forces to fly and fight against these threats. Threat sensor and communication systems are being modified and fielded in compressed timelines as commercial advances are adopted in short (18 month or less) cycles. PSS attempts to lead turn threat networks by developing, fielding and rapidly transitioning concepts of operations (CONOPs); tactics, techniques and procedures (TTPs); Network Target Playbooks; and capabilities that address ISR and kinetic/non-kinetic networked options at all classification levels. Exercises provide an opportunity to train personnel in combined, distributed operations focused on the "Find, Fix, and Finish" process for high-value targets. Formal assessment and operator critiques, derived during constructive play and live fly/live fire events, will be used to make rapid fielding decisions. PSS will continue development to integrate latest generation, classified kinetic and non-kinetic weapons, advanced ISR and Joint/Coalition capabilities.

This program is categorized as Budget Activity 7 because it provides for development of technologies in support of operational system development. BPAC 675274 was established in FY 2007 for information operations and battle management purposes (IOBM) and to date has progressed to this point via funding from programs outside this PE.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305221F Network Centric Collaborative Targeting	PROJECT NUMBER AND TITLE: 5197 Core Technology

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	NCCT Core Technology Development and Refresh	10.793	6.561	5.907
(U)	SAF/RCO Special Interest Support for USSTRATCOM's XESSA Initiative	4.937	0.000	0.000
(U)	Technical Support	0.591	0.986	1.300
(U)	Test and Evaluation	0.550	0.000	0.000
(U)	Management	1.595	1.039	1.600
(U)	Total Cost	18.466	8.586	8.807

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	PE 0305206F BPAC 675038	0.000	0.000	0.000	0.000	0.000	0.000	0.000		

(U) D. Acquisition Strategy

645 Aeronautical Systems Group (645 AESG), at Wright Patterson AFB OH, manages the Cost Plus Fixed Fee contract used to develop NCCT core technology. 645 AESG will provide NCCT software and common hardware to platforms for fielding. Individual platform offices (RIVET JOINT, AF DCGS, AOC, national systems) manage and may contract directly for Platform Interface Module (PIM) development and integration on their platforms.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Core Technology	CPFF	L3 ComCept / Rockwall, TX		10.793	Nov-06	6.561	Nov-07	5.907	Nov-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	10.793		6.561		5.907		Continuing	TBD	TBD
Remarks:												
(U) Technical Support												
Security Certification	Various	Various		0.591	Jan-07	0.986	Nov-07	1.300	Nov-08	Continuing	TBD	TBD
Subtotal Technical Support			0.000	0.591		0.986		1.300		Continuing	TBD	TBD
Remarks:												
(U) Test and Evaluation												
Operational Test	MIPR	605 TES		0.550	Nov-06	0.000	Nov-07	0.000	Nov-08	Continuing	TBD	TBD
Subtotal Test and Evaluation			0.000	0.550		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Management												
Program Office	Various	645 AESG / Wright-Patterson AFB, OH		1.595	Nov-06	1.039	Nov-07	1.600	Nov-08	Continuing	TBD	TBD
Other Government	MIPR	SAF/RCO & USSTRATCOM		4.937	Nov-06	0.000	Nov-07	0.000	Nov-08	Continuing	TBD	TBD
Subtotal Management			0.000	6.532		1.039		1.600		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	18.466		8.586		8.807		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305221F Network Centric Collaborative Targeting	PROJECT NUMBER AND TITLE: 5197 Core Technology

NCCT Development

Page 1 of 1 — 1/9/07

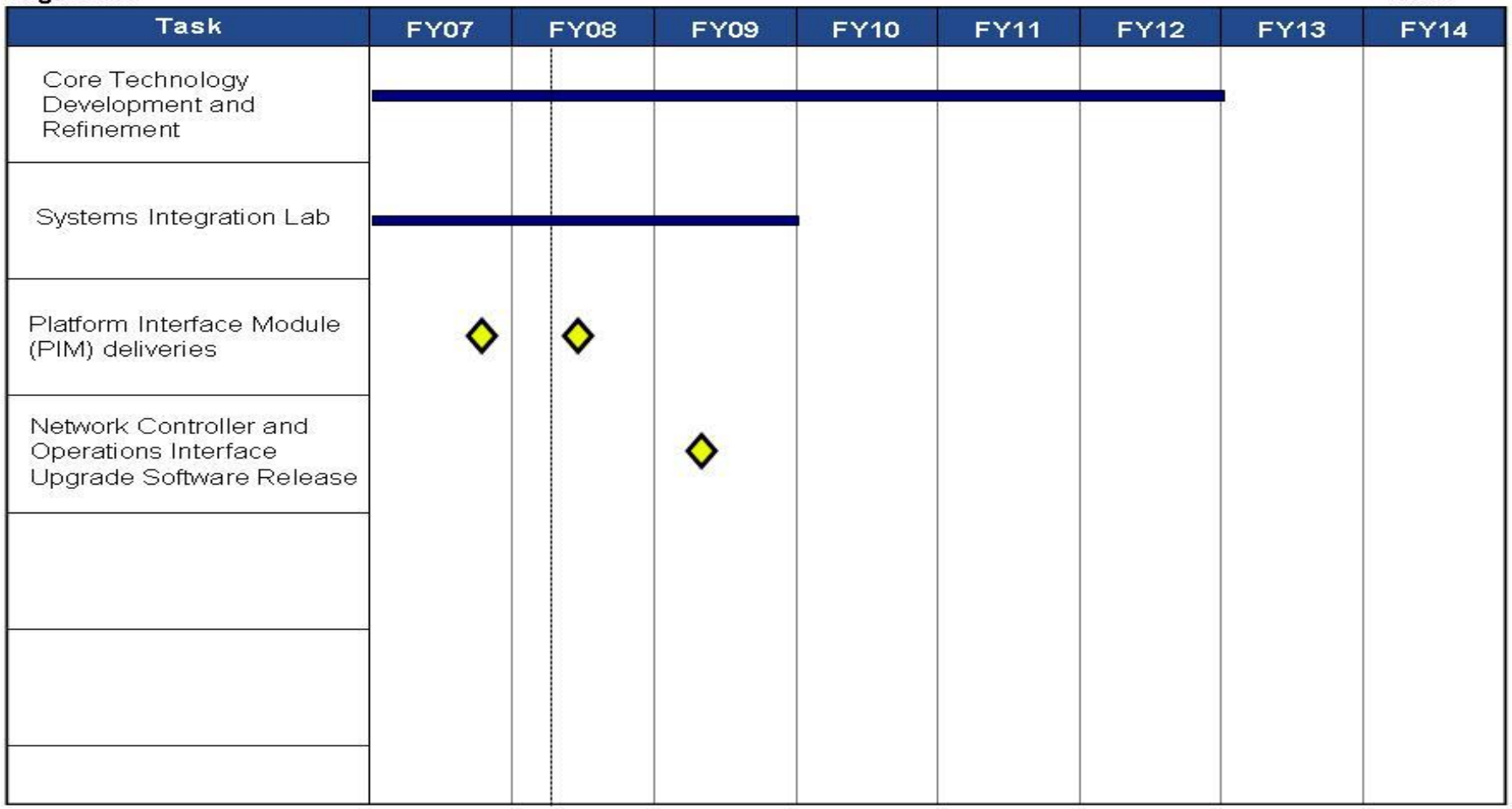

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305221F Network Centric Collaborative Targeting	PROJECT NUMBER AND TITLE: 5197 Core Technology

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) Continued Core Technology Development and Refinement	1-4Q	1-4Q	1-4Q
(U) Systems Integration Lab operation	1-4Q	1-4Q	1-4Q
(U) Platform Interface Module (PIM) deliveries	3Q	2Q	
(U) Network Controller and Operations Interface Upgrade Software Release			2Q

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PE NUMBER: 0305265F
PE TITLE: GPS III Space Segment

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305265F GPS III Space Segment

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	0.000	420.342	284.973	262.810	299.210	247.075	0.000	0.000
A019 GPS IIIA	0.000	0.000	420.342	284.973	262.810	299.210	247.075	0.000	0.000

(U) A. Mission Description and Budget Item Justification

The Global Positioning System (GPS) is a space based position, navigation and time (PNT) distribution system. This Program Element (PE) funds the Research and Development (R&D) for GPS IIIA space vehicles. This includes, but is not limited to, advanced concept development, systems engineering and analysis, user equipment interfaces, Integrated Logistics Support (ILS) products and developmental test resources.

Funds will support engineering studies and analyses, architectural engineering studies, technology needs forecasting, trade studies, systems engineering, system development, test and evaluation efforts and mission operations in support of upgrades and product improvements for military and civil applications necessary to support efforts to protect U.S. military and allies' use of GPS.

Funding in this PE was previously part of the GPS III PE 0603421F. In the FY09 PB, GPS III space funding is separated out into this dedicated space PE for increased visibility. Associated ground segment funding was moved from PE 0603421F into two additional PEs.

This program is Budget Activity 7 - Operational System Development.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.000	0.000	0.000
(U)	Current PBR/President's Budget	0.000	0.000	420.342
(U)	Total Adjustments	0.000		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

GPS IIIA funding transferred from PE 0604321F beginning in FY09.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305265F GPS III Space Segment

PROJECT NUMBER AND TITLE: A019 GPS IIIA

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
A019 GPS IIIA	0.000	0.000	420.342	284.973	262.810	299.210	247.075	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 Global Positioning System (GPS) is a space based position, navigation and time (PNT) distribution system. This Program Element (PE) funds the Research and Development (R&D) for GPS IIIA space vehicles. This includes, but is not limited to, advanced concept development, systems engineering and analysis, user equipment interfaces, Integrated Logistics Support (ILS) products and developmental test resources.

Funds will support engineering studies and analyses, architectural engineering studies, technology needs forecasting, trade studies, systems engineering, system development, test and evaluation efforts and mission operations in support of upgrades and product improvements for military and civil applications necessary to support efforts to protect U.S. military and allies' use of GPS.

Funding in this PE was previously part of the GPS III PE 0603421F. In the FY09 PB, GPS III space funding is separated out into this dedicated space PE for increased visibility. Associated ground segment funding was moved from PE 0603421F into two additional PEs.

This program is Budget Activity 7 - Operational System Development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) GPS IIIA Development	0.000	0.000	413.749
(U) Program Support	0.000	0.000	6.593
(U) Total Cost	0.000	0.000	420.342

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) PE 0603421F Global Positioning System (Project 644993; BA-04; R-38)	291.556	482.845	0.000	0.000	0.000	0.000	0.000	0.000	774.401
(U) PE 0305165F Navstar GPS (Space) (Project 673030; BA-07; R-179)	160.555	119.089	91.277	56.335	35.414	35.699	36.417	Continuing	TBD
(U) PE 0603427F GPS Control Segment Backwards	0.000	0.000	304.360	212.962	0.000	0.000	0.000	0.000	517.322

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305265F GPS III Space Segment	PROJECT NUMBER AND TITLE: A019 GPS IIIA	

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

	Compatibility (Project 64A022; BA-04; R-XX)									
(U)	PE 0603423F Global Positioning System III Operational Control Segment (Project 64A021; BA-04; R-XX)	0.000	0.000	2.975	236.734	359.524	330.812	310.996	Continuing	TBD
(U)	Other APPN									
(U)	Operations & Maintenance: PE 0305165F; BA-1; SAG 11M, 13D	62.936	77.264	83.326	92.168	98.214	100.103	102.492	Continuing	TBD
(U)	Missile Procurement: PE 030265F, BA-5, P-XX	0.000	0.000	0.000	0.000	139.484	650.029	482.004	Continuing	TBD
(U)	Missile Procurement PE 0305165F, BA 5, P-22, 23	84.576	207.826	110.443	167.801	355.160	66.553	297.178	Continuing	TBD
(U)	Other Procurement: PE 0305165F, BP 83, WSC 836790, P-71; 836730, P-70; BP 86, WSC 86190A, P-62	11.087	11.599	25.111	10.802	18.215	27.624	20.470	Continuing	TBD

(U) D. Acquisition Strategy

The Air Force is pusuing a "Block" approach to the GPS III next generation space segment to rapidly respond to warfighter capability requirements. The Block acquisition approach follows the "Back to Basics" space program acquisition philosophy which focuses on mitigating cost and schedule risk through a lower risk incremental delivery of mature technologies. This approach, consistent with the National Security Space (NSS) 03-01 Acquisition Policy, focuses on mission success and on time delivery. The first block of GPS III satellites, GPS IIIA, will have GPS IIF capabilities plus up to a 10 dB increase in military (M-code) signal power, a new L1C civil signal compatible with the European Galileo and a satellite bus capable of supporting Block B and C capability upgrades.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305265F GPS III Space Segment

PROJECT NUMBER AND TITLE: A019 GPS IIIA

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Block IIIA Development	TBD	TBD	0.000	0.000		0.000		378.162	Nov-08	Continuing	TBD	
SE&I (SAIC)	CPAF	Huntington Beach, CA	0.000	0.000		0.000		13.540	Nov-08	Continuing	TBD	
Modernization/SE & Technical Support	Various	Various	0.000	0.000		0.000		22.047	Nov-08	Continuing	TBD	
Subtotal Product Development			0.000	0.000		0.000		413.749		Continuing	TBD	0.000
Remarks:												
(U) Support												
Wing Support	Various	Various	0.000	0.000		0.000		6.284	Nov-08	Continuing	TBD	
Other Agency Support	Various	Various	0.000	0.000		0.000		0.309	Nov-08	Continuing	TBD	
Subtotal Support			0.000	0.000		0.000		6.593		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			0.000	0.000		0.000		420.342		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305265F GPS III Space Segment	PROJECT NUMBER AND TITLE: A019 GPS IIIA

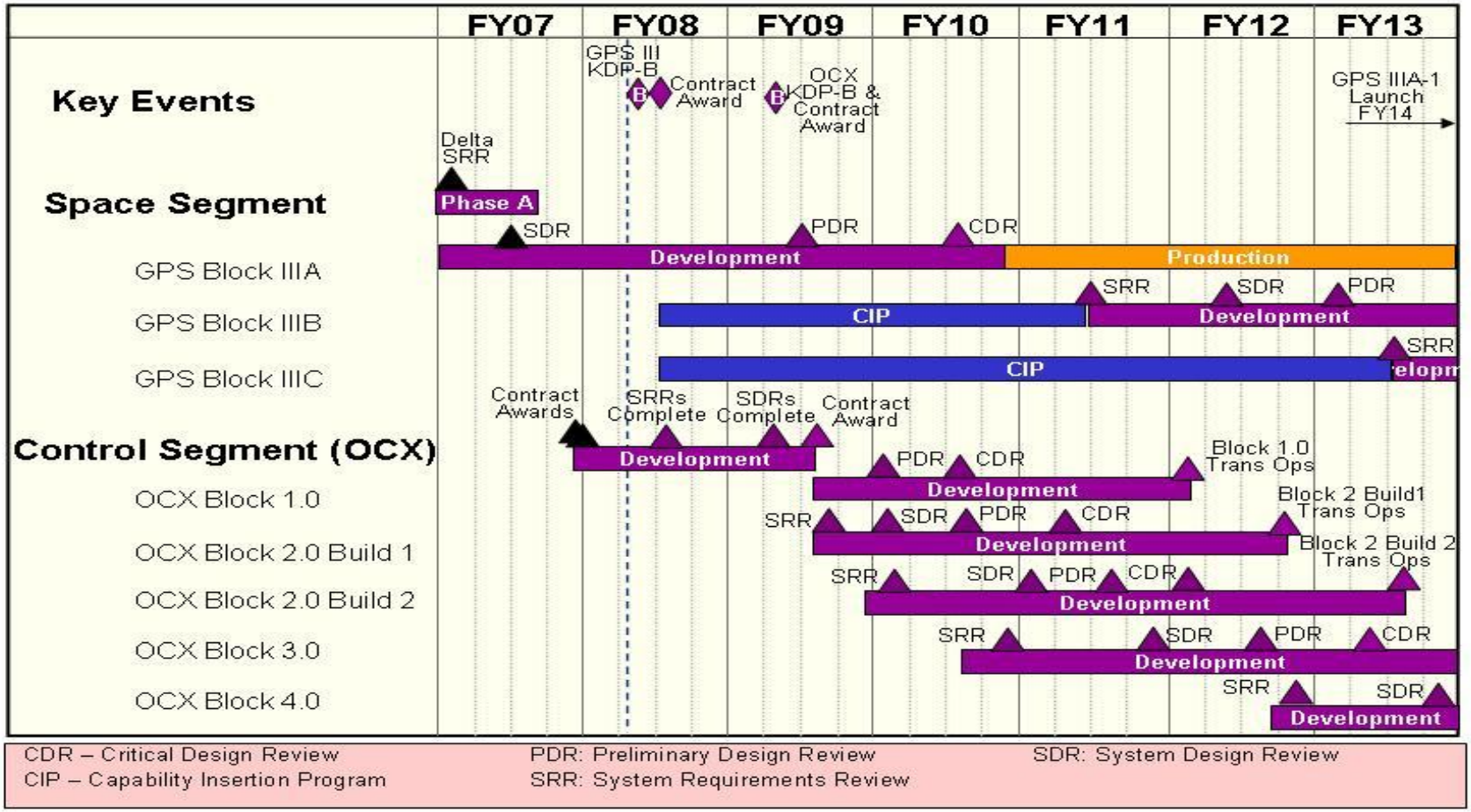

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305265F GPS III Space Segment**	PROJECT NUMBER AND TITLE **A019 GPS IIIA**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) GPS IIIA Preliminary Design Review (PDR)			3Q

PE NUMBER: 0305887F
PE TITLE: Electronic Combat Intelligence Support

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305887F Electronic Combat Intelligence Support

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	5.121	5.305	5.438	5.586	5.656	5.765	5.882	Continuing	TBD
0374	Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt	5.121	5.305	5.438	5.586	5.656	5.765	5.882	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

(U) This program expedites Information Superiority (IS) Technology transition from laboratory, industry, and academia to operational platforms via studies, rapid prototyping, technology demonstrations and other RDT&E efforts. Program efforts directly support the AF Information Operations Capabilities Plan (IOCP) and the DoD Information Operations (IO) Roadmap.

(U) The program office investigates and selects the highest potential Information Operations technologies to meet specific shortfalls and deficiencies documented by major commands (MAJCOMs), unified commands, and IO agencies in Mission Area Plans (MAPs) and capabilites documents. In accordance with Air Force Policy on Information Operations, the IS core capability areas to be considered are influence operations, electronic warfare operations and network warfare operations.

(U) Planned areas of study, prototyping, and demonstration, include but are not limited to, techniques and technologies for defending systems against sophisticated Information Superiority (IS) and computer network attacks. This will be done by exploiting Integrated Air Defense Systems (IADS), Command and Control Systems, and applying the latest advancements in emerging physics, communications, directed energy, electronic sensors, and intelligence to IS.

(U) The program office works directly with labs, industry, and warfighters 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 advanced IO studies to leverage current DoD laboratory research, concept exploration and joint concept technology demonstrations. Studies support or complement PE 0208021 Information Warfare Support. Program activities are protected under the PANTHER DEN Special Access Program. Data available upon request.

(U) This program is Budget Activity 7, Operational System Development, because it studies, develops, and fields IO technologies.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305887F Electronic Combat Intelligence Support

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	5.144	5.362	5.485
(U)	Current PBR/President's Budget	5.121	5.305	5.438
(U)	Total Adjustments	-0.023	-0.057	
(U)	Congressional Program Reductions			
	Congressional Rescissions	0.000	-0.057	
	Congressional Increases			
	Reprogrammings	-0.023		
	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 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
0374	Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt	5.121	5.305	5.438	5.586	5.656	5.765	5.882	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

(U) This program expedites Information Superiority (IS) Technology transition from laboratory, industry, and academia to operational platforms via studies, rapid prototyping, technology demonstrations and other RDT&E efforts. Program efforts directly support the AF Information Operations Capabilities Plan (IOCP) and the DoD Information Operations (IO) Roadmap.

(U) The program office investigates and selects the highest potential Information Operations technologies to meet specific shortfalls and deficiencies documented by major commands (MAJCOMs), unified commands, and IO agencies in Mission Area Plans (MAPs) and capabilites documents. In accordance with Air Force Policy on Information Operations, the IS core capability areas to be considered are influence operations, electronic warfare operations and network warfare operations.

(U) Planned areas of study, prototyping, and demonstration, include but are not limited to, techniques and technologies for defending systems against sophisticated Information Superiority (IS) and computer network attacks. This will be done by exploiting Integrated Air Defense Systems (IADS), Command and Control Systems, and applying the latest advancements in emerging physics, communications, directed energy, electronic sensors, and intelligence to IS.

(U) The program office works directly with labs, industry, and warfighters 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 advanced IO studies to leverage current DoD laboratory research, concept exploration and joint concept technology demonstrations. Studies support or complement PE 0208021 Information Warfare Support. Program activities are 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.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	The IO Technology Program provides security, systems engineering, rapid prototyping, and demonstrations of state-of-the-art IO technologies to meet the warfighters IO requirements. The IO Capabilities Team (IOCT) and the IO Capabilities Plan will be supported through these developmental efforts.	5.121	5.305	5.438
(U)	Total Cost	5.121	5.305	5.438

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305887F Electronic Combat Intelligence Support	PROJECT NUMBER AND TITLE: 0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) PE 0208021F Information Warfare Support	28.028	11.965	12.220	12.482	12.664	14.734	15.036	Continuing	TBD

(U) D. Acquisition Strategy

All major contracts within this program element are awarded after full and open competition unless other than full and open is justified to the Program Executive Officer (PEO).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Fielded System	T&M	Various, Lackland AFB, TX		2.345	Jan-07	2.446	Jan-08	2.509	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	2.345		2.446		2.509		Continuing	TBD	TBD
Remarks:												
(U) Support												
Security Support	A&AS	Various, LAFB, TX		1.369	Jan-07	1.203	Jan-08	1.240	Jan-09	Continuing	TBD	
Engineering Support	FFRDC	MITRE, Bedford MA		0.510	Oct-06	0.644	Oct-07	0.721	Oct-08	Continuing	TBD	TBD
Subtotal Support			0.000	1.879		1.847		1.961		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Funded Via Platform Program Offices	MASKED (SPECIAL ACCESS REQUIRED)	MASKED (SPECIAL ACCESS REQUIRED)		0.643		0.693		0.653		Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.643		0.693		0.653		Continuing	TBD	TBD
Remarks:												
(U) Management												
Operating Costs		950th ELSG, Hanscom AFB MA		0.254	Sep-07	0.319	Sep-08	0.315	Sep-09	Continuing	TBD	TBD
Subtotal Management			0.000	0.254		0.319		0.315		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	5.121		5.305		5.438		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305887F Electronic Combat Intelligence Support**	PROJECT NUMBER AND TITLE **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

PANTHER DEN Schedule

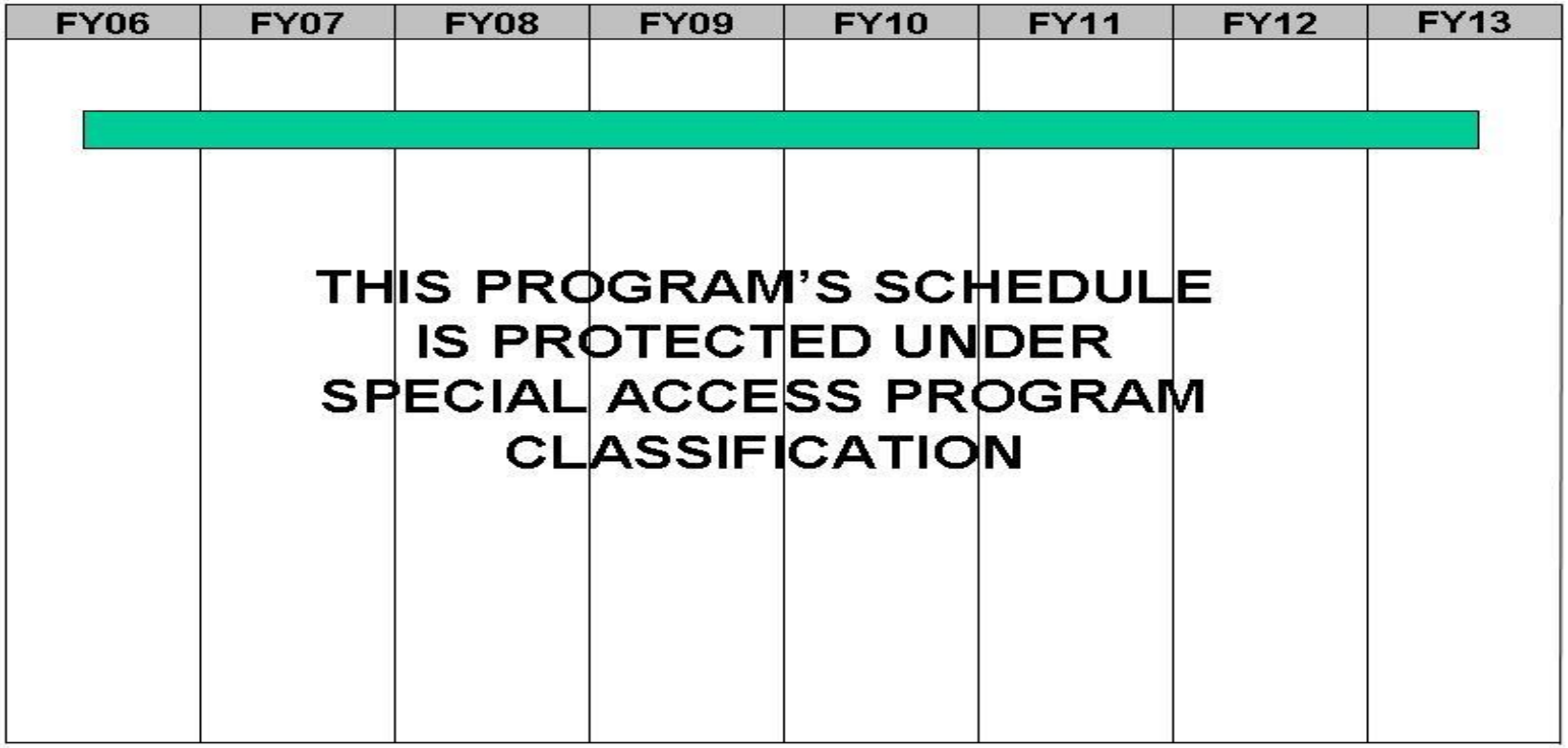

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305887F Electronic Combat Intelligence Support**	PROJECT NUMBER AND TITLE **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Program schedules are protected under Special Access Program classification	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0305906F
PE TITLE: NCMC - TW/AA System

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305906F NCMC - TW/AA System

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	42.152	11.720	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4806	Combatant Commanders' Integrated Command and Control System (CCIC2S)	42.152	11.720	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Combatant Commander's Integrated Command and Control System (CCIC2S) provides the future standards-based, interoperable architecture for a North American Aerospace Defense Command/US Strategic Command (NORAD/USSTRATCOM) Battle Management/C4I system of systems that complies with the Network Centric Enterprise Services, Joint Technical Architecture standards and provides for DoD/Joint Command and Control (C2) interoperability. CCIC2S initially addressed all NORAD and selected USSTRATCOM missions including the Integrated Tactical Warning/Attack Assessment of missile, space, and air threats, and Space Battle Management. CCIC2S will provide NORAD Commander and Combatant Commander USSTRATCOM a C2 system that is interoperable with the NORAD/USSTRATCOM warfighting functions and supporting/supported Combatant Commanders. CCIC2S has the flexibility to enable it to meet evolving mission needs (e.g.,Space-Based Infrared System, Command and Control Battle Management and Communications, Computer Network Defense and Information Operations). The CCIC2S operational architecture will allow Combatant Commanders to better monitor world situations, make threat assessments, formulate Courses of Action, and develop force direction for synchronized warfighter operations.

This program element is in Budget Activity 7, Operational System Development, because the projects in this program element support development acquisition programs or upgrades in support of operational systems.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	43.271	11.882	0.330
(U)	Current PBR/President's Budget	42.152	11.720	0.000
(U)	Total Adjustments	-1.119		
(U)	Congressional Program Reductions		0.087	
	Congressional Rescissions		0.075	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-1.119		

(U) Significant Program Changes:

The Space Surveillance and Warning FY08-13 portion of the CCIC2S program has been transferred to PE 64425F. The Space C2 (FY08-13) portion of the CCIC2S program has been transferred to PE27410F to provide an integrated approach to Air & Space C2.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4806	Combatant Commanders' Integrated Command and Control System (CCIC2S)	42.152	11.720	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

Combatant Commander's Integrated Command and Control System (CCIC2S) provides the future standards-based, interoperable architecture for a North American Aerospace Defense Command/US Strategic Command (NORAD/USSTRATCOM) Battle Management/C4I system of systems that complies with the Network Centric Enterprise Services, Joint Technical Architecture standards and provides for DoD/Joint Command and Control (C2) interoperability. CCIC2S initially addressed all NORAD and selected USSTRATCOM missions including the Integrated Tactical Warning/Attack Assessment of missile, space, and air threats, and Space Battle Management. CCIC2S will provide NORAD Commander and Combatant Commander USSTRATCOM a C2 system that is interoperable with the NORAD/USSTRATCOM warfighting functions and supporting/supported Combatant Commanders. CCIC2S has the flexibility to enable it to meet evolving mission needs (e.g.,Space-Based Infrared System, Command and Control Battle Management and Communications, Computer Network Defense and Information Operations). The CCIC2S operational architecture will allow Combatant Commanders to better monitor world situations, make threat assessments, formulate Courses of Action, and develop force direction for synchronized warfighter operations.

This program element is in Budget Activity 7, Operational System Development, because the projects in this program element support development acquisition programs or upgrades in support of operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Core C2 Services: Continue enterprise network infrastructure (Core C2) development to support mission elements. The infrasture is comprised of systems operations and enterprise services (database, workstations, security information assurance, and scenario services). Additionally, the communications systems upgrade, which provides critical data to the USSTRATCOM Joint Space Operations Center (JSpOC) and replaces the unsupportable legacy Communication System Segment Replacement (CSSR) will be completed in FY08.	28.722	11.720	0.000
(U) Missile Mission Development/Test: Missile Warning mission capability was delivered in Dec 06 providing Global Command and Control System (GCCS)-based core missile warning capability adaptable to operating locations and interoperable with other National Command Centers. Missile monitoring and status tools, theater event displays, and simulated threat environments for improved training capability were also delivered.	8.836		
(U) Space Surveillance and Warning: Development efforts (FY08-13) transferred to PE 64425F.			
(U) Single Integrated Space Picture (SISP): develops prototype net-centric space services to present an integrated space User Defined Operational Picture (UDOP). This Space UDOP will contain relevant space data that allows space	4.594		

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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 2007	FY 2008	FY 2009
	commanders to know status of Blue, Red, and Grey space forces, recognize and understand the impacts of space events, and facilitate command of their space forces to support global and theater operations. Delivers multiple prototypes and operational pilots that utilize rapid development principles to obtain continuous user feedback. Reduces technical risk to future Space C2 System.			
(U)	Total Cost	42.152	11.720	0.000

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Other APPN									
(U)	OPAF (PE 0305906F, Cheyenne Mountain Complex, P-1 Line Item #42, BA 3)	6.881	14.341	9.420	18.918	19.200	19.575	19.962	Continuing	TBD
(U)	OPAF (PE 0305906F, Spares and Repair Parts, P-1 Line Item #104, BA 5)	0.700	0.725	0.743	0.756	0.765	0.780	0.796	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 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305906F NCMC - TW/AA System**

PROJECT NUMBER AND TITLE: **4806 Combatant Commanders' Integrated Command and Control System (CCIC2S)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Lockheed Martin	CP/AF	Colorado Springs, CO Lockheed Martin (Denver, CO)		35.578	Oct-06	9.040	Oct-07				44.618	TBD
											0.000	
Subtotal Product Development			0.000	35.578		9.040		0.000		0.000	44.618	TBD
Remarks:												
(U) Support												
MITRE	CP/FF	Colorado Springs, CO		2.578	Nov-06	0.315	Nov-07				2.893	TBD
A&AS	CP/FF	various, Colorado Springs, CO		3.220	Nov-06	1.958	Nov-07				5.178	TBD
Program Support	Various	various, Colorado Springs, CO		0.776	Nov-06	0.407	Nov-07	0.000	Nov-08		1.183	TBD
											0.000	
Subtotal Support			0.000	6.574		2.680		0.000		0.000	9.254	TBD
Remarks:												
(U) Total Cost			0.000	42.152		11.720		0.000		0.000	53.872	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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

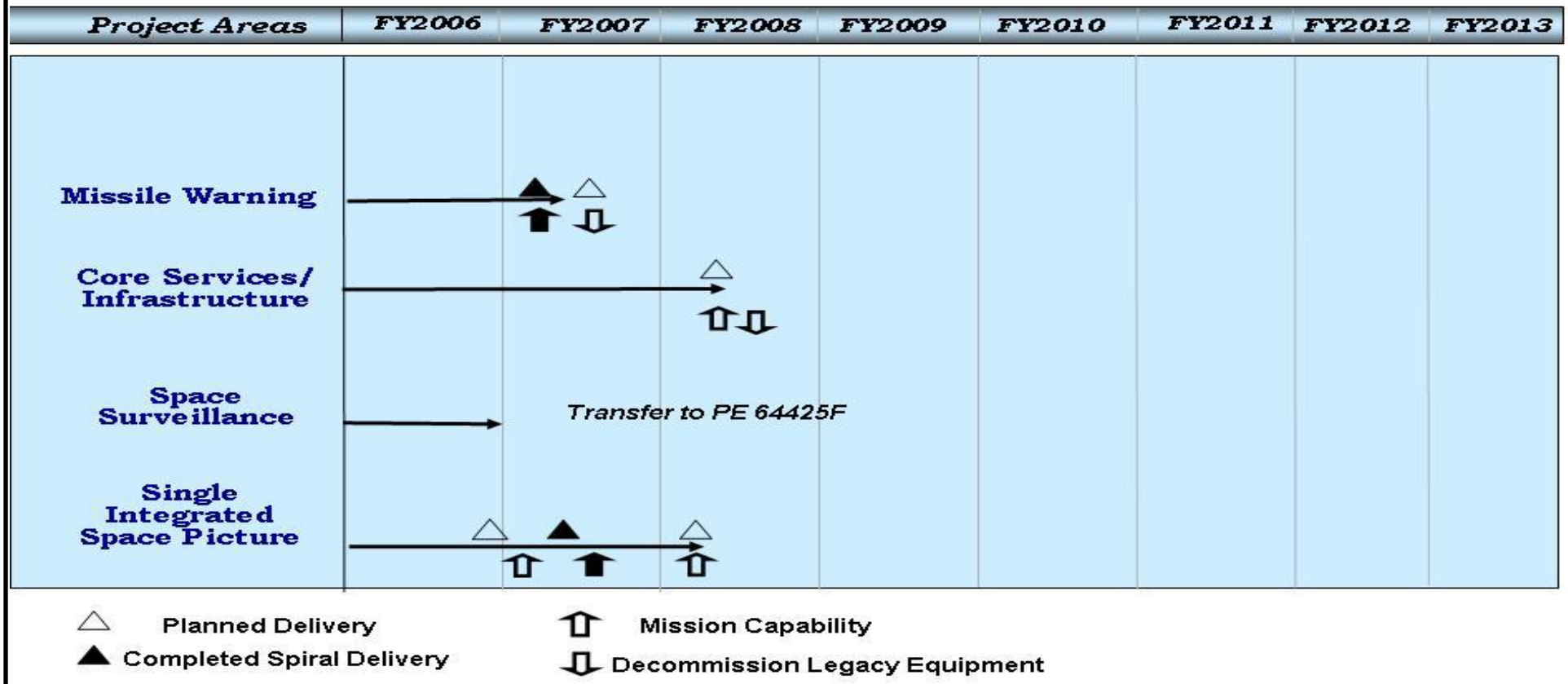


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305906F NCMC - TW/AA System**	PROJECT NUMBER AND TITLE **4806 Combatant Commanders' Integrated Command and Control System (CCIC2S)**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Missile Warning/Missile Defense Deliveries	1Q		
(U) Core Services/Infrastructure Deliveries		2Q	
(U) Single Integrated Space Picture (SISP) 1.0 Delivery	2Q		
(U) Single Integrated Space Picture (SISP) Enhanced Dev Del		1Q	

PE NUMBER: 0305913F
PE TITLE: NUDET Detection System (Space)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305913F NUDET Detection System (Space)

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	59.917	38.279	41.292	39.384	38.434	39.183	39.972	Continuing	TBD
2808 Nuc Detonation Det Sys (sensors)	59.917	38.279	41.292	39.384	38.434	39.183	39.972	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Nuclear Detonation (NUDET) Detection System (NDS) provides a worldwide, highly survivable capability to detect, locate, and report any nuclear detonations in the earth's atmosphere or in near space in near-real time. The NDS supports NUDET detection requirements for United States Northern Command (USNORTHCOM)/North American Aerospace Defense Command (NORAD) (Integrated Tactical Warning and Attack Assessment (ITW/AA)), United States Strategic Command (USSTRATCOM) (Nuclear Force Management), and Air Force Technical Applications Center (AFTAC) (Treaty Monitoring). NDS consists of space and ground segments. The current space segment consists of NUDET detection sensors (optical, x-ray, dosimeters and electromagnetic pulse (EMP) sensor) on Global Positioning System (GPS) satellites and (optical, x-rays, and neutron and gamma rays) on Defense Support Program (DSP) satellites. The ground segment includes the Integrated Correlation and Display System (ICADS) and the Ground NDS Terminals (GNT).

The NDS program element funds research and development, testing and fielding of ICADS, GNT, and the integration of Space and Atmospheric Burst Reporting System (SABRS) sensors on Geostationary (GEO) satellites. ICADS provides a fixed ground receiving station and GNT provides the survivable ground receiving station. SABRS is the future neutron/gamma sensor payload that will be hosted on SBIRS and a classified GEO satellite to replace the NDS sensor payload on DSP satellites. Sensor integration for GPS satellites is funded in the GPS Space & Control PE (0305165F) for GPS Block IIF and the GPS III Space Segment PE (0305265F) for GPS III satellites. Ground segment development remains in the NDS PE. DOE funds new NDS sensor research and production .

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

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	59.917	38.974	41.903
(U)	Current PBR/President's Budget	59.917	38.279	41.292
(U)	Total Adjustments	0.000	-0.695	
(U)	Congressional Program Reductions		-0.451	
	Congressional Rescissions		-0.244	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

None

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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)

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2808 Nuc Detonation Det Sys (sensors)	59.917	38.279	41.292	39.384	38.434	39.183	39.972	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 United States Northern Command (USNORTHCOM)/North American Aerospace Defense Command (NORAD) (Integrated Tactical Warning and Attack Assessment (ITW/AA)), United States Strategic Command (USSTRATCOM) (Nuclear Force Management), and Air Force Technical Applications Center (AFTAC) (Treaty Monitoring). NDS consists of space and ground segments. The current space segment consists of NUDET detection sensors (optical, x-ray, dosimeters and electromagnetic pulse (EMP) sensor) on Global Positioning System (GPS) satellites and (optical, x-rays, and neutron and gamma rays) on Defense Support Program (DSP) satellites. The ground segment includes the Integrated Correlation and Display System (ICADS) and the Ground NDS Terminals (GNT).

The NDS program element funds research and development, testing and fielding of ICADS, GNT, and the integration of Space and Atmospheric Burst Reporting System (SABRS) sensors on Geostationary (GEO) satellites. ICADS provides a fixed ground receiving station and GNT provides the survivable ground receiving station. SABRS is the future neutron/gamma sensor payload that will be hosted on SBIRS and a classified GEO satellite to replace the NDS sensor payload on DSP satellites. Sensor integration for GPS satellites is funded in the GPS Space & Control PE (0305165F) for GPS Block IIF and the GPS III Space Segment PE (0305265F) for GPS III satellites. Ground segment development remains in the NDS PE. DOE funds new NDS sensor research and production .

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continue ICADS and GNT development	17.108	18.152	23.740
(U) Continue NDS sensor on-orbit qualification	3.500	3.500	3.600
(U) Continue Mission and Program support and system studies	3.789	2.510	2.593
(U) Continue Technical Support	3.970	4.617	4.759
(U) Continue SABRS on GEO host development/integration	31.550	9.500	6.600
(U) Total Cost	59.917	38.279	41.292

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Operations & Maintenance, (PE 0305913F, BA 1, Operating Forces, SAG 12A)	8.535	8.781	9.221	9.651	9.606	9.805	10.008	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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, WSC 836750 P-63)	12.783	16.348	27.626	21.755	10.442	10.671	10.905	Continuing	TBD
(U) Missile Procurement, (PE 0305913F, BA 5 - Space & Other support, P-23)	0.000	0.000	1.250	3.548	4.338	4.420	4.510	Continuing	TBD

(U) D. Acquisition Strategy

The NDS Acquisition Strategy is to develop, field and sustain NDS satellite sensors and NDS ground data processing and distribution hardware and software as well as mission operational and technical program support to sustain the NDS capability on a variety of satellites; funding is sent by Military Interdepartmental Purchase Request (MIPR) from DoD and Department of Energy (DoE) to Sandia and Los Alamos National Laboratories and other agencies on existing DOE contracts.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305913F NUDET Detection System (Space)

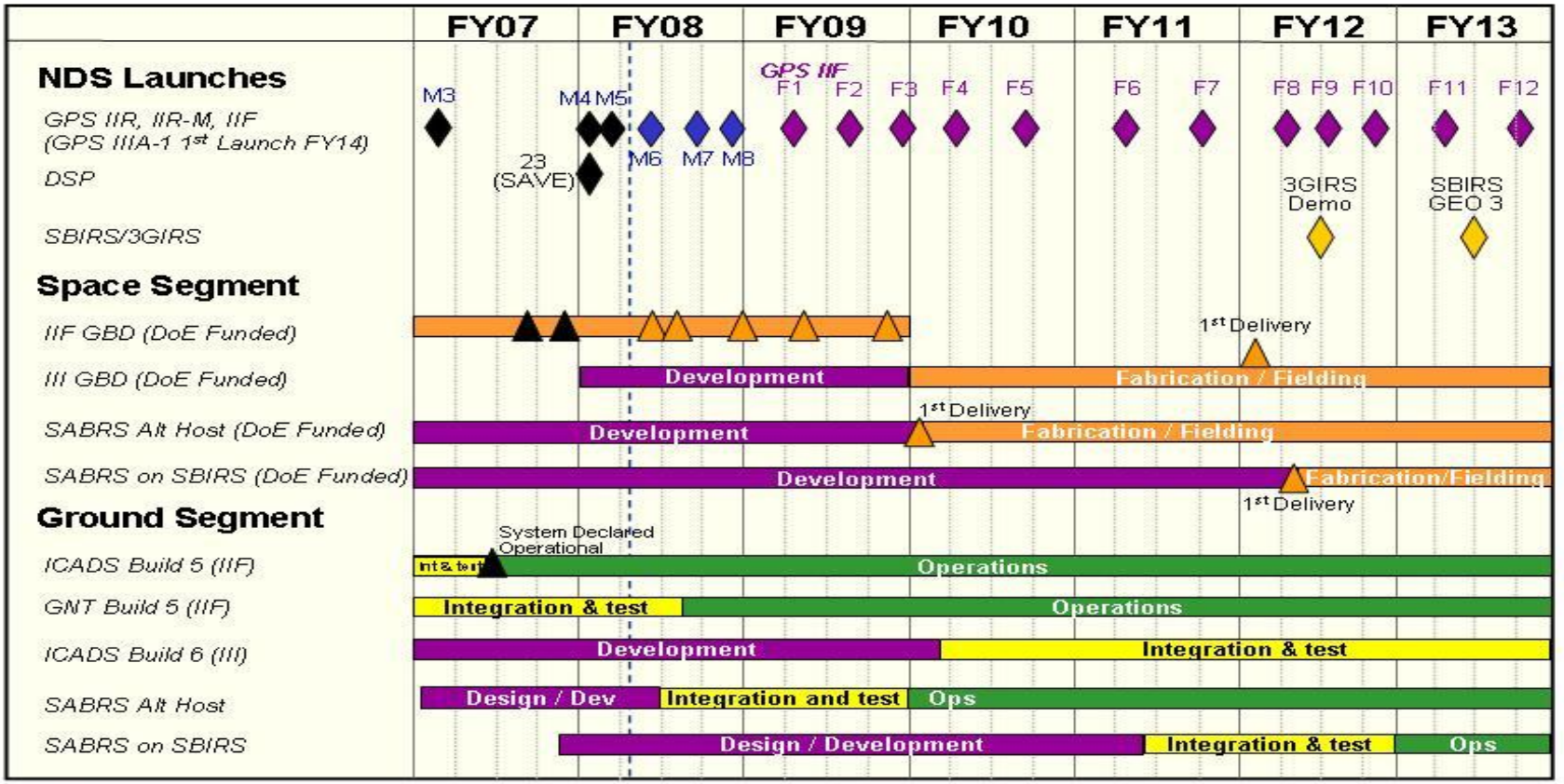
PROJECT NUMBER AND TITLE: 2808 Nuc Detonation Det Sys (sensors)

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
ICADS and GNT	MIPR	Department of Energy; Sandia National Laboratory, Albuquerque NM	157.222	17.108	Nov-06	18.152	Nov-07	23.740	Nov-08	Continuing	TBD	
GNT: Intermetrics	CPFF		1.262							0.000	1.262	
SAIC (Intg/Grd Supt)	Time/Matls		5.219							0.000	5.219	
Combined GOSC/NAP: Lockheed Martin	FFP		6.166							0.000	6.166	
W-Sensor: SRI (Stanford Rsch Inst.)	CPFF		0.415							0.000	0.415	
On-orbit sensor testing	MIPR	Department of Energy; Los Alamos National Laboratory, Los Alamos NM, Sandia National Laboratory, Albuquerque NM	16.381	3.500	Nov-06	3.500	Nov-07	3.600	Nov-08	Continuing	TBD	
SABRS	MIPR	Classified	0.000	31.550	Nov-06	9.500	Nov-07	6.600	Nov-08	Continuing	TBD	
Subtotal Product Development			186.665	52.158		31.152		33.940		Continuing	TBD	0.000
Remarks:												
(U) Support												
Mission Support	Various		13.566	3.728	Nov-06	2.365	Nov-07	2.388	Nov-08	Continuing	TBD	
Prog Contractual Spt.	Various		5.185							0.000	5.185	
Technical Support	Various		18.655	3.970	Nov-06	4.617	Nov-07	4.759	Nov-08	Continuing	TBD	
Subtotal Support			37.406	7.698		6.982		7.147		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
17th TS, Schriever AFB CO	Various		0.414	0.061	Dec-06	0.145	Nov-07	0.205	Nov-08	Continuing	TBD	
Subtotal Test & Evaluation			0.414	0.061		0.145		0.205		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

Exhibit R-3, RDT&E Project Cost Analysis			DATE: February 2008
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)	

	Remarks:								
(U)	Total Cost	224.485	59.917	38.279	41.292	Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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)



DSP: Defense Support Program
GBD: Global Burst Detector
GNT: Ground NDS Terminal
ICADS: Integrated Correlation & Display System
SABRS: Space & Atmospheric Burst Reporting System
SAVE: SABRS Validation Experiment
SBIRS: Space Based InfraRed Systems
3GIRS: Third Generation InfraRed Systems

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(U) ICADS IIF Operational	2Q		
(U) GNT IIF Force Development Evaluation (FDE)	2Q		
(U) SABRS on GEO Host Critical Design Review (CDR)	4Q		
(U) GNT IIF Operational		3Q	
(U) SABRS Qual Available (Alt Host)		3Q	
(U) SABRS Testing on Alt Host complete			4Q

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PE NUMBER: 0305924F
PE TITLE: National Security Space Office

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305924F National Security Space Office

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	17.351	10.745	10.797	11.058	11.233	11.452	11.682	Continuing	TBD
A016 National Security Space Office	17.351	10.745	10.797	11.058	11.233	11.452	11.682	Continuing	TBD

(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 enables better decisions to guide the future of the NSS community and provides requisite knowledge to better leverage space assets more effectively in support of U.S. national objectives and 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 2007	FY 2008	FY 2009
(U) Previous President's Budget	13.365	10.821	10.956
(U) Current PBR/President's Budget	17.351	10.745	10.797
(U) Total Adjustments	3.986		
(U) Congressional Program Reductions			
Congressional Rescissions		-0.076	
Congressional Increases			
Reprogrammings	4.342		
SBIR/STTR Transfer	-0.356		

(U) Significant Program Changes:

FY07: +$4.3M Reprogramming for the Allard Commission Space Assessment

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
A016	National Security Space Office	17.351	10.745	10.797	11.058	11.233	11.452	11.682	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(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 enables better decisions to guide the future of the NSS community and provides requisite knowledge to better leverage space assets more effectively in support of U.S. national objectives and 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.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	NSS Strategy and enabling activities	5.713	1.359	1.370
(U)	NSS Plan development	1.860	1.466	1.477
(U)	NSS Program Assessments	1.993	1.595	1.585
(U)	Space architecture and study development and support	4.578	3.755	3.777
(U)	Architecture transition planning and implementation support	0.664	0.531	0.539
(U)	Architecture and enterprise engineering	2.543	2.039	2.049
(U)	Total Cost	17.351	10.745	10.797

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

NSSO conducted a full and open competition to award a contract for the technical assistance and management support it uses to execute its space architecture, strategy, development, and planning activities. It will also continue to utilize existing contract vehicles maintained by other DoD organizations for supplemental assistance and support, as required.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Architecture/other product development	C/CPAF	SAIC, San Diego, CA	0.000	14.151	Dec-06	6.945	Dec-07	6.997	Dec-08	Continuing	TBD	
Architecture/other product development	SS/CPAF	Aerospace Corp., El Segundo, CA	0.000	1.300	Nov-06	1.900	Nov-07	1.900	Nov-08	Continuing	TBD	
Architecture/other product development	Cost (reimbursable)	MITRE, Bedford, MA	0.000	1.900	Oct-06	1.900	Oct-07	1.900	Oct-08	Continuing	TBD	
Subtotal Product Development			0.000	17.351		10.745		10.797		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	17.351		10.745		10.797		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305924F National Security Space Office	PROJECT NUMBER AND TITLE: A016 National Security Space Office

NSSO Schedule

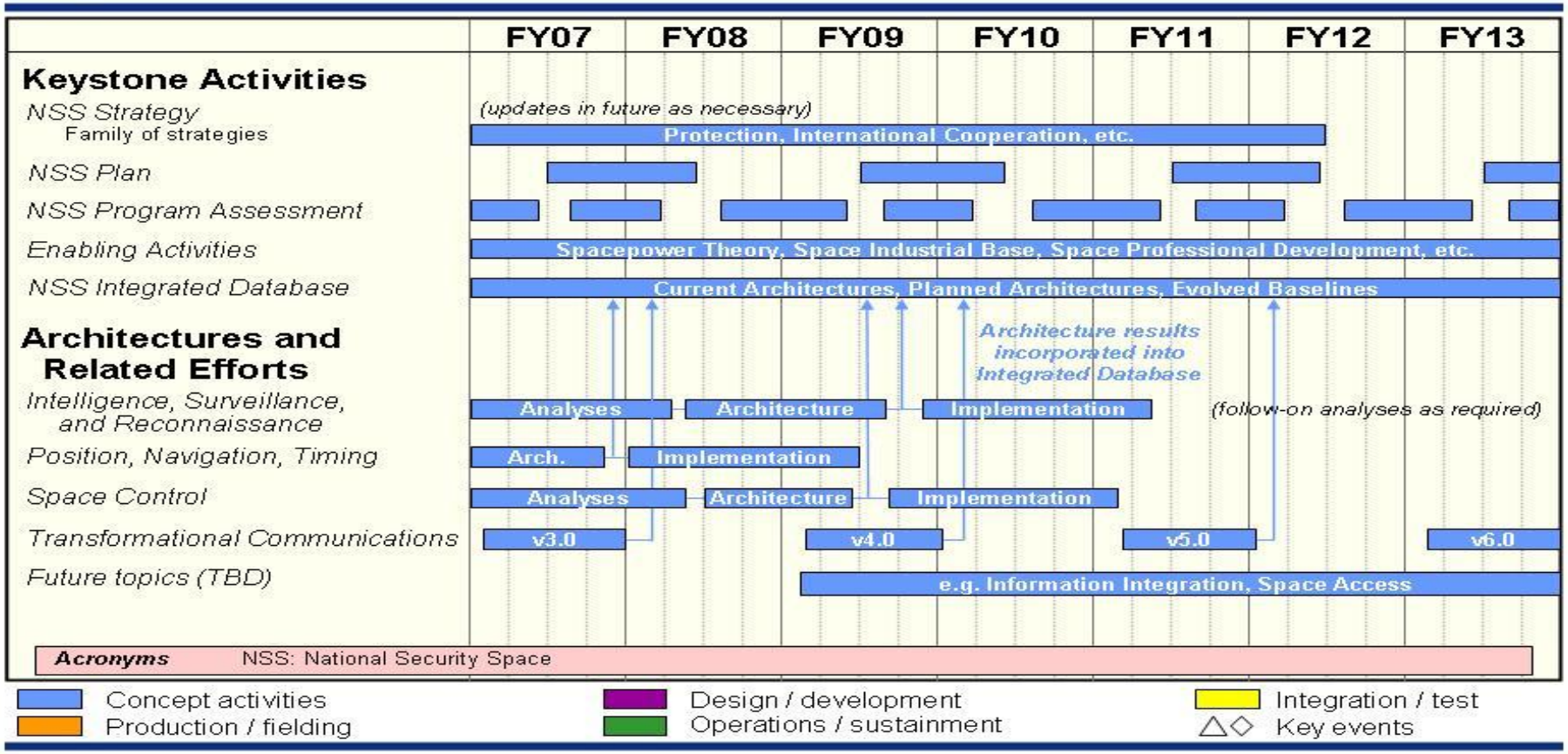

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305924F National Security Space Office	PROJECT NUMBER AND TITLE: A016 National Security Space Office

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Complete biannual NSS Plan		2Q	
(U) Complete annual NSS Program Assessment	2Q	1Q	2Q
(U) Continue space architecture efforts	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0305940F
PE TITLE: Space Situation Awareness Operations

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305940F Space Situation Awareness Operations

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	29.476	23.827	16.166	0.000	0.000	0.000	0.000	0.000	69.469
A017	Sensor Service Life Extension Programs	29.476	23.827	16.166	0.000	0.000	0.000	0.000	0.000	69.469

(U) A. Mission Description and Budget Item Justification

FY2008 funding totals do not include $8.9M FY2008 GWOT requirements still pending Congressional consideration.

Space Situation Awareness (SSA) is knowledge of all aspects of space related to operations. The foundation for space control, it encompasses intelligence on adversary space operations; surveillance of all space objects and activities; detailed reconnaissance of specific space assets; monitoring space environmental conditions; monitoring cooperative space assets; and conducting integrated command, control, communications, processing, analysis, dissemination, and archiving activities. This program element fields, upgrades, operates, and sustains Air Force sensors and information integration capabilities within the SSA network while companion program element 0604425F, Space Situation Awareness Systems, develops new network sensors and improved information integration capabilities across the network. Activities funded in this program element focus on surveillance of objects in Earth orbit to aid tasks including satellite tracking; space object identification, tracking, and cataloging; satellite attack warning; notification of satellite flyovers to U.S. forces; space treaty monitoring; and technical intelligence gathering.

The Sensor Service Life Extension Programs (SLEPs) project funds efforts to upgrade and extend the lifetimes of operational Space Situation Awareness (SSA) sensors. The first of these, the Eglin SLEP, extends the lifetime of the one-of-a-kind AN/FPS-85 phased array radar at Eglin Air Force Base, Florida, dedicated to finding and tracking near Earth and deep space objects. Operational since 1968, this radar is the SSA network's largest tracker of objects in the manned flight region, and it tracks over half the objects in the Air Force space object catalog. The SLEP effort replaces aging, increasingly unsupportable radar components.

The second effort in this project, the Haystack Ultra-wideband Satellite Imaging Radar, upgrades the X-band Haystack radar at the Lincoln Space Surveillance Complex in Westford, Massachusetts. Haystack provides radar imagery, space object identification, and metric data to the Air Force to aid SSA operations. The upgrade effort builds a W-band high-power transmitter enabling object imaging with resolution significantly greater than that of the X-band system; it also replaces the existing antenna and processing equipment with more modern hardware and software compatible with W-band operations. The resulting architecture will enable seamless W- and X-band operations as well as easier switching between X-band space surveillance and radio astronomy activities. Greater radar resolution is necessary to maintain current levels of space object characterization since satellites are becoming smaller than ever, making X-band characterization of them increasingly difficult.

Both these efforts are in Budget Activity 7, Operational System Development, because they develop modifications for operational SSA sensors.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305940F Space Situation Awareness Operations

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	31.282	23.980	16.405
(U)	Current PBR/President's Budget	29.476	23.827	16.166
(U)	Total Adjustments	-1.806	-0.153	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.153	
	Congressional Increases			
	Reprogrammings	-0.980		
	SBIR/STTR Transfer	-0.826		
(U)	Significant Program Changes:			

FY 2009: Reductions for higher Air Force priorities.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
A017	Sensor Service Life Extension Programs	29.476	23.827	16.166	0.000	0.000	0.000	0.000	0.000	69.469
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

FY2008 funding totals do not include $8.9M FY2008 GWOT requirements still pending Congressional consideration.

Space Situation Awareness (SSA) is knowledge of all aspects of space related to operations. The foundation for space control, it encompasses intelligence on adversary space operations; surveillance of all space objects and activities; detailed reconnaissance of specific space assets; monitoring space environmental conditions; monitoring cooperative space assets; and conducting integrated command, control, communications, processing, analysis, dissemination, and archiving activities. This program element fields, upgrades, operates, and sustains Air Force sensors and information integration capabilities within the SSA network while companion program element 0604425F, Space Situation Awareness Systems, develops new network sensors and improved information integration capabilities across the network. Activities funded in this program element focus on surveillance of objects in Earth orbit to aid tasks including satellite tracking; space object identification, tracking, and cataloging; satellite attack warning; notification of satellite flyovers to U.S. forces; space treaty monitoring; and technical intelligence gathering.

The Sensor Service Life Extension Programs (SLEPs) project funds efforts to upgrade and extend the lifetimes of operational Space Situation Awareness (SSA) sensors. The first of these, the Eglin SLEP, extends the lifetime of the one-of-a-kind AN/FPS-85 phased array radar at Eglin Air Force Base, Florida, dedicated to finding and tracking near Earth and deep space objects. Operational since 1968, this radar is the SSA network's largest tracker of objects in the manned flight region, and it tracks over half the objects in the Air Force space object catalog. The SLEP effort replaces aging, increasingly unsupportable radar components.

The second effort in this project, the Haystack Ultra-wideband Satellite Imaging Radar, upgrades the X-band Haystack radar at the Lincoln Space Surveillance Complex in Westford, Massachusetts. Haystack provides radar imagery, space object identification, and metric data to the Air Force to aid SSA operations. The upgrade effort builds a W-band high-power transmitter enabling object imaging with resolution significantly greater than that of the X-band system; it also replaces the existing antenna and processing equipment with more modern hardware and software compatible with W-band operations. The resulting architecture will enable seamless W- and X-band operations as well as easier switching between X-band space surveillance and radio astronomy activities. Greater radar resolution is necessary to maintain current levels of space object characterization since satellites are becoming smaller than ever, making X-band characterization of them increasingly difficult.

Both these efforts are in Budget Activity 7, Operational System Development, because they develop modifications for operational SSA sensors.

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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 2007	FY 2008	FY 2009
(U)	Eglin radar life extension engineering design, development, and support	16.313	15.044	15.509
(U)	Haystack radar upgrade engineering design, development, and support	13.163	8.783	0.657
(U)	Total Cost	29.476	23.827	16.166

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

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

(U) Not Applicable

(U) D. Acquisition Strategy

The Eglin SLEP effort is replacing key radar items via an option on the System Engineering, Sustainment and Modernization (SENSOR) contract, competitively awarded to ITT Industries in 2002. The Air Force uses the SENSOR contract for sustaining and upgrading various Air Force radars, including the Eglin radar.

The Massachusetts Institute of Technology's Lincoln Laboratory (MIT/LL), a non-profit Federally-Funded Research & Development Center, performs the Haystack upgrade effort under a master contract with the Electronics System Center. This effort is classified as applied research under that contract. MIT/LL transferred ownership of the radar to the Air Force but continues to operate it as part of its Lincoln Space Surveillance Complex per contract with the Air Force.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Eglin architecture development and life extension	C/CPAF	ITT Industries, Colorado Springs, CO		13.184	Nov-06	12.652	Jun-07	12.879	Jun-07	0.000	38.715	
Haystack radar upgrade design and build	SS/FP-LOE	MIT Lincoln Laboratory, Lexington, MA		12.533	Oct-06	7.835	Oct-07	0.536	Oct-08	0.000	20.904	
Subtotal Product Development			0.000	25.717		20.487		13.415		0.000	59.619	0.000
Remarks:												
(U) Support												
Development review and management	C/FP-LOE	L3 / Engility, Billerica, MA		0.967	Nov-06	0.400	Nov-07	0.000	Nov-08	0.000	1.367	
Development review and management	C/FP-LOE	Odyssey Systems, Wakefield, MA	0.000	0.809	Jun-07	0.490	Jan-08	0.447	Nov-08		1.746	
Technical review and management	C/FP-LOE	Jacobs Technology, Tullahoma, TN	0.000	0.000		0.644	Jan-08	1.206	Jan-09		1.850	
Program Office Support	Various	Electronic Systems Center, Hanscom AFB, MA		1.983	Nov-06	1.806	Nov-07	1.098	Nov-08	0.000	4.887	
Subtotal Support			0.000	3.759		3.340		2.751		0.000	9.850	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	29.476		23.827		16.166		0.000	69.469	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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**

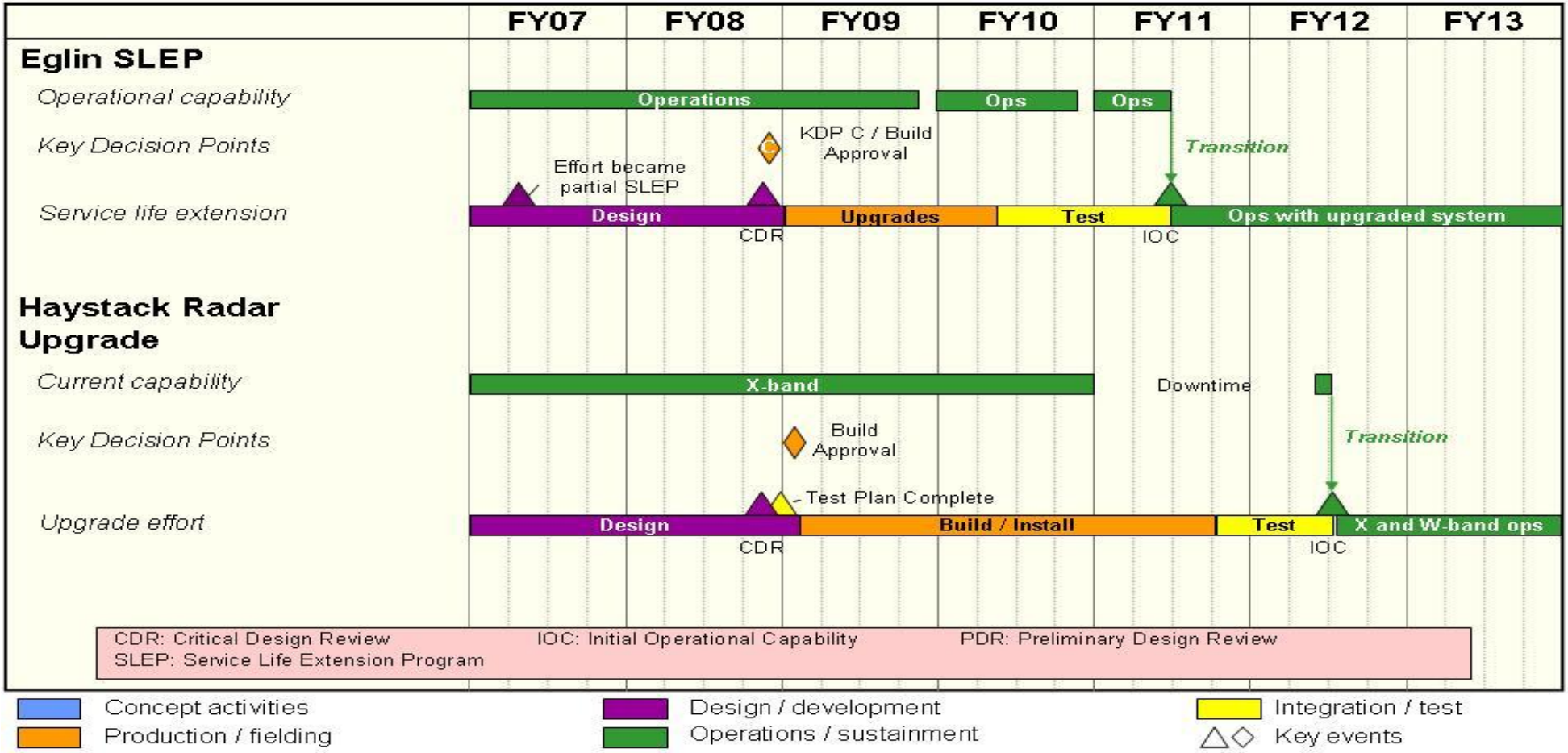

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305940F Space Situation Awareness Operations**	PROJECT NUMBER AND TITLE **A017 Sensor Service Life Extension Programs**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Eglin effort becomes partial SLEP	2Q		
(U) Eglin CDR		4Q	
(U) Eglin KDP C / Build Approval		4Q	
(U) Eglin - Build Upgraded Hardware			1-4Q
(U) Eglin Operations Acceptance			4Q
(U) Haystack CDR		4Q	
(U) Haystack Build Approval			1Q

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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 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0307141F NASS, IO TECH INTEGRATION & TOOL DEV

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	14.759	15.582	15.726	15.730	15.662	15.962	16.286	Continuing	TBD
4871	Information Operations Technology	14.759	15.582	15.726	15.730	15.662	15.962	16.286	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Joint Functional Component Command Network Warfare (JFCC-NW) responsibilities include: planning, integrating, and coordinating computer network warfare capabilities; operational and tactical level planning and day-to-day employment of assigned and attached Computer Network Attack (CNA) forces; integration of CNA forces with Computer Network Defense (CND) forces and planning and coordination of network attack capabilities that have trans-regional effects or that directly support national objectives; providing CNA support for assigned missions; and CNA planning and integration in support of other combatant commanders as directed.

JFCC-NW RDT&E funds research, development, testing and systems modifications of the technologies and capabilities that allow USSTRATCOM to plan, faciliate coordination and integration, deconflict, and synchronize DoD Computer Network Operations (CNO). This program also provides the ability for other Combatant Commanders CNO planning. The JFCC-NW accomplishes part of its mission via systems engineering, testing and development across two primary functions: Net Warfare Assurance, Risk Assessment, and Safeguards (NWARS); and, Requirements, Capabilities and Gap Analysis. Specifically, the NWARS function provides world-class "Assurance-in-Depth" products and services enabling Combatant Commanders to confidently, legally, safely, and securely apply Computer Network Attack capabilities as one of the elements of national power. The NWARS function is further subdivided into Net Warfare Risk Assessment and Mitigation (NRAM), Compter Network Operations Test and Evaluation (CNOTE), and Computer Network Technical Assurance Program. Further detail is classified and can be provided upon request.

JFCC-NW provides support for headquarters USSTRATCOM and other geographic and functional combatant commanders exercise, wargames, and experimentation requirements. Integrates and synchronizes the efforts with USSTRATCOM's Training and Exercise Division Support headquarters development of network warfare military utility assessments, research, and development efforts, and advocacy of capability needs for the Joint Capabilities Integration Development System (JCIDS) process.

The JFCC-NW also supports the Information Operations (IO) community by providing a cadre of experts on CNA technology and its use; renders technical assistance in the development, review and coordination of CNA plans and operations.
This program is Budget Activity 7, Operational System Development, because it studies, develops and fields IO technologies.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	15.391	15.681	15.857
(U)	Current PBR/President's Budget	14.759	15.582	15.726
(U)	Total Adjustments	-0.632		
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.099	
	Congressional Increases			
	Reprogrammings	-0.200		
	SBIR/STTR Transfer	-0.432		
(U)	Significant Program Changes:			
	None			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4871	Information Operations Technology	14.759	15.582	15.726	15.730	15.662	15.962	16.286	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Joint Functional Component Command Network Warfare (JFCC-NW) responsibilities include: planning, integrating, and coordinating computer network warfare capabilities; operational and tactical level planning and day-to-day employment of assigned and attached Computer Network Attack (CNA) forces; integration of CNA forces with Computer Network Defense (CND) forces and planning and coordination of network attack capabilities that have trans-regional effects or that directly support national objectives; providing CNA support for assigned missions; and CNA planning and integration in support of other combatant commanders as directed.

JFCC-NW RDT&E funds research, development, testing and systems modifications of the technologies and capabilities that allow USSTRATCOM to plan, faciliate coordination and integration, deconflict, and synchronize DoD Computer Network Operations (CNO). This program also provides the ability for other Combatant Commanders CNO planning. The JFCC-NW accomplishes part of its mission via systems engineering, testing and development across two primary functions: Net Warfare Assurance, Risk Assessment, and Safeguards (NWARS); and, Requirements, Capabilities and Gap Analysis. Specifically, the NWARS function provides world-class "Assurance-in-Depth" products and services enabling Combatant Commanders to confidently, legally, safely, and securely apply Computer Network Attack capabilities as one of the elements of national power. The NWARS function is further subdivided into Net Warfare Risk Assessment and Mitigation (NRAM), Compter Network Operations Test and Evaluation (CNOTE), and Computer Network Technical Assurance Program. Further detail is classified and can be provided upon request.

JFCC-NW provides support for headquarters USSTRATCOM and other geographic and functional combatant commanders exercise, wargames, and experimentation requirements. Integrates and synchronizes the efforts with USSTRATCOM's Training and Exercise Division Support headquarters development of network warfare military utility assessments, research, and development efforts, and advocacy of capability needs for the Joint Capabilities Integration Development System (JCIDS) process.

The JFCC-NW also supports the Information Operations (IO) community by providing a cadre of experts on CNA technology and its use; renders technical assistance in the development, review and coordination of CNA plans and operations.
This program is Budget Activity 7, Operational System Development, because it studies, develops and fields IO technologies.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	NRAM, CNOTE & Technical Assurance Program	6.549	9.343	9.506
(U)	Requirements and Capabilities and Gap Analysis	8.210	6.239	5.955
(U)	Lab Redesign & Upgrades	0.000	0.000	0.265
(U)	Total Cost	14.759	15.582	15.726

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Joint HQ Information Operations, Operations and Maintenance, AF PE 0307141F	10.626	15.328	14.999	15.616	14.340	14.669	15.932	Continuing	TBD
(U) Joint HQ Information Operations, Operations and Maintenance AF, PE 0307141F, ESP 7C (Operation Enduring Freedom	3.000								

(U) D. Acquisition Strategy

Contracts will be awarded under full and open competition whenever possible. Variations of both Fixed Price (FP) and Cost Plus (CP) contracting vehicles will be used.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) J81-NWARS												
NRAM, CNOTE, & Technical Assurance Program Network	CPFF	NSA	8.075	6.549	Jul-07	9.343	Oct-07	9.506	Oct-08	Continuing	TBD	TBD
Network Warfare Lab Upgrades	CPFF	NSA	0.500	0.000	Jan-08	0.000	Jan-09	0.265	Sep-09	Continuing	TBD	TBD
Subtotal J81-NWARS			8.575	6.549		9.343		9.771		Continuing	TBD	TBD
Remarks:												
(U) J82												
Requirements, Capabilities and Gap Analysis	Various	NSA/Other Msn Partners	6.389	8.210	Jan-08	6.239	Jan-09	5.955	Sep-09	Continuing	TBD	TBD
Subtotal J82			6.389	8.210		6.239		5.955		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			14.964	14.759		15.582		15.726		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0307141F NASS, IO TECH INTEGRATION & TOOL DEV	PROJECT NUMBER AND TITLE 4871 Information Operations Technology

JFCC-NW NASS IO TECH INTEGRATION & TOOL DEVELOPMENT

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0307141F NASS, IO TECH INTEGRATION & TOOL DEV	PROJECT NUMBER AND TITLE: 4871 Information Operations Technology

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) J81 -Net Warfare Assurance, Risk Assessment and Safeguards	4Q	1-4Q	1-4Q
(U) J82 -Requirements and Capability Development	2-4Q	1-4Q	1-4Q

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PE NUMBER: 0308699F
PE TITLE: Shared Early Warning System

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0308699F Shared Early Warning System

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	2.896	3.127	3.152	3.209	3.128	2.692	2.325	Continuing	TBD
4838 Shared Early Warning System	2.896	3.127	3.152	3.209	3.128	2.692	2.325	Continuing	TBD

(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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	2.975	3.152	3.178
(U)	Current PBR/President's Budget	2.896	3.127	3.152
(U)	Total Adjustments	-0.079		
(U)	Congressional Program Reductions		0.005	
	Congressional Rescissions		0.020	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.079		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4838	Shared Early Warning System	2.896	3.127	3.152	3.209	3.128	2.692	2.325	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 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Program			
(U) Continue SEWS design, development, and test efforts to include but not limited to: SEWS common architecture, SEWS initiatives as identified by theater commanders, investigating evolving technologies to enhance the JDEC system for future deployment in Moscow and development of a multi-lingual, web-based infrastructure to provide Pre-Launch Notification System information and site preparation for additional systems, as required.	2.896	3.127	3.152
(U) Total Cost	2.896	3.127	3.152

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other APPN									
(U) OPAF (PE 0308699F, Comm Elect Mods,	0.290	0.300	0.254	0.242	0.319	0.326	0.332	Continuing	TBD
(U) Operations and Maintenance AF	5.985	7.136	7.372	7.591	7.350	7.486	7.450	Continuing	TBD

(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 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Lockheed Martin	C/CPAF	Colorado Springs, CO		0.809	Dec-06	1.105	Oct-07	1.059	Oct-08	Continuing	TBD	TBD
Navy	MIPR	San Diego, CA		0.373	Jan-07	0.312	Jan-08	0.324	Jan-09	Continuing	TBD	TBD
Various Ctrs/Gov Agencies	MIPR	Colorado Springs, CO		0.798	Jan-07	0.761	Jan-08	0.786	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	1.980		2.178		2.169		Continuing	TBD	TBD
Remarks:												
(U) Support												
MITRE	SS/CPFF	Colorado Springs, CO		0.153	Oct-06	0.160	Oct-07	0.167	Oct-08	Continuing	TBD	TBD
A&AS	C/T&M	Colorado Springs, CO		0.751	Dec-06	0.777	Oct-07	0.804	Oct-08	Continuing	TBD	TBD
PMA	N/A	Colorado Springs, CO		0.012	Oct-06	0.012	Oct-07	0.012	Oct-08	Continuing	TBD	TBD
Subtotal Support			0.000	0.916		0.949		0.983		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	2.896		3.127		3.152		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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

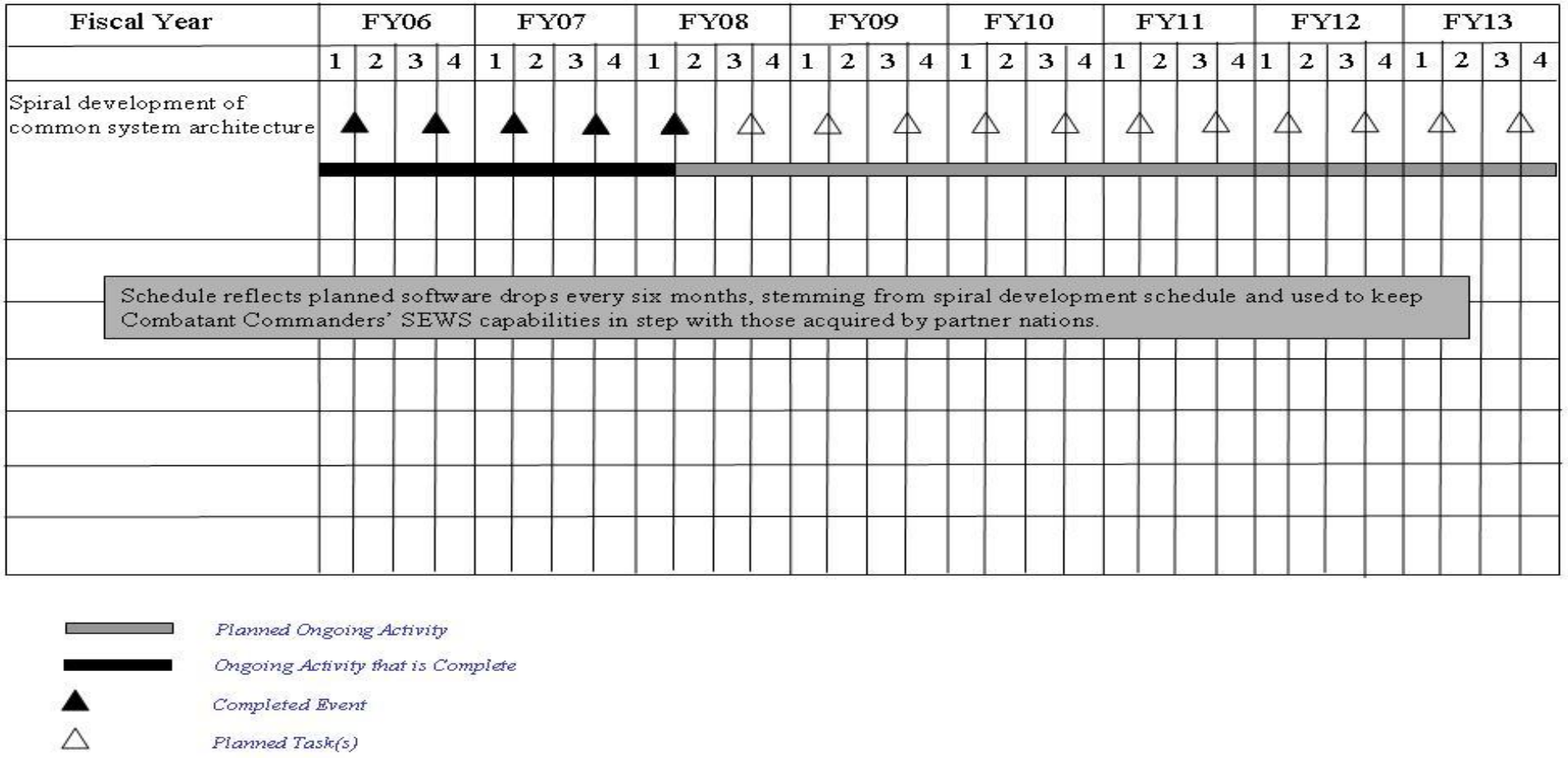

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0308699F Shared Early Warning System**	PROJECT NUMBER AND TITLE **4838 Shared Early Warning System**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(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 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	185.554	250.020	172.560	129.164	47.540	12.876	9.904	Continuing	TBD
4885	Avionics Modernization Program (AMP)	182.355	246.443	172.560	129.164	47.540	12.876	9.904	Continuing	TBD
5243	C-130 Initiatives	3.199	3.577	0.000	0.000	0.000	0.000	0.000	0.000	0.000

(U) A. Mission Description and Budget Item Justification

The C-130 Avionics Modernization Program (AMP) consolidates and installs the mandated AF Navigation/Safety mods, the Global Air Traffic Management (GATM) systems [now referred to as Communications Navigation Surveillance/Air Traffic Management (CNS/ATM)] and the C-130 Broad Area Review requirements on 222 of the AF's Combat Delivery C-130s . These mandated mods are incorporated with various other Reliability, Maintainability, and Sustainability (RM&S) upgrades to include: replacement of the radars, compasses, dual autopilots, dual flight management systems and HF/UHF/VHF data links. AMP will allow this fleet complete access to the CNS/ATM-mandated national and international air space for the forseeable future.

This fleet consists of 3 different mission design series (MDS) to be modified by the AMP (C-130 H2, H2.5, and H3). Within each of these MDSs are multiple configurations that will be modified by AMP. Today, these different models and cockpit configurations create significant logistics support and aircrew training inefficiencies. Also, these differences greatly complicate aircrew and aircraft interoperability at forward operating locations. C-130 AMP standardizes the cockpit configurations and avionics suites for these different variants into a single cockpit configuration by installing a core avionics package and a common cockpit layout, thus eliminating many of these significant logistics, interoperability, and training problems. Diminshing Manufacturing Sources (DMS) issues will be addressed during SDD and production phases. Shown here are RDT&E funds for only C-130 AMP (Note: funding for the C/EC/WC-130J fleets are not included here.)

The Engineering and Manufacturing Development contract was awarded to The Boeing Company on 30 Jul 01. An Integrated Baseline Review (IBR) was conducted in late Jan 02. The program was restructured due to funding reductions in FY03/04. This resulted in delays in the System Development and Demonstration (SDD) program for up to 2 years. From FY02-05, the combination of funding and requirements instability, coupled with increases in prime contractor development costs pushed AMP into reportable cost and schedule breaches. With the completion of an Air Force Service Cost Position in Oct 2006, a major cost deviation was confirmed. In Dec 2006, a Program Deviation Report (PDR) was issued and in Feb 2007 and a critical Nunn-McCurdy breach was formalized.

In Jun 2007, USD (AT&L) recertified AMP to Congress at a reduced MDS profile of 222 aircraft, comprising the majority of the AMC/ANG/AFRC Combat Delivery fleets. De-scoped aircraft included 166 special mission and C-130H1 Combat Delivery aircraft. Disposition of this fleet will be addressed in future budgets.

C-130 AMP is currently undergoing developmental activities. The C-130 H2 began ground tests in FY06 and first flight occurred in Sep 2006. In Mar 2007, the C-130 H2.5 joined the test fleet after its successful modification. The C-130 H3 was inducted for Trial Installation in Nov 2007. All aircraft flight test DT&E requirements will be complete in the Jun/Jul 2009 timeframe, with the program then postured for transition to the Initial Operational Test and Evaluation (IOT&E) phase.

To date, AMP has completed Critical Design Reviews (CDR) for majority of the hardware and software requirements. At present, the focus is on completing final

software spiral builds and the remaining engineering data release (i.e., component drawings, interface control documents, etc) for the C-130H3 (targeted for completion NLT May 2008) and H2/H2.5 configurations (set for delivery NLT May 2009). This engineering release will include both general component data and tail number-specific Time Compliance Technical Orders (TCTO) to support modification installs. The C-130 AMP Low Rate Initial Production (LRIP) and installation contract will be awarded in Jul 2008.

This project consists of low technical risk efforts supporting a stable design that has been proven in flight test and therefore was assigned Budget Activity Code 07.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	230.709	188.069	
(U)	Current PBR/President's Budget	185.554	250.020	172.560
(U)	Total Adjustments	-45.155		
(U)	Congressional Program Reductions		-0.054	
	Congressional Rescissions	-10.000	-1.595	
	Congressional Increases		63.600	
	Reprogrammings	-28.974		
	SBIR/STTR Transfer	-6.181		

(U) Significant Program Changes:

In FY07 Congress added: $1.6M for STOL Herk 1 Continuation, $2M for C-130 Automated Inspection, Repair, Corrossion, and Aircraft Tracking (AIRCAT), and $1.3M for Electro-Magnetic In-Flight Propeller Balancing System.

In FY08 Congress added: $1.2M for Propeller De-icing System Metal Fiber Brushes and $2.4M for C-130 AIRCAT Condition Based Maintenance (CBM+)

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4885	Avionics Modernization Program (AMP)	182.355	246.443	172.560	129.164	47.540	12.876	9.904	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 modifications, the Communications Navigation Surveillance/Air Traffic Management (CNS/ATM) capabilities formerly known as Global Air Traffic Management (GATM) systems and the C-130 Broad Area Review requirements on 222 of the AF's Combat Delivery C-130s. These mandated modifications are incorporated with various other Reliability, Maintainability, and Sustainability (RM&S) upgrades to include: installation of fleet-wide radars, aircrew displays, dual autopilots, dual flight management systems and HF/UHF/VHF radios/data links. AMP will allow this fleet complete access to the CNS/ATM-mandated national and international air space for the foreseeable future.
This fleet consists of three (3) different mission design series (MDS) aircraft to be modified by the AMP (C-130 H2, H2.5, and H3). Within each of these MDSs multiple configurations exist among the aircraft that will be modified with AMP. Today, these different models and cockpit configurations create significant logistics support and aircrew training inefficiencies. Also, these differences greatly complicate aircrew and aircraft scheduling and 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 with a common cockpit layout, thus eliminating many of these significant logistics, interoperability, and training problems. A number of C-130 Diminishing Manufacturing Sources (DMS) issues are addressed during System Development and Demonstration (SDD) as a result of the new hardware included in the AMP design. The DMS planned developed during SDD will be implemented during the production phases. A block upgrade program is also included in SDD. Shown here are RDT&E funds for only C-130 AMP. (Note: The C/EC/WC-130J fleets are separately funded and not included here.)
The SDD contract was awarded to The Boeing Company on 30 July 2001. An Integrated Baseline Review (IBR) was conducted in late January 2002. Due to funding reductions in FY03/04, the C130 AMP program was restructured. This resulted in delays in the SDD program for 2 years or longer on some MDS. From FY02-05, the combination of funding and requirements instability, coupled with increases in prime contractor development costs pushed AMP into reportable cost and schedule breaches. With the completion of an Air Force Service Cost Position in Oct 2006, a major cost deviation was confirmed. In Dec 2006, a Program Deviation Report (PDR) was issued and a critical Nunn-McCurdy breach was formalized in February 2007.

In June 2007, USD (AT&L) recertified AMP to Congress-albeit at a reduced MDS profile of 222 aircraft, comprising the majority of the AMC/ANG/AFRC Combat Delivery fleets. De-scoped aircraft included 166 Special Mission and C-130H1 Combat Delivery aircraft. In accordance with the June 2007 Acquisition Decision Memorandum (ADM), which directed a 166 investment strategy, the C-130 AMP allows for special mission analysis, studies, and engineering effort in support of additional MDS.

C-130 AMP is currently undergoing developmental activities. The C-130 H2 began ground tests in FY06 and first flight occurred in Sep 2006. In Mar 2007, the C-130 H2.5 joined the test fleet after its successful modification. The C-130 H3 was inducted for Trial Installation in November 2007. All aircraft flight test DT&E requirements will be complete in the June/July 2009 timeframe, with the program then postured for transition to the Initial Operational Test and Evaluation (IOT&E)

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS	PROJECT NUMBER AND TITLE 4885 Avionics Modernization Program (AMP)

phase.

To date, AMP has completed Critical Design Reviews (CDR) for majority of the hardware and software requirements. Presently, Boeing is focused on completing final software spiral builds and the remaining engineering data release (i.e., component drawings, interface control documents) for the C-130 H3 (targeted for completion NLT May 08); data for the updated H2/H2.5 wiring configurations is set for delivery NLT May 2009. This engineering release will include both general component data and tail number-specific Time Compliance Technical Orders (TCTO) to support modification installs.

This project consists of low technical risk efforts supporting a stable design that has been proven in flight test and therefore was assigned Budget Activity Code 07.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2007	FY 2008	FY 2009
(U)	Design activities continues for software spirals, design/qualification of Group B hardware (mission computer, etc.) and remaining Group A engineering data release for the H3 H2/H2.5 configurations.	142.972	192.413	111.040
(U)	Engineering Change Orders (ECO), Govt Furnished Parts and Information (GFP/GFI), Award Fee, WR-ALC alloc, and Protest Settlement Costs.	24.344	30.587	26.820
(U)	Developmental Test and Evaluation.	5.438	9.866	12.650
(U)	Training System development upgrades.	2.351	6.808	11.990
(U)	Program office support (A&AS, TDY, training and supplies).	7.250	6.769	10.060
(U)	Total Cost	182.355	246.443	172.560

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E									
(U)	Other APPN									
(U)	PE 0401115F, 3010, C-130 AMP, BP1100	0.000	28.652	149.077	296.327	247.797	277.489	315.148	2,668.183	3,982.673

(U) D. Acquisition Strategy

The C-130 AMP contract was awarded 30 July 2001. This is a Cost-Plus Award Fee contract to develop and install AMP kits for the development aircraft and conduct developmental flight test. A Restructure Engineering Change Proposal (ECP) 1302 was awarded to Boeing 20 August 2003. The ECP rebaselines the program due to funding reductions in FYs 03/04 which resulted in delays in System Development and Demonstration (SDD) program exceeding 2 years. Revisions to the AF training system began in Jul 2006 under the AMP contract. This effort will modify the various Training Programs, Courses and Weapons Systems Trainers to the AMP configuration. The Nunn-McCurdy certification resulted in the need to restructure and rebaseline the remaining program activity with a Contract Modification anticipated for award in 2nd Quarter of FY08. The program office is actively working the full-rate production acquisition strategy details. The C-130 AMP Low Rate Initial Production (LRIP) and installation contract will be awarded in late FY 2008.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Boeing, Long Beach, CA	CPAF			169.667	Dec-06	229.808	Nov-07	148.405	Nov-08	175.310	723.190	
Subtotal Product Development			0.000	169.667		229.808		148.405		175.310	723.190	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			7.250		6.769		11.510		17.010	42.539	
Subtotal Support			0.000	7.250		6.769		11.510		17.010	42.539	0.000
Remarks: Award Dates vary throughout the year depending on activity (TDY, Training, Contractor Support)												
(U) Test & Evaluation												
Various				5.438	Oct-06	9.866	Nov-08	12.645	Nov-09	9.080	37.029	
Subtotal Test & Evaluation			0.000	5.438		9.866		12.645		9.080	37.029	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	182.355		246.443		172.560		201.400	802.758	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401115F C-130 AIRLIFT SQUADRONS	PROJECT NUMBER AND TITLE: 4885 Avionics Modernization Program (AMP)

DRAFT

C-130 AMP Program Plan

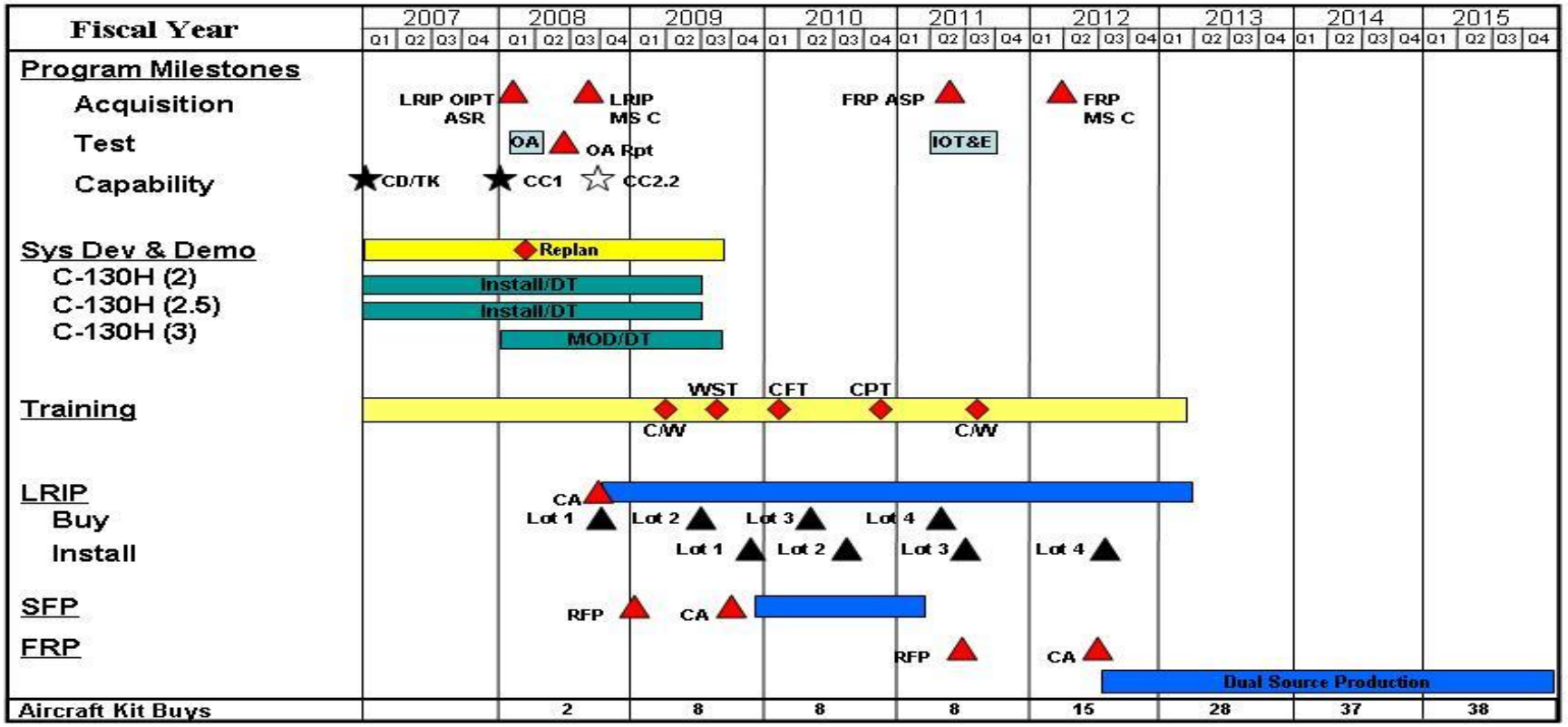

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401115F C-130 AIRLIFT SQUADRONS**	PROJECT NUMBER AND TITLE **4885 Avionics Modernization Program (AMP)**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) C-130H3 First Flight			2Q
(U) MS C LRIP Decision		3Q	
(U) Development Flight Test Complete			4Q
(U) Software Core Complete 2.2 First Flight		3Q	

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401115F C-130 AIRLIFT SQUADRONS**

PROJECT NUMBER AND TITLE: **5243 C-130 Initiatives**

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5243 C-130 Initiatives	3.199	3.577	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

C-130 Congressional Adds

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

	FY 2007	FY 2008	FY 2009
(U) Propeller De-icing System Metal Fiber Brushes		1.192	
(U) C-130 AIRCAT Condition Based Maintenance (CBM+)		2.385	
(U) C-130 AIRCAT & In-Flight Popeller Balancing System	3.199		
(U) Total Cost	3.199	3.577	0.000

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

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

(U) D. Acquisition Strategy

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401115F C-130 AIRLIFT SQUADRONS**

PROJECT NUMBER AND TITLE: **5243 C-130 Initiatives**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development											0.000	
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000	0.000	0.000
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 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS	PROJECT NUMBER AND TITLE 5243 C-130 Initiatives

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401115F C-130 AIRLIFT SQUADRONS**	PROJECT NUMBER AND TITLE **5243 C-130 Initiatives**

(U) Schedule Profile

FY 2007	FY 2008	FY 2009

(U)

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PE NUMBER: 0401119F
PE TITLE: C-5 Airlift Squadrons

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401119F C-5 Airlift Squadrons

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	137.565	178.990	125.063	28.136	20.065	10.007	0.000	0.000	1,987.009
4495	Avionics Modernization Program	0.000	12.525	1.830	0.000	0.000	0.000	0.000	0.000	409.396
4835	Reliability Enhancement & Reengining Program	137.565	166.465	123.233	28.136	20.065	10.007	0.000	0.000	1,577.613

(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)], navigation/safety capability, and the All Weather Flight Control System (AWFCS). It installs Deputy Secretary of Defense (DepSecDef) directed navigation/safety equipment: Terrain Awareness, Warning System (TAWS), and Traffic Alert and Collision Avoidance System (TCAS). This reduces 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. TCAS was accelerated ahead of 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 first flight occurred in Dec 02. The final software build completed Jun 05, and operational testing completed Jul 06. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development. AMP requirements have been expanded to incorporate updates to the new avionics architecture, to include security enhancements to the Global Positioning System. Equipment DMS issues will be resolved to support continued operations through studies, bridge buys, life of type buys, development and redesign efforts.

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 Cost (TOC). This effort centers around replacing TF39 engines with a more reliable, Commercial Off-the-Shelf (COTS) turbofan engine with increased takeoff thrust and stage three noise compliance. These new engines (along with new pylons, wing attach fittings and upgrades, and thrust reversers) increase payload capability and access to Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) airspace. The modification also decreases aircraft time to climb, increases engine-out climb gradient for takeoff, improves transportation system throughput, and decreases engine removals. Additionally, numerous other system modifications will be performed (e.g., auxiliary power units, electrical, hydraulics, fuel system, fire suppression system, pressurization/air conditioning system, landing gear, and airframe) to increase fleet availability and reduce TOC. RDT&E funded three test articles for installation and flight test. RERP's Preliminary Design Review (PDR) completed in Jan 03 and the Air Vehicle Critical Design Review (CDR) completed in Mar 04. First Flight of the first test article occurred in Jun 06, followed by first flight of second and third test articles in Nov 06 and Mar 07, respectively. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7. Increased costs due to development delays; budget adjustments; and production cost increases associated with engines, pylons, reliability enhancements items, and Lockheed Martin labor

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401119F C-5 Airlift Squadrons

have led to a review of total program requirements. SecAF notified Congress on 27 Sep 07 of critical Nunn-McCurdy (NM) breaches for Average Procurement Unit Cost (APUC) and Procurement Acquisition Unit Cost (PAUC). An out-of-cycle Selected Acquisition Report (SAR) was submitted to Congress on 14 Nov 07. C-5 RERP remains in NM review at this time. These documents reflect the Program of Record prior to the declaration of the NM breach, but incorporate fact-of-life changes. After NM decisions are made, the results will be provided to the defense committees. These adjustments will be reflected in the FY10 PBR. Equipment DMS issues will be resolved to support continued operations through studies, bridge buys, life of type buys, development and redesign efforts.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	150.638	203.585	28.276
(U)	Current PBR/President's Budget	137.565	178.990	125.063
(U)	Total Adjustments	-13.073	-24.595	
(U)	Congressional Program Reductions		-25.053	
	Congressional Rescissions		-1.142	
	Congressional Increases		1.600	
	Reprogrammings	-8.840		
	SBIR/STTR Transfer	-4.233		

(U) Significant Program Changes:

C-5 RERP remains in NM review at this time. These documents reflect the Program of Record prior to the declaration of the NM breach, but incorporate fact-of-life changes. After NM decisions are made, the results will be provided to the defense committees. These adjustments will be reflected in the FY10 PBR.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4495	Avionics Modernization Program	0.000	12.525	1.830	0.000	0.000	0.000	0.000	0.000	409.396
	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 (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, Warning System (TAWS), and Traffic Alert and Collision Avoidance System (TCAS). This reduces 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. TCAS was accelerated ahead of AMP mod and was completed 31 Oct 02. Two AMP RDT&E test articles were funded in FY99 for installation and flight test in FY02/03/04/05. AMP's first flight occurred in Dec 02. The final software build completed Jun 05, and operational testing completed Jul 06. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development. AMP requirements have been expanded to incorporate updates to the new avionics architecture, to include security enhancements to the Global Positioning System. Equipment DMS issues will be resolved to support continued operations through studies, bridge buys, life of type buys, development and redesign efforts.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	System Engineering/Program Management		1.372	0.200
(U)	AMP Avionics Design/Development/Contractor Test		6.583	0.962
(U)	Prototype Fabrication/Install		1.188	0.174
(U)	Mission Support		1.628	0.238
(U)	Government Flight Test Cost		1.754	0.256
(U)	Total Cost	0.000	12.525	1.830

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E									
(U)	Other APPN									
(U)	Aircraft Procurement, AF, BA-5,	52.171	88.477	95.170	78.828	75.297	77.454	75.303	29.701	958.591

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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-19		23.584	7.429	4.970	1.510				37.493
(U)	Aircraft Procurement, AF, BA-5, C-5 Mods, Reliability Enhancement and Re-engining Program, BP-11 (to include Advance Procurement)	92.372	199.802	438.579	837.909	955.184	926.932	931.983	5,166.286	9,553.756

(U) D. Acquisition Strategy

Avionics Modernization Program: Program acquisition strategy establishes a single integrating contractor (Lockheed Martin) 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 Lockheed Martin 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 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Lockheed Martin Aeronautics Co	CPAF		351.230	0.000		9.143	Apr-08	1.336	Nov-08	0.000	361.709	361.709
N/A											0.000	
Subtotal Product Development			351.230	0.000		9.143		1.336		0.000	361.709	361.709
Remarks: Engineering complete.												
(U) Support												
730 ACSG. Robins AFB, GA			10.837								10.837	10.837
716 AESG, Wright-Patterson AFB, OH			13.611			1.628		0.238			15.477	15.477
N/A											0.000	
Subtotal Support			24.448	0.000		1.628		0.238		0.000	26.314	26.314
Remarks: Engineering complete.												
(U) Test & Evaluation												
418 Test Squadron		Edwards AFB	19.363			1.754	Jun-08	0.256	Apr-09		21.373	21.373
N/A											0.000	
Subtotal Test & Evaluation			19.363	0.000		1.754		0.256		0.000	21.373	21.373
Remarks: Engineering complete.												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks: Engineering complete.												
(U) Total Cost			395.041	0.000		12.525		1.830		0.000	409.396	409.396

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401119F C-5 Airlift Squadrons	PROJECT NUMBER AND TITLE: 4495 Avionics Modernization Program

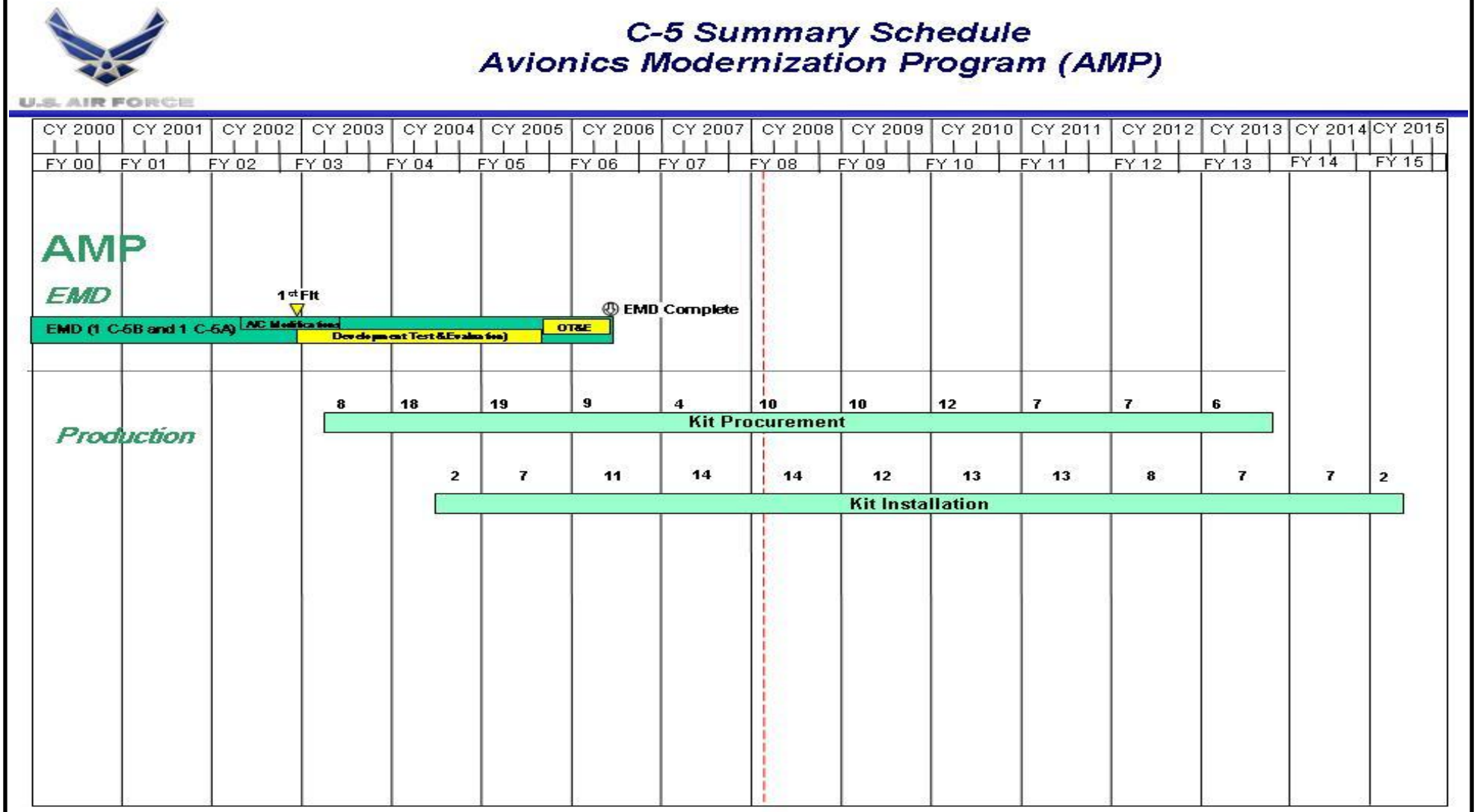

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401119F C-5 Airlift Squadrons**	PROJECT NUMBER AND TITLE **4495 Avionics Modernization Program**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Aircraft is in production	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4835	Reliability Enhancement & Reengining Program	137.565	166.465	123.233	28.136	20.065	10.007	0.000	0.000	1,577.613
	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 Cost (TOC). This effort centers around replacing TF39 engines with a more reliable, Commercial Off-the-Shelf (COTS) turbofan engine with increased takeoff thrust and stage three noise compliance. These new engines (along with new pylons, wing attach fittings and upgrades, and thrust reversers) increase payload capability and access to Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) airspace. The modification also decreases aircraft time to climb, increases engine-out climb gradient for takeoff, improves transportation system throughput, and decreases engine removals. Additionally, numerous other system modifications will be performed (e.g., auxiliary power units, electrical, hydraulics, fuel system, fire suppression system, pressurization/air conditioning system, landing gear, and airframe) to increase fleet availability and reduce TOC. RDT&E funded three test articles for installation and flight test. RERP's Preliminary Design Review (PDR) completed in Jan 03 and the Air Vehicle Critical Design Review (CDR) completed in Mar 04. First Flight of the first test article occurred in Jun 06, followed by first flight of second and third test articles in Nov 06 and Mar 07, respectively. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7. Increased costs due to development delays; budget adjustments; and production cost increases associated with engines, pylons, reliability enhancements items, and Lockheed Martin labor have led to a review of total program requirements. SecAF notified Congress on 27 Sep 07 of critical Nunn-McCurdy (NM) breaches for Average Procurement Unit Cost (APUC) and Procurement Acquisition Unit Cost (PAUC). An out-of-cycle Selected Acquisition Report (SAR) was submitted to Congress on 14 Nov 07. C-5 RERP remains in NM review at this time. These documents reflect the Program of Record prior to the declaration of the NM breach, but incorporate fact-of-life changes. After NM decisions are made, the results will be provided to the defense committees. These adjustments will be reflected in the FY10 PBR. Equipment DMS issues will be resolved to support continued operations through studies, bridge buys, life of type buys, development and redesign efforts.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Systems Engineering/Program Management	9.777	19.322	6.942
(U)	RERP Design/Development/Contractor Test	76.264	121.659	78.351
(U)	Prototype Fabrication/Install	34.913	0.000	0.000
(U)	Mission Support	7.691	5.654	8.996
(U)	Government Test Support	8.920	17.830	7.024
(U)	Aircrew & Maintenance Trainer	0.000	2.000	21.920
(U)	Total Cost	137.565	166.465	123.233

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									
(U) Aircraft Procurement,AF, BA-5,C-5 Mods, Reliability Enhancement and Re-engining Program, BP-11 (to include Advance Procurement)	92.372	199.802	438.579	837.909	955.184	926.932	931.983	5,166.286	9,553.756
(U) Aircraft Procurement, AF, BA-5, C-5 Mods, Avionics Modernization Program, BP-11	52.171	88.477	95.170	78.828	75.297	77.454	75.303	29.701	958.591
(U) Aircraft Procurement, AF, BA-5, C-5 Mods, Avionics Modernization Program, BP-19		23.584	7.429	4.970	1.510				37.493

(U) D. Acquisition Strategy

Reliability Enhancement and Re-engining Program (RERP): The approved FY02 acquisition strategy and the updated FY06 acquisition strategy called for the modification of the entire C-5 aircraft fleet starting with the 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. Lockheed Martin 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. SecAF notified Congress on 27 Sep 07 of critical Nunn-McCurdy (NM) breaches for Average Procurement Unit Cost (APUC) and Program Acquisition Unit Cost (PAUC). An out-of-cycle Selected Acquisition Report (SAR) was submitted to Congress on 14 Nov 07 and the NM recertification is ongoing.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Lockheed Martin Aeronautics Co (Pre-EMD)	FFP									0.000	0.000	
Lockheed Martin Aeronautics Co (SDD)	CPAF		1,023.607	120.954	Oct-06	140.981	Oct-07	85.293	Oct-08	25.288	1,396.123	1,396.123
											0.000	
Subtotal Product Development			1,023.607	120.954		140.981		85.293		25.288	1,396.123	1,396.123
Remarks:												
(U) Support												
730.ACSG, Robins AFB, GA			17.045	2.300		2.500		2.675		0.000	24.520	24.520
716 AESG, Wright-Patterson AFB, OH			29.317	9.053		3.142		6.321		0.000	47.833	47.833
N/A											0.000	
Subtotal Support			46.362	11.353		5.642		8.996		0.000	72.353	72.353
Remarks:												
(U) Test & Evaluation												
418 Test Squadron (Edwards AFB)			22.173	8.920		17.830		7.024		3.577	59.524	59.524
N/A											0.000	
Subtotal Test & Evaluation			22.173	8.920		17.830		7.024		3.577	59.524	59.524
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												
						2.000		21.920		25.693	49.613	49.613
Subtotal Aircrew & Maintenance Trainer			0.000	0.000		2.000		21.920		25.693	49.613	49.613
Remarks:												
(U) Total Cost			1,092.142	141.227		166.453		123.233		54.558	1,577.613	1,577.613

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401119F C-5 Airlift Squadrons	PROJECT NUMBER AND TITLE: 4835 Reliability Enhancement & Reengining Program

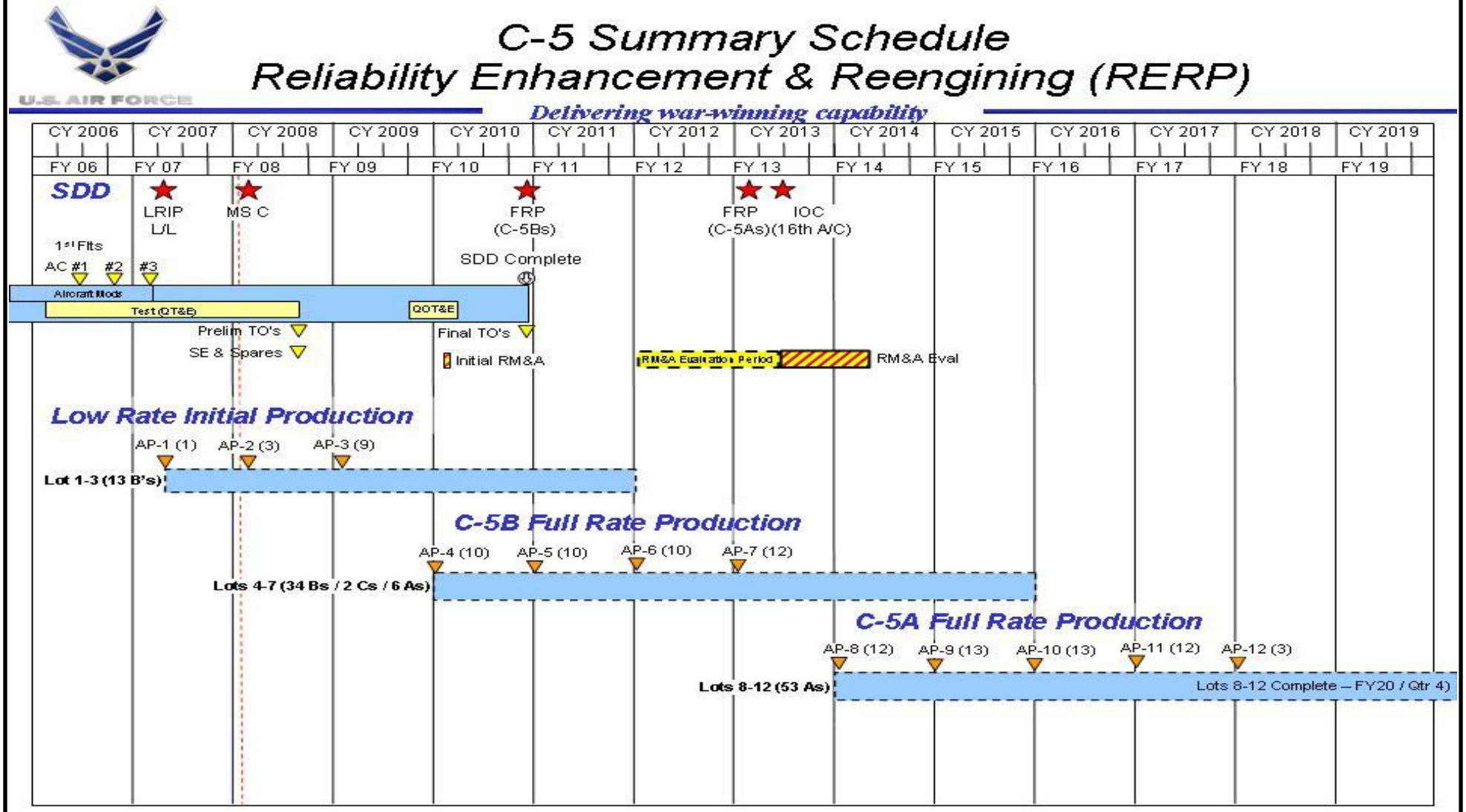

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401119F C-5 Airlift Squadrons**	PROJECT NUMBER AND TITLE **4835 Reliability Enhancement & Reengining Program**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) LRIP Long-Lead procurement for Lot 1 (1 aircraft)	3Q		
(U) Milestone C (FY08/2)		2Q	

PE NUMBER: 0401130F
PE TITLE: C-17 Aircraft

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401130F C-17 Aircraft

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	170.527	180.581	236.047	216.032	206.530	222.591	223.200	Continuing	TBD
2569 C-17 Aircraft	170.527	180.581	236.047	216.032	206.530	222.591	223.200	Continuing	TBD

FY02 and later funds for LAIRCM were ZBTed to PE 41134F.

(U) A. Mission Description and Budget Item Justification

The C-17 can perform the entire spectrum of airlift missions and is specifically designed to operate effectively and efficiently in both strategic and theater environments. Airlift provides essential flexibility when responding to contingencies on short notice anywhere in the world. It is a major element of America's National Military Strategy and constitutes the most responsive means of meeting U.S. mobility requirements. Specific tasks associated with the airlift mission include deployment, employment (airland and airdrop), sustaining support, retrograde, and combat redeployment. The C-17 provides a vast increase in overall airlift capability necessary to replace and exceed the capabilities lost from retiring the aging C-141 fleet from the Air Force inventory. Not only can the C-17 deliver outsize cargo to austere tactical environments, but it also reduces ground time during airland operations. The C-17 will perform the airlift mission well into this century. RDT&E efforts support aircraft performance improvements.

This program is BA 7, Operational System Development, since the program has completed Milestone III but is continuing to increase the operational capability of the C-17 through programmed modifications.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	173.125	181.734	
(U)	Current PBR/President's Budget	170.527	180.581	236.047
(U)	Total Adjustments	-2.598	-1.153	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-1.153	
	Congressional Increases			
	Reprogrammings	1.780		
	SBIR/STTR Transfer	-4.378		

(U) Significant Program Changes:

FY09 increase is to sustain 4 FY08 new starts which are completing initial design and progressing into full development activities as well as to support the FY09 new start: Advanced Situational Awareness and Countermeasures (ASACM).

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2569 C-17 Aircraft	170.527	180.581	236.047	216.032	206.530	222.591	223.200	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 Military Strategy and constitutes the most responsive means of meeting U.S. mobility requirements. Specific tasks associated with the airlift mission include deployment, employment (airland and airdrop), sustaining support, retrograde, and combat redeployment. The C-17 provides a vast increase in overall airlift capability necessary to replace and exceed the capabilities lost from retiring the aging C-141 fleet from the Air Force inventory. Not only can the C-17 deliver outsize cargo to austere tactical environments, but it also reduces ground time during airland operations. The C-17 will perform the airlift mission well into this century. RDT&E efforts support aircraft performance improvements.

This program is BA 7, Operational System Development, since the program has completed Milestone III but is continuing to increase the operational capability of the C-17 through programmed modifications.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Performance Improvement Development & Testing	87.916	102.504	150.814
(U) Systems Engineering/Program Management	41.488	42.677	46.169
(U) Producibility Enhancement/Performance Improvement (PE/PI) Contractor Flight Test	23.233	26.900	26.150
(U) Producibility Enhancement/Performance Improvement (PE/PI) Government Flight Test	17.890	8.500	12.914
(U) Total Cost	170.527	180.581	236.047

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) APAF, MYP, BA02, PE0401130F	4332.520	258.839	358.788	220.408	209.842	212.675	194.649	0.000	5,787.721
(U) APAF, A/C Mods, BA05, PE0401130F/PE0401134F	389.194	179.982	340.301	507.498	473.695	419.270	629.714	0.000	2,939.654
(U) MilCon, Facilities, PE0401130F	170.813	44.071	12.000	0.000	0.000			0.000	226.884

The A/C mods funding includes the LAIRCM PE since those funds are included in the C-17 11C17A BPAC (P-1 line)

(U) D. Acquisition Strategy

The C-17 Acquisition Strategy is based on several separate contracts to support the entire scope of the C-17 weapon system. These contracts are: 1) a multi-year procurement (MYP) aircraft contract (to economically purchase the remaining complement of 180 production aircraft) - (APAF), additionally new IDIQ contracts were

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401130F C-17 Aircraft	PROJECT NUMBER AND TITLE 2569 C-17 Aircraft

issued for the procurement of C-17s and engines beyond 180, including the additional 10 aircraft authorized in the FY07 Defense Appropriations Act and foreign orders that may materialize; 2) a Producibility Enhancement and Performance Improvement (PE/PI) contract (to develop cost reduction changes, capability enhancements, and design fixes to service-revealed problems) - (RDT&E, APAF); a new five-year ordering period IDIQ contract was awarded December 2007 which is the third contract for the Producibility Enhancement/Performance Improvement program; 3) a Globemaster III Sustainment Partnership (field support) contract (to support the current and future fielded aircraft) - (O&M, TWCF); 4) a MYP engine contract (for Government Furnished Equipment [GFE] engines) - (APAF); 5) a set of aircrew simulator and training contracts: one for aircrew simulators and one for training & concurrency upgrades; and 6) a maintenance training device contract (for devices & concurrency upgrades) - (APAF).

Two C-17 Defense Acquisition Board (DAB) decisions, contained in the 3 Nov 95 and 1 Feb 96 USD(A&T) Acquisition Decision Memoranda (ADM), directed the Air Force to proceed with a 120-aircraft production program. The Air Force proceeded with procuring 40 aircraft followed by an 80-aircraft MYP program (along with engines to support them). Sixty additional C-17s were programmed at the end of the 80-aircraft MYP to meet requirements not included in the 120 aircraft program. Most recently, the FY07 Defense Appropriations Act authorized funding for 10 additional aircraft bringing the total fleet number to 190 aircraft.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Boeing	C,FPI/FP										0.000	
Boeing	C,CPAF		6,686.436	152.477	Oct-06	162.532	Oct-07	213.255	Nov-08	773.192	7,987.892	
Subtotal Product Development			6,686.436	152.477		162.532		213.255		773.192	7,987.892	0.000
Remarks:												
(U) Support												
Mission Support OGC	PO		101.278	0.160	Dec-06	9.549	Oct-07	9.878	Oct-08	41.610	162.475	
Subtotal Support			101.278	0.160		9.549		9.878		41.610	162.475	0.000
Remarks:												
(U) Test & Evaluation												
Combined Test Force	PO		336.861	15.000	Oct-06	8.000	Nov-07	12.914	Nov-08	53.551	426.326	
JPADS	PO			0.200	Dec-06						0.200	
SPRO (Army funds for testing)	PO			2.650	Mar-07	0.500	Apr-08			0.000	3.150	
AFRL				0.040							0.040	
Subtotal Test & Evaluation			336.861	17.890		8.500		12.914		53.551	429.716	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			7,124.575	170.527		180.581		236.047		868.353	8,580.083	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401130F C-17 Aircraft	PROJECT NUMBER AND TITLE: 2569 C-17 Aircraft

C-17 Aircraft Schedule

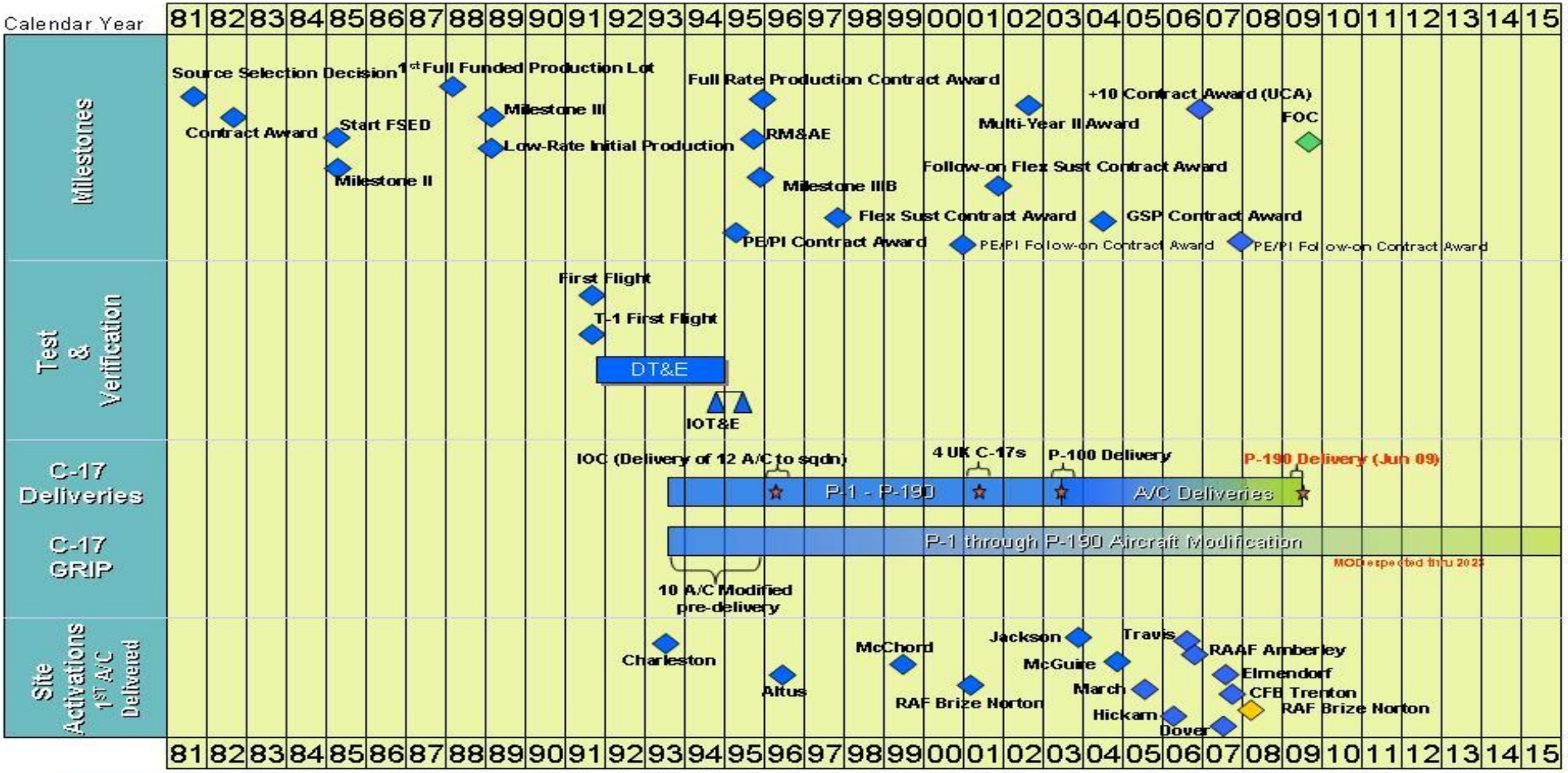

Exhibit R-4a, RDT&E Schedule Detail

DATE: February 2008

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0401130F C-17 Aircraft	2569 C-17 Aircraft

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Incremental Funding of Ongoing Performance Improvement Projects (Boeing)	1-3Q	1-3Q	1-3Q
(U) ASACM			2Q
(U) Replacement HUD		3Q	1Q
(U) Airdrop Improvements		1Q	1Q
(U) IFF CNS/ATM Mode 5		3Q	1Q
(U) ELT Frequency Change		3Q	1Q
(U) Rnav/Vnav & Baro Vnav Capability		3Q	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 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401132F C-130J PROGRAM

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	34.765	73.753	52.354	42.202	59.876	59.903	58.332	Continuing	TBD
5061 C-130J	34.765	73.753	52.354	42.202	59.876	59.903	58.332	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

FY08 C-130J program RDT&E funding provides for:

1.) Participation in the International Co-operative Systems and Software Upgrade Requirements Management (COSSURM). COSSURM participants include the United Kingdom, Australia, Italy, Denmark, and the United States. COSSURM provides a mechanism to jointly identify, collect, define, analyze, and price requirements. By combining requirements and resources under COSSURM, each participating country will save in aircraft upgrade costs.

2.) Continuation of Block 7.0 Upgrades. Block 7.0 is the second phase of at least four block upgrades which primarily address mandated Communication, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) requirements. Block 7.0 is the first Block Upgrade initiative that is a true International partnership, as the development costs will be shared by each participating nation. Block 7.0 requirements include:

a.) Communication, Navigation & Identification (CNI) upgrades
b.) Dual Multi-Mode Receivers (MMR) with TSO C-129A Civil Global Positioning System (GPS)
c.) CNI Special Processor upgrade
d.) Tactical Datalink (TDL)
e.) Mission Computer (MC) upgrades

Included in Block 7.0 is a systems integration lab which will be used to integrate Block 7.0 (as well as all future Block Upgrades) into the various training systems.

3.) AMC Requirements and Planning Council (R&PC) activities. AMC has prioritized requirements that do not fall within the International Block Upgrade program, which primarily addresses deficiencies, system improvements, and diminsihing manufacturing sources (DMS). This includes Navigation Safety upgrades, Formation Positioning System (FPS), Large Aircraft Infrared Counter Measures (LAIRCM), and Sensor Cant, among other priorities.

FY09 C-130J program RDT&E funding provides for:
1.) Continued participation in COSSURM.
2.) Continuation and testing of Block 7.0 Upgrades
3.) Continuation of R&PC activities
4.) Start of Block 8.0 Upgrades

The C-130J is a medium-sized transport aircraft capable of performing a variety of combat delivery (tactical airlift) operations across a broad range of mission environments. The C-130J aircraft, with its extended (by 15 feet) fuselage, provides additional cargo carrying capacity for the USAF combat delivery mission compared with legacy C-130E/H and the C-130J (Short). Special mission variants of the C-130J conduct airborne psychological operations (EC-130J) and weather

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401132F C-130J PROGRAM

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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	40.389	74.223	52.790
(U)	Current PBR/President's Budget	34.765	73.753	52.354
(U)	Total Adjustments	-5.624		
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.470	
	Congressional Increases			
	Reprogrammings	-4.500		
	SBIR/STTR Transfer	-1.124		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5061 C-130J	34.765	73.753	52.354	42.202	59.876	59.903	58.332	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

FY08 C-130J program RDT&E funding provides for:

1.) Participation in the International Co-operative Systems and Software Upgrade Requirements Management (COSSURM). COSSURM participants include the United Kingdom, Australia, Italy, Denmark, and the United States. COSSURM provides a mechanism to jointly identify, collect, define, analyze, and price requirements. By combining requirements and resources under COSSURM, each participating country will save in aircraft upgrade costs.

2.) Continuation of Block 7.0 Upgrades. Block 7.0 is the second phase of at least four block upgrades which primarily address mandated Communication, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) requirements. Block 7.0 is the first Block Upgrade initiative that is a true International partnership, as the development costs will be shared by each participating nation. Block 7.0 requirements include:

a.) Communication, Navigation & Identification (CNI) upgrades
b.) Dual Multi-Mode Receivers (MMR) with TSO C-129A Civil Global Positioning System (GPS)
c.) CNI Special Processor upgrade
d.) Tactical Datalink (TDL)
e.) Mission Computer (MC) upgrades

Included in Block 7.0 is a systems integration lab which will be used to integrate Block 7.0 (as well as all future Block Upgrades) into the various training systems.

3.) AMC Requirements and Planning Council (R&PC) activities. AMC has prioritized requirements that do not fall within the International Block Upgrade program, which primarily addresses deficiencies, system improvements, and diminsihing manufacturing sources (DMS). This includes Navigation Safety upgrades, Formation Positioning System (FPS), Large Aircraft Infrared Counter Measures (LAIRCM), and Sensor Cant, among other priorities.

FY09 C-130J program RDT&E funding provides for:
1.) Continued participation in COSSURM.
2.) Continuation and testing of Block 7.0 Upgrades
3.) Continuation of R&PC activities
4.) Start of Block 8.0 Upgrades

The C-130J is a medium-sized transport aircraft capable of performing a variety of combat delivery (tactical airlift) operations across a broad range of mission environments. The C-130J aircraft, with its extended (by 15 feet) fuselage, provides additional cargo carrying capacity for the USAF combat delivery mission compared with legacy C-130E/H and the C-130J (Short). Special mission variants of the C-130J conduct airborne psychological operations (EC-130J) and weather reconnaissance (WC-130J). These aircraft must be capable of worldwide operations.

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401132F C-130J PROGRAM	PROJECT NUMBER AND TITLE 5061 C-130J

This effort is assigned to Budget Activity 7, as it supports an operational system.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	COSSURM payment	1.304	1.770	1.900
(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 CNS/ATM / nav safety hardware and software modifications. Procure and install hardware on flight test aircraft and one C-130J weapon system trainer.	17.987		
(U)	Flight Test	1.134	1.500	1.500
(U)	Initiate non-recurring engineering design and software development for Block 7.0 CNS/ATM / nav safety requirements and aircraft deficiencies/product improvements.	11.900		
(U)	Continue Block 7.0 non-recurring engineering design and software development. Conduct laboratory testing of CNS/ATM / nav safety hardware and software modifications. Procure and install hardware on flight test aircraft and the C-130J trainer integration lab.	0.000	36.200	11.334
(U)	Requirements and Planning Council (R&PC) activities	1.338	30.313	8.560
(U)	International Program Office (IPO) Support (A&AS, Travel, Supplies)	1.102	3.970	4.060
(U)	International Block Upgrade Savings			25.000
(U)	Total Cost	34.765	73.753	52.354

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	PE 0401132F, C-130J Procurement (BP1100)									
(U)	Mod MN-_1701 Blk 6.0	11.480	3.937	0.312					0.000	15.729
(U)	Mod MN-_1411 MWS		1.681	2.523	0.642				0.000	4.846
(U)	Mod MN-_2612 Av Sys		28.043	46.491	13.617				0.000	88.151
(U)	Mod MN-_6298 Blk 7.0				29.388	56.553	49.600	7.000	0.000	142.541
(U)	Mod MN-_8629 LAIRCM				39.295	42.914	44.100	8.792		TBD
(U)	Mod MN-_5448 FPS				19.523	12.800	33.631	12.441	0.000	78.395
(U)	Mod MN-_5222 Blk 8.0							75.510		TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401132F C-130J PROGRAM	PROJECT NUMBER AND TITLE 5061 C-130J

(U) D. Acquisition Strategy

C-130J aircraft will be modified using a 'block upgrade' strategy. The full CNS/ATM / nav safety requirement will be met in four block upgrades: Block 6.0, which began with FY03 RDT&E funding and continues through FY07 RDT&E funding, Block 7.0, which started in FY07, Block 8.0, which will start in FY10, and Block 9.0, which will start in FY13. The proportion of CNS/ATM / nav safety requirements allocated to Blocks 6.0 through 9.0 was determined via a design trade study conducted by Lockheed Martin (the C-130J prime contractor) and verified by the C-130J system program office and AMC. The development costs are being shared via a Global Project arrangement by the United States, the United Kingdom, Italy, Australia, and Denmark. An international program office, with USAF lead (Wright Patterson AFB, OH) manages the block upgrade development effort. Embodiment of a Block on the aircraft is the responsibility of each nation.

Lockheed Martin will be the prime contractor for these efforts, perform the non-recurring engineering and, following the successful conclusion of flight testing and certification of each block upgrade, will provide production retrofit kits on USAF C-130J aircraft. Installation will be performed by contractor, depot, and Air Force personnel.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Block 6.0, Aeronautical Systems Center (AFMC), WPAFB, OH	CPFF	Lockheed Martin Aeronautics, Marietta GA	30.731	17.987	Oct-06						48.718	
Block 7.0, Aeronautical Systems Center (AFMC), WPAFB, OH	CPFF	Lockheed Martin Aeronautics, Marietta GA	0.000	11.900	May-07	26.200	Dec-07	6.334	Oct-08		44.434	
Block 7.0, Aeronautical Systems Center (AFMC), WPAFB, OH	CPFF	Lockheed Martin Information Sytems, Orlando FL				10.000	Jan-08	5.000	Oct-08		15.000	
R&PC, Aeronautical Systems Center (AFMC), WPAFB, OH	CPFF	Lockheed Martin Aeronautics, Marietta GA		1.338		30.313	Mar-08	8.560	Oct-08		40.211	
Subtotal Product Development			30.731	31.225		66.513		19.894		0.000	148.363	0.000
Remarks:												
(U) Support												
IPO Support	N/A			1.102	Jan-07	3.970	Dec-07	4.060			9.132	
Subtotal Support			0.000	1.102		3.970		4.060		0.000	9.132	0.000
Remarks: A&AS, Travel, Supplies - all vary on support needed												
(U) Test & Evaluation												
Air Force Materiel Command (DT&E)				1.134	Oct-06	1.500	Dec-07	1.500	Oct-08		4.134	
Subtotal Test & Evaluation			0.000	1.134		1.500		1.500		0.000	4.134	0.000
Remarks:												
(U) Management												
COSSURM			3.800	1.304	Oct-06	1.770	Dec-07	1.900	Oct-08		8.774	
International Savings								25.000			25.000	
Subtotal Management			3.800	1.304		1.770		26.900		0.000	33.774	0.000
Remarks:												
(U) Lockheed Martin Aeronautics, Marietta, GA												
(U) Total Cost			34.531	34.765		73.753		52.354		0.000	195.403	0.000
Remarks:												

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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

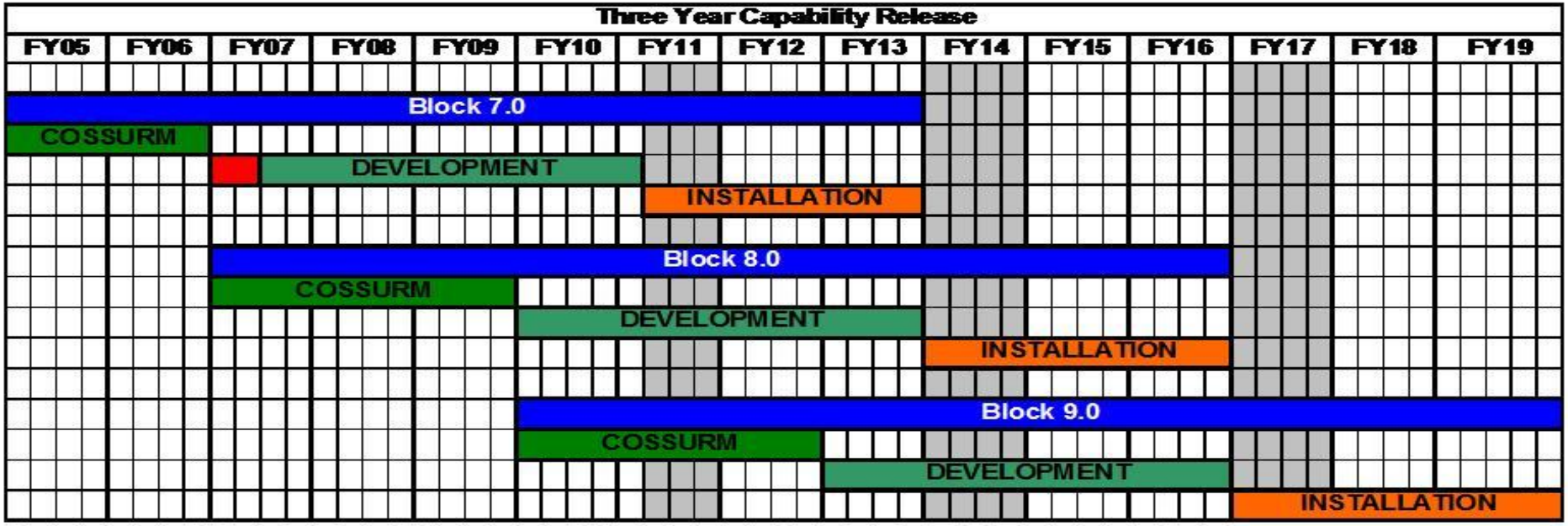

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401132F C-130J PROGRAM**	PROJECT NUMBER AND TITLE **5061 C-130J**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Block 6.0 FY07 award	1Q		
(U) Block 7.0 FY07 contract award	3Q		
(U) Block 7.0 FY08 award		1Q	
(U) Block 7.0 FY09 award			1Q

PE NUMBER: 0401134F
PE TITLE: Large Aircraft InfraRed Counter Measures (LAIRCM)

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	35.349	19.201	32.100	12.073	7.120	7.258	7.406	Continuing	TBD
4942	Large Aircraft Infrared Counter Measures (LAIRCM)	35.349	19.201	32.100	12.073	7.120	7.258	7.406	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Large Aircraft Infrared Countermeasures System (LAIRCM) provides significantly improved defensive systems capability for Air Force 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 laser transmitter assembly, control interface unit and processors to detect, track, jam and counter incoming IR missiles. The number of sensors and turrets per aircraft is determined by the size and signature of the aircraft. 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 an evolutionary acquisition program.

The Baseline program installs the laser transmitter assembly, ultra-violet MWS, processor, and Control Interface Unit (CIU) and a repeater (on some aircraft) to meet the need for advanced IR countermeasures. The Guardian Laser Transmitter Assembly (GLTA) is an upgrade to the baseline transmitter equipment. Initial procurement of GLTA is late FY07.

Development of the Next Generation Missile Warning System (NexGen MWS) is new hardware that improves capability. Baseline equipment (ultra-violet MWS) will be retrofitted with the NexGen MWS as it becomes available. Initial procurement of the NexGen MWS: mid/late FY08.

Continued hardware and software upgrades and testing of the LAIRCM system will ensure new and emerging threats will be defeated.

Integration and testing as well as integration support to incorporate LAIRCM on new platforms including C-130J, AC-130H, AC-130U, MC-130H and other C-130 variants as defined by AMC and AFSOC will be accomplished.

LAIRCM is Budget Activity 7, Operational Systems Development as it is an electronic countermeasures system upgrade to existing weapons systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	40.463	19.324	32.369
(U)	Current PBR/President's Budget	35.349	19.201	32.100
(U)	Total Adjustments	-5.114	-0.123	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.123	
	Congressional Increases			
	Reprogrammings	-4.000		
	SBIR/STTR Transfer	-1.114		

(U) Significant Program Changes:

- $4M Reprogramming for higher Air Force priorities.
- Congress appropriated $5.7M specifically for AFSOC aircraft LAIRCM integration.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4942	Large Aircraft Infrared Counter Measures (LAIRCM)	35.349	19.201	32.100	12.073	7.120	7.258	7.406	Continuing	TBD
	Quantity of RDT&E Articles	0	2	1	1	1	0	0		

(U) A. Mission Description and Budget Item Justification

The Large Aircraft Infrared Countermeasures System (LAIRCM) provides significantly improved defensive systems capability for Air Force 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 laser transmitter assembly, control interface unit and processors to detect, track, jam and counter incoming IR missiles. The number of sensors and turrets per aircraft is determined by the size and signature of the aircraft. 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 an evolutionary acquisition program.

The Baseline program installs the laser transmitter assembly, ultra-violet MWS, processor, and Control Interface Unit (CIU) and a repeater (on some aircraft) to meet the need for advanced IR countermeasures. The Guardian Laser Transmitter Assembly (GLTA) is an upgrade to the baseline transmitter equipment. Initial procurement of GLTA is late FY07.

Development of the Next Generation Missile Warning System (NexGen MWS) is new hardware that improves capability. Baseline equipment (ultra-violet MWS) will be retrofitted with the NexGen MWS as it becomes available. Initial procurement of the NexGen MWS: mid/late FY08.

Continued hardware and software upgrades and testing of the LAIRCM system will ensure new and emerging threats will be defeated.

Integration and testing as well as integration support to incorporate LAIRCM on new platforms including C-130J, AC-130H, AC-130U, MC-130H and other C-130 variants as defined by AMC and AFSOC will be accomplished.

LAIRCM is Budget Activity 7, Operational Systems Development as it is an electronic countermeasures system upgrade to existing weapons systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Group A Contracts	18.762	5.747	16.200
(U) Nex Gen MWS Contracts	4.897	0.150	0.000
(U) Guardian Laser Transmitter Assembly (GLTA) Program	3.907	0.661	0.000
(U) LAIRCM Upgrades	0.621	4.572	10.447

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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 2007	FY 2008	FY 2009
(U)	Test	2.300	4.471	5.253
(U)	PMA	4.862	3.600	0.200
(U)	Total Cost	35.349	19.201	32.100

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	C-130 (AFRC) Procurement (BP1100)		17.500	55.114	1.055	1.048	1.068	1.090		76.875
(U)	C-17 Procurement (BP1100)	259.348	75.061	80.747	144.643	69.031	46.369	179.556		854.755
(U)	C-130 Procurement (BP1100)	235.513	25.921	4.393						265.827
(U)	C-5 Procurement (BP1100)	58.844	18.622	41.671	24.532	5.268	5.359	5.451		159.747
(U)	C-130J Procurement (BP1100)				37.922	42.914	44.100	8.792		133.728

(U) D. Acquisition Strategy

The LAIRCM SDD contract was awarded on 28 Sep 01 as a CPAF contract. An IDIQ contract for LAIRCM production hardware and support was awarded in May 06. Hardware and software upgrades will be awarded as separate delivery orders under the IDIQ contract.

The Next Generation Missile Warning System (Nex Gen MWS) contracts for a System Design and Development (SDD) competition were awarded to Northrop Grumman and Lockheed Martin in Jun 04. Both contractors have developed, tested, and integrated NexGen MWS prototypes during the SDD competition. A NexGen MWS production contractor will be selected during a competitive source selection with production buys following milestone C. Integration of the NexGen MWS production hardware will be accomplished with the NexGen MWS production contractor and the platform Group A integrator for the various LAIRCM equipped platforms.

Integration of the LAIRCM subsystems on C-130 variants is accomplished by Northrop Grumman. The contract for AC-130H integration was awarded in FY07. The contract for AC-130U integration will be awarded in FY09. The contract for MC-130H integration will be awarded in FY10. Contracts were awarded to Lockheed Martin and Northrop Grumman for a C-130J LAIRCM integration study in FY07. Contracts for the design, integration and test of LAIRCM on the C-130J will be awarded to Lockheed Martin and Northrop Grumman in FY08.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
SDD Phase I	Various	Various	111.158								111.158	111.158
MC-130 Integration	TBD	Northrop Grumman, Rolling Meadows, IL								6.000	6.000	6.000
AC-130 Integration	CPFF	Northrop Grumman, Rolling Meadows, IL	3.700	5.523	Jun-07	0.400		6.000	Apr-09		15.623	15.623
Next Generation Missile Warning Sensor Integration	CPAF/FFP	Northrop Grumman, Rolling Meadows, IL	17.083								17.083	17.083
Next Generation Missile Warning Sensor Development	CPFF	Morthrop Grumman, Rolling Meadows, IL	31.608	2.306		0.150					34.064	33.914
Next Generation Missile Warning Sensor Development	CPFF	Lockheed Martin, Orlando, FL	9.043	2.591							11.634	11.055
GLTA Development	CPFF	Northrop Grumman, Rolling Meadows, IL	37.781	3.907		0.661					42.349	42.065
C-5B Development & Integration	CPFF	Lockheed Martin, Marietta, GA	13.671	12.425		0.272					26.368	24.808
C-130J Development & Integration	CPFF	Lockheed Martin, Marietta, GA		0.814	Feb-07	5.075		10.200	Apr-09		16.089	17.675
LAIRCM Hardware and Software upgrades	CPFF	Northrop Grumman, Rolling Meadows, IL		0.621		4.572		10.447			15.640	
Subtotal Product Development			224.044	28.187		11.130		26.647		6.000	296.008	279.381
Remarks:												
(U) Support												
654 AESS	Various	Various	16.265	4.862		3.600		0.200		0.800	25.727	

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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)**

	Subtotal Support			16.265	4.862	3.600	0.200	0.800	25.727	0.000
	Remarks:									
(U)	Test & Evaluation									
	Various Gov't Test Organizations	Various	Various	5.196	2.300	4.471	5.253	23.413	40.633	
	Subtotal Test & Evaluation			5.196	2.300	4.471	5.253	23.413	40.633	0.000
	Remarks:									
(U)	Total System Cost									
(U)	Total Cost			245.505	35.349	19.201	32.100	30.213	362.368	279.381
	Remarks:									

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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

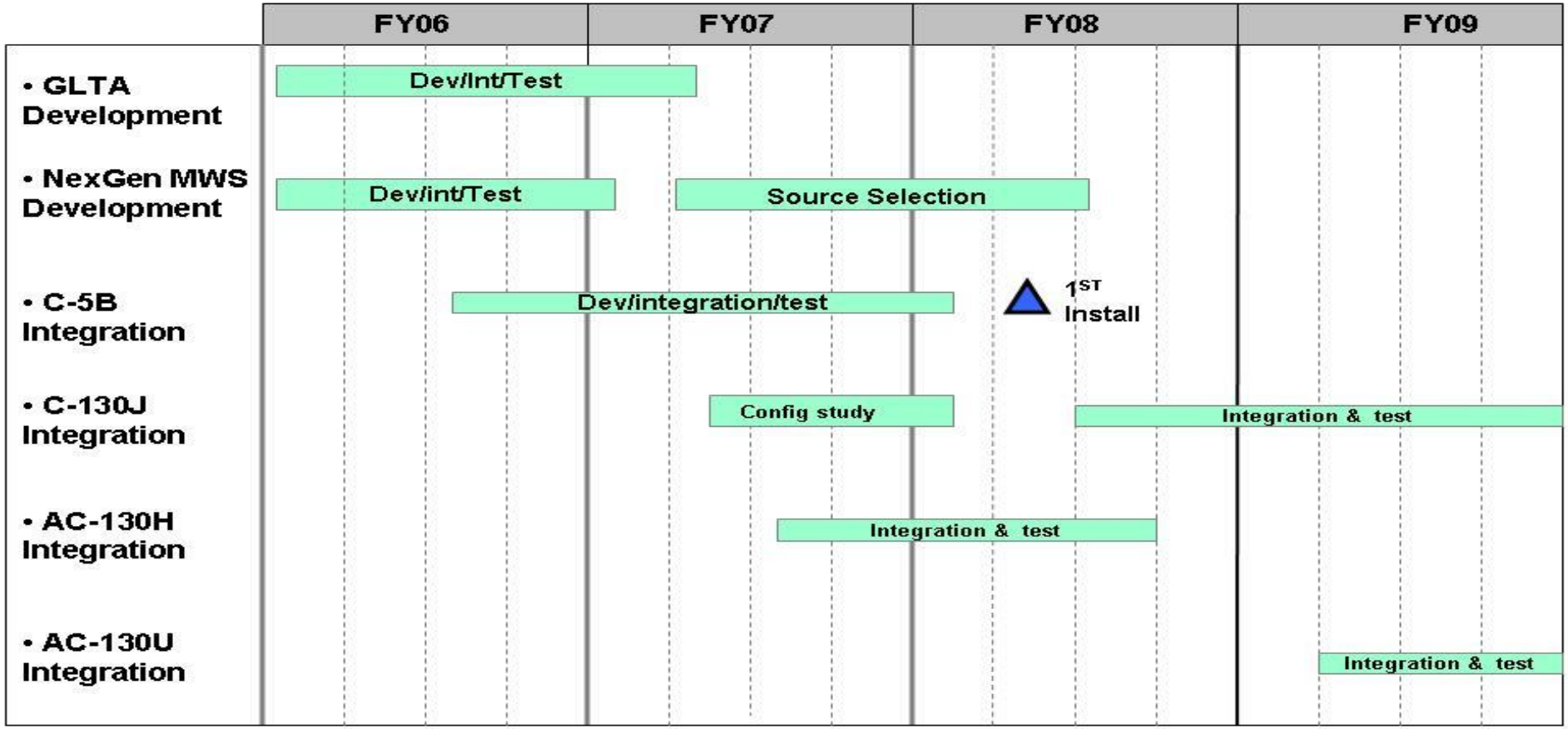

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)**	PROJECT NUMBER AND TITLE **4942 Large Aircraft Infrared Counter Measures (LAIRCM)**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) GLTA Development	1-2Q		
(U) Next Generation Missile Warning System Development	2-4Q	1-3Q	
(U) C-5B Integration	1-4Q	1Q	
(U) C-130J Integration	2-4Q	1-4Q	1-4Q
(U) AC-130H Integration	3-4Q	1-3Q	
(U) AC-130U Integration			2-4Q

PE NUMBER: 0401218F
PE TITLE: KC-135s

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401218F KC-135s

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	1.092	8.710	7.133	0.000	0.000	0.000	0.000	Continuing	TBD
4494	KC-135 Aging Aircraft Program	1.092	1.228	1.160	0.000	0.000	0.000	0.000	Continuing	TBD
5261	KC-135 Upgrades	0.000	7.482	5.973	0.000	0.000	0.000	0.000	0.000	0.000

(U) A. Mission Description and Budget Item Justification

KC-135 Aging Aircraft Program (674494).

This program supports projects that will help to keep the KC-135 viable into the future. Projects include the analysis and testing efforts in the area of aging aircraft, to include structural, corrosion, fatigue, and stress corrosion cracking. Additionally, the Functional System Integrity Program (FSIP) proactively examines individual aircraft systems for potential impacts due to aging components. The USAF will utilize these activities to improve KC-135 Programmed Depot Maintenance efficiency and to provide direction for future aircraft efforts to sustain the KC-135 as a viable airframe.

KC-135 Upgrades (675261).

Block 45 program - Supports a modification program performing analysis, testing, software development, prototyping, documenting source data, and incorporating a new Digital Flight Director (DFD), Radio Altimeter (RA), Aeromedical Evacuation upgrade (AE), and Night Vision Imaging System (NVIS).

Mode S Enhanced Surveillance (EHS) - Replaces the current APX-100 transponder with the APX-119 transponder. Efforts allow integration of new equipment into exiting KC-135 systems.

These efforts support a fielded weapon system and therefore are assigned to Budget Activity 7, Operational System Development.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	1.122	8.766	7.133
(U)	Current PBR/President's Budget	1.092	8.710	7.133
(U)	Total Adjustments	-0.030	-0.056	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.056	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.030		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4494	KC-135 Aging Aircraft Program	1.092	1.228	1.160	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 supports projects that will help to keep the KC-135 viable into the future. Projects include the analysis and testing efforts in the area of aging aircraft, to include structural, corrosion, fatigue, and stress corrosion cracking. Additionally, the Functional System Integrity Program (FSIP) proactively examines individual aircraft systems for potential impacts due to aging components. The USAF will utilize these activities to improve KC-135 Programmed Depot Maintenance efficiency and to provide direction for future aircraft efforts to sustain the KC-135 as a viable airframe.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Corrosion/crack growth rate and fatigue determination and testing	0.076	0.439	0.000
(U) Functional Systems Integrity Program (FSIP)	0.698	0.500	0.600
(U) Mission support/contractor support	0.318	0.289	0.560
(U) Total Cost	1.092	1.228	1.160

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) None									

(U) D. Acquisition Strategy

The acquisition strategy consists primarily of separate task orders (with separate statements of work) ranging from fixed price to cost plus contracts. These task orders address a myriad of aging aircraft activities against existing contract vehicles, such as the SPO-managed KC-135 Fleet Support Contract and Design Engineering Program contracts managed through the Air Logistics Centers.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
None											0.000	
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Support												
Aging Aircraft Studies	C/FP	ARINC, Oklahoma City and other support ctrs.		0.310		0.439		0.200		Continuing	TBD	
Subtotal Support			0.000	0.310		0.439		0.200		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
Corrosion & Fatigue Testing/Functional Systems Integrity Program	Fleet Support, T&M/FFP	Boeing, Wichita KS		0.774		0.500		0.600		Continuing	TBD	
Subtotal Test & Evaluation			0.000	0.774		0.500		0.600		Continuing	TBD	0.000
Remarks:												
(U) Management												
				0.008		0.289		0.360		Continuing	TBD	
Subtotal Management			0.000	0.008		0.289		0.360		Continuing	TBD	0.000
Remarks:												
(U) Total Cost			0.000	1.092		1.228		1.160		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401218F KC-135s	PROJECT NUMBER AND TITLE 4494 KC-135 Aging Aircraft Program

KC-135 R-4 Schedule Profile

Fiscal Year	FY06				FY07				FY08				FY09			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Corrosion & Fatigue Testing												▲				
FSIP (see note 1)																
FSIP will continue to examine additional a/c systems as required while monitoring those that have previously been examined (note 1).																
Contractor/Management Support																

☆ Major Event or Milestone

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ Completed Event

△ Planned Task(s)

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401218F KC-135s	PROJECT NUMBER AND TITLE: 4494 KC-135 Aging Aircraft Program

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Corrosion & Fatigue Testing	1-4Q	1-4Q	
(U) FSIP	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401218F KC-135s

PROJECT NUMBER AND TITLE: 5261 KC-135 Upgrades

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5261 KC-135 Upgrades	0.000	7.482	5.973	0.000	0.000	0.000	0.000	0.000	0.000
Quantity of RDT&E Articles	0	0	1	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Block 45 program - Supports a modification program performing analysis, testing and incorporating a new Digital Flight Director (DFD), Radar Altimeter (RA), Aeromedical Evacuation upgrade (AE), and Night Vision Imaging System (NVIS).

Mode S Enhanced Surveillance (EHS) - Replaces the current APX-100 transponder with the APX-119 transponder. Efforts allow integration of new equipment into exiting KC-135 systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Block 45 - Non-Recurring Engineering efforts/tasks for all Block 45 sub programs		5.917	5.973
(U)			
(U) EHS - Non-Recurring Engineering efforts/tasks for EHS		1.565	
(U) Total Cost	0.000	7.482	5.973

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Block 45 Mod # 8653 3010 BP11 C135 0401218F			2.123	5.322	15.815	37.244	45.538	195.765	301.807
(U) EHS Mod # 8654 3010 BP11 C135 0401218F		5.341	5.777	19.894	8.950	4.019			43.981

(U) D. Acquisition Strategy

Block 45 - The strategy is to have a contracted integrator accomplish the task of performing analysis, testing, software development, prototype, documentation of source data, and incorporating a new Digital Flight Director (DFD), Radio Altimeter (RA), Aeromedical Evacuation upgrade (AE), and Night Vision Imaging System (NVIS). The contractor will be responsible for acquiring the necessary information and personnel to incorporate each item stated above. An RFP will be sent out requesting a single contracted integrator to integrate Block 45 onto the KC-135. The contractor will be responsible for developing, subcontracting, or a combination of the two for the development of the components.

EHS - The strategy is to have a single contractor do NRE. Kits will be purchased and installed as a Field Level Modification.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401218F KC-135s

PROJECT NUMBER AND TITLE: 5261 KC-135 Upgrades

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Block 45 - NRE, engineering, development, and prototype	TBD	TBD				5.917		5.973			11.890	
EHS - NRE and development	TBD	TBD				1.565					1.565	
Subtotal Product Development			0.000	0.000		7.482		5.973		0.000	13.455	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									0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
		TBD									0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	0.000		7.482		5.973		0.000	13.455	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401218F KC-135s**	PROJECT NUMBER AND TITLE **5261 KC-135 Upgrades**

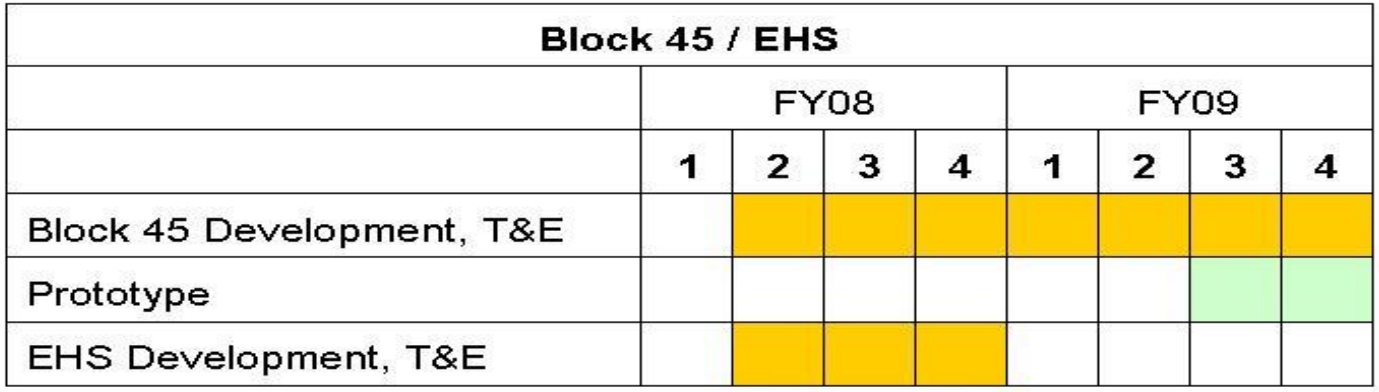

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401218F KC-135s	PROJECT NUMBER AND TITLE: 5261 KC-135 Upgrades

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Block 45 - NRE Effort		2-4Q	1-4Q
(U) EHS - NRE Effort		2Q	

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PE NUMBER: 0401219F
PE TITLE: KC-10S

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401219F KC-10S**

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	4.696	13.703	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5195	Aircraft Modernization Program (AMP)	4.696	13.703	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Global Air Traffic Management (GATM) was based upon evolving Communication, Navigation and Surveillance (CNS) and Free Flight concepts and requirements. Key elements of its architecture were Dual MMR (Multi-Mode Receiver), Dual CMU (Communications Management Unit), Communication Data links (HF, VHF, SATCOM), and associated avionics components and wiring. Communications upgrades included a data link to augment/replace voice communications. The navigation capabilities included a fully integrated GPS and an advanced flight management system. The surveillance capabilities included automatic aircraft position reporting (both enroute and oceanic). Prototype aircraft delivery was scheduled for 3QFY03 but due to schedule slips and cost overruns, the prototype delivery was expected to be delayed to 2QFY05. The development program was terminated in April 2004.

KC-10 Aircraft Modernization Program (AMP) is the first major modification to the KC-10A Extender and includes required Communication/Navigation/Surveillance (CNS) upgrades, increased survivability, net-centric operational capabilities; and reliability enhancements. Specifically, AMP provides mandatory CNS functionality for continued use of global airspace, a robust, integrated, on-board digital aircraft network enabling global net-centric operations, Night Vision Imaging System (NVIS) compatibility for aircraft exterior, boom operator station and cockpit, growth path to Defensive Systems (DS), provisions to support multi-mission payload, and real-time threat information in the cockpit (RTIC). All aircraft controls and systems will be compatible with aircrew chemical defense ensemble. Communications upgrades include datalink capability to augment/replace voice communications and adding secure capability for both voice and data. Navigation capabilities include a fully integrated GPS and an advanced flight management system. Surveillance capabilities include automatic aircraft reporting (both enroute and oceanic). The AMP will use the Systems Engineering Plan (SEP) along with Modular Open Systems Approach (MOSA) principles and Human Systems Integration Plan (HSIP) with the upgrade modifications. Anti Tamper requirements will be addressed in the Selective Availability Anti Spoofing Module (SAASM). AMP will address reliability, maintainability and obsolescence issues, to include replacing inertial navigation units (INU), central air data computer (CADC), weather radar, analog autopilot, analog engine instruments, analog flight instruments and displays, analog nav/comm radios, cockpit voice recorder (CVR), and flight data recorder (FDR), fuel system gauges, refueling boom/drogue electronics, and flight engineer station controls/instruments. AMP will automate aircrew tasks to reduce the crew's current workload, allow the crew to perform additional missions and manage the increased complexity, and integrate products and displays into an efficient package that will increase situational awareness. KC-10 training and mission planning systems will be correspondingly upgraded.

Concept Refinement Studies have addressed potential technical approaches, spiral development, cockpit commonality, affordability, etc. These studies will also be beneficial for the AMP Request for Proposal and development contract. The phasing of the SDD funding will be updated in the next budget cycle to reflect the emerging strategy.

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 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401219F KC-10S

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	4.781	36.790	73.591
(U)	Current PBR/President's Budget	4.763	36.790	36.991
(U)	Total Adjustments	-0.018		
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.018		
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

Concept Refinement Studies were completed in Mar 07. These studies have provided insight into various technical approaches and assisting the program office in the development of its acquisition strategies.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5195	Aircraft Modernization Program (AMP)	4.696	13.703	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

Global Air Traffic Management (GATM) was based upon evolving Communication, Navigation and Surveillance (CNS) and Free Flight concepts and requirements. Key elements of its architecture were Dual MMR (Multi-Mode Receiver), Dual CMU (Communications Management Unit), Communication Data links (HF, VHF, SATCOM), and associated avionics components and wiring. Communications upgrades included a data link to augment/replace voice communications. The navigation capabilities included a fully integrated GPS and an advanced flight management system. The surveillance capabilities included automatic aircraft position reporting (both enroute and oceanic). Prototype aircraft delivery was scheduled for 3QFY03 but due to schedule slips and cost overruns, the prototype delivery was expected to be delayed to 2QFY05. The development program was terminated in April 2004.

KC-10 Aircraft Modernization Program (AMP) is the first major modification to the KC-10A Extender and includes required Communication/Navigation/Surveillance (CNS) upgrades, increased survivability, net-centric operational capabilities; and reliability enhancements. Specifically, AMP provides mandatory CNS functionality for continued use of global airspace, a robust, integrated, on-board digital aircraft network enabling global net-centric operations, Night Vision Imaging System (NVIS) compatibility for aircraft exterior, boom operator station and cockpit, growth path to Defensive Systems (DS), provisions to support multi-mission payload, and real-time threat information in the cockpit (RTIC). All aircraft controls and systems will be compatible with aircrew chemical defense ensemble. Communications upgrades include datalink capability to augment/replace voice communications and adding secure capability for both voice and data. Navigation capabilities include a fully integrated GPS and an advanced flight management system. Surveillance capabilities include automatic aircraft reporting (both enroute and oceanic). The AMP will use the Systems Engineering Plan (SEP) along with Modular Open Systems Approach (MOSA) principles and Human Systems Integration Plan (HSIP) with the upgrade modifications. Anti Tamper requirements will be addressed in the Selective Availability Anti Spoofing Module (SAASM). AMP will address reliability, maintainability and obsolescence issues, to include replacing inertial navigation units (INU), central air data computer (CADC), weather radar, analog autopilot, analog engine instruments, analog flight instruments and displays, analog nav/comm radios, cockpit voice recorder (CVR), and flight data recorder (FDR), fuel system gauges, refueling boom/drogue electronics, and flight engineer station controls/instruments. AMP will automate aircrew tasks to reduce the crew's current workload, allow the crew to perform additional missions and manage the increased complexity, and integrate products and displays into an efficient package that will increase situational awareness. KC-10 training and mission planning systems will be correspondingly upgraded.

Concept Refinement Studies have addressed potential technical approaches, spiral development, cockpit commonality, affordability, etc. These studies will also be beneficial for the AMP Request for Proposal and development contract. The phasing of the SDD funding will be updated in the next budget cycle to reflect the emerging strategy.

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 2008
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 2007	FY 2008	FY 2009
(U)	Development Engineering, Design, and Integration		31.790	26.891
(U)	Studies and Analysis	0.200	0.200	2.600
(U)	Government Test and Evaluation		0.000	2.000
(U)	Mission Support	4.563	4.800	5.500
(U)				
(U)				
(U)				
(U)				
(U)				
(U)				
(U)	Total Cost	4.763	36.790	36.991

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Other APPN	0.000	0.000	0.000	0.000	0.000	48.721	46.467	Continuing	TBD

PE # 41219F / KC-10, Aircraft procurement, BP-11, Aircraft Modernization Program

(U) D. Acquisition Strategy

Concept Refinement Studies (CRS) in FY06/FY07 have fostered competition and mitigated some of the identified acquisition risks. CRS will also support System Development and Demonstration (SDD) Request for Proposal (RFP). FY07 will consist of CRS analysis, RFP preparation and development. FY08 will consist of solicitation. Source Selection will take place between 3QFY08 and 2QFY09. The KC-10 AMP SDD prime contract will be a competitively awarded, best value contract, in 3QFY09. The phasing of the SDD funding will be updated in the next budget cycle to reflect the emerging strategy.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U)	Product Development												
	Studies and Analysis	C/CPFF			0.200		0.200		2.600		Continuing	TBD	
	Development Engineering, Design, and Integration	TBD					31.790		26.891	Jun-09	Continuing	TBD	
		N/A									Continuing	TBD	
	Subtotal Product Development			0.000	0.200		31.990		29.491		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												
	Gov Test and Evaluation						0.000		2.000		Continuing	TBD	
	Subtotal Test & Evaluation			0.000	0.000		0.000		2.000		Continuing	TBD	0.000
	Remarks:												
(U)	Management												
	Mission Support		Wright Patterson AFB, OH		4.563		4.800		5.500		Continuing	TBD	
												0.000	
												0.000	
												0.000	
												0.000	
												0.000	
	Subtotal Management			0.000	4.563		4.800		5.500		Continuing	TBD	0.000
	Remarks:												
(U)	Total Cost			0.000	4.763		36.790		36.991		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401219F KC-10S
PROJECT NUMBER AND TITLE: 5195 Aircraft Modernization Program (AMP)	

Exhibit R-4, RDT&E Schedule Profile																
07 Operational Systems Development																
Fiscal Year	FY06	FY06	FY06	FY07	FY07	FY07	FY07	FY07	FY08	FY08	FY08	FY08	FY09	FY09	FY09	FY09
Quarter	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
CDD JROC Approved – FY08Q3			X													
Concept Refinement Studies Completion						X										
Draft SDD RFP				X				X								
SDD RFP										X						
Source Selection																
SDD Contract Award/Milestone B															X	

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(U) Concept Refinement Studies	2Q		
(U) Draft System Development & Demonstration (SDD) Request for Proposal (RFP) Released	4Q		
(U) SDD RFP Released		2Q	
(U) Source Selection		3Q	2Q
(U) SDD Contract Award/Milestone B			3Q

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PE NUMBER: 0401221F
PE TITLE: KC-135 Replacement Tanker

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401221F KC-135 Replacement Tanker

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	68.340	113.728	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4927 KC-135 Replacement Tanker	68.340	113.728	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

FY05 Approps bill establishes $100M Transfer Replacement Transfer Fund ($10.2M used by AF in FY05) -- $89.8M funding remaining as of submission of FY08PB. FY08 Approps bill cuts $50M in RDT&E; moves $150M of $264.5M FY08 RDT&E to Transfer Fund -- $239.8M in Transfer Fund as of FY09PB. These transfer funds will be used to fund KC-X acquisition after contract award.

(U) A. Mission Description and Budget Item Justification

FY09 and beyond RDT&E funds have been transfered from PE 401221F / BPAC 674927 KC-135 Replacement Tanker to PE 605221F / BPAC 655271 KC-X, Next Generation Aerial Refueling Aircraft.

The Air Force considered data in the Analysis of Alternatives (AoA) for KC-135 Recapitalization, industry responses to a Request for Information and two draft Request for Proposals, and is pursuing a strategy of full and open competition to select a commercial derivative replacement tanker aircraft. The KC-X is in source selection.

The Air Force needs to replace its aging KC-135 tankers (average age 47 years). This initial increment, known as KC-X, will replace roughly one-third of the current capability. The KC-X will be able to provide fuel to joint and coalition receivers via a boom or drogue system on every mission and will also augment the airlift fleet with cargo, passenger and medical evacuation capabilities.

The KC-X will be able to operate in day/night and adverse weather conditions to enable deployment, employment, sustainment and reployment of U.S. joint, allied and coalition forces. The KC-X will have navigation and communication equipment for world-wide operations; will have the capability for performing missions in chemical and biological environments; and will have the capability to operate in low to medium threat areas and near-high threat areas with self-defense/protection (both active and passive) capabilities and necessary battle space awareness to mitigate threats.

The KC-X development effort will also procure the necessary ground and flight test assets to support developmental/operational test. The program plans to procure four RDT&E aircraft that will be retrofitted back to production configuration.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401221F KC-135 Replacement Tanker

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	69.632	314.454	0.000
(U)	Current PBR/President's Budget	68.340	113.728	0.000
(U)	Total Adjustments	-1.292		
(U)	Congressional Program Reductions		-200.000	
	Congressional Rescissions		-0.726	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-1.292		

(U) Significant Program Changes:

FY09 and beyond RDT&E funds have been transfered from PE 401221F / BPAC 674927 KC-135 Replacement Tanker to PE 605221F / BPAC 655271 KC-X, Next Generation Aerial Refueling Aircraft.

FY05 Approps bill establishes $100M Transfer Replacement Transfer Fund ($10.2M used by AF in FY05) -- $89.8M funding remaining as of submission of FY08PB.

FY08 Approps bill cuts $50M in RDT&E; moves $150M of $264.5M FY08 RDT&E to Transfer Fund -- $239.8M in Transfer Fund as of FY09PB. These transfer funds will be used to fund KC-X acquisition after contract award.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4927 KC-135 Replacement Tanker	68.340	113.728	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

FY05 Approps bill establishes $100M Transfer Fund ($10.2M used by AF in FY05) -- $89.8M funding remaining as of submission of FY08PB. FY08 Approps bill cuts $50M in RDT&E; moves $150M of $264.5M FY08 RDT&E to Transfer Fund -- $239.8M in Transfer Fund as of FY09PB. These funds will be used to fund KC-X acquisition after contract award.

(U) A. Mission Description and Budget Item Justification

FY09 and beyond RDT&E funds have been transfered from PE 401221F / BPAC 674927 KC-135 Replacement Tanker to PE 605221F / BPAC 655271 KC-X, Next Generation Aerial Refueling Aircraft.

The Air Force considered data in the Analysis of Alternatives (AoA) for KC-135 Recapitalization, industry responses to a Request for Information and two draft Request for Proposals, and is pursuing a strategy of full and open competition to select a commercial derivative replacement tanker aircraft. The KC-X is in source selection.

The Air Force needs to replace its aging KC-135 tankers (average age 47 years). This initial increment, known as KC-X, will replace roughly one-third of the current capability. The KC-X will be able to provide fuel to joint and coalition receivers via a boom or drogue system on every mission and will also augment the airlift fleet with cargo, passenger and medical evacuation capabilities.

The KC-X will be able to operate in day/night and adverse weather conditions to enable deployment, employment, sustainment and reployment of U.S. joint, allied and coalition forces. The KC-X will have navigation and communication equipment for world-wide operations; will have the capability for performing missions in chemical and biological environments; and will have the capability to operate in low to medium threat areas and near-high threat areas with self-defense/protection (both active and passive) capabilities and necessary battle space awareness to mitigate threats.

The KC-X development effort will also procure the necessary ground and flight test assets to support developmental/operational test. The program plans to procure four RDT&E aircraft that will be retrofitted back to production configuration.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Non-recurring engineering, RDT&E tanker aircraft and support	60.599	92.710	
(U) Test	0.442	7.636	
(U) Studies	1.237	5.252	
(U) Mission Support	6.062	8.130	
(U) Omnibus, Other Sources			
(U) Total Cost	68.340	113.728	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401221F KC-135 Replacement Tanker	PROJECT NUMBER AND TITLE 4927 KC-135 Replacement Tanker

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Aircraft Procurement, BP10			61.660	1962.086	2780.974	3066.917	2970.468	Continuing	TBD
(U)	Aircraft Modification, BP11					20.504	50.161	40.211	Continuing	TBD
(U)	MILCON				92.898	92.782	43.715		Continuing	TBD
(U)	O&M			1.057	2.493	67.567	99.335	190.533	Continuing	TBD

FY09 and beyond RDT&E funds have been transfered from PE 401221F / BPAC 674927 KC-135 Replacement Tanker to PE 605221F / BPAC 655271 KC-X, Next Generation Aerial Refueling Aircraft.

(U) D. Acquisition Strategy

The KC-X program is pursuing an acquisition strategy of a full and open competition to select a commercial derivative replacement tanker aircraft. The program is currently in source selection.

As the initial phase of a comprehensive aerial refueling re-capitalization strategy, the KC-X program will replace approximately one third of the war-fighting capability provided by the current aerial refueling fleet. The KC-X program will procure approximately 179 aircraft. SDD contract award is anticipated in 2nd Qtr FY08.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Non-recurring, RDT&E tanker aircraft and support	TBD	Aerospace manufacturer TBD		60.599		92.710				Continuing	TBD	
Subtotal Product Development			0.000	60.599		92.710		0.000		Continuing	TBD	0.000
Remarks:												
(U) Support												
Studies and Analysis		Proposed ASC/EN/XR, AFVB, Edwards, AFMSS, RAND, Eglin, trainers, support contractors	20.781	1.237		5.252				Continuing	TBD	
Subtotal Support			20.781	1.237		5.252		0.000		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
Test and Planning	TBD	AFFTC, AFOTEC, Edwards AFB, Surviac, Live Fire	3.504	0.442		7.636				Continuing	TBD	
Subtotal Test & Evaluation			3.504	0.442		7.636		0.000		Continuing	TBD	0.000
Remarks:												
(U) Management												
653d Aeronautical Systems Squadron	n/a	653 AESS, Wright Patterson AFB	29.912	6.062		8.130				Continuing	TBD	
Subtotal Management			29.912	6.062		8.130		0.000		Continuing	TBD	0.000
Remarks:												
(U) AF WH, Omnibus, Other Sources												
Air Force withhold, Omnibus, Other Sources	na									Continuing	TBD	
Subtotal AF WH, Omnibus, Other Sources			0.000	0.000		0.000		0.000		Continuing	TBD	0.000
Remarks:												
(U) Total Cost			54.197	68.340		113.728		0.000		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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

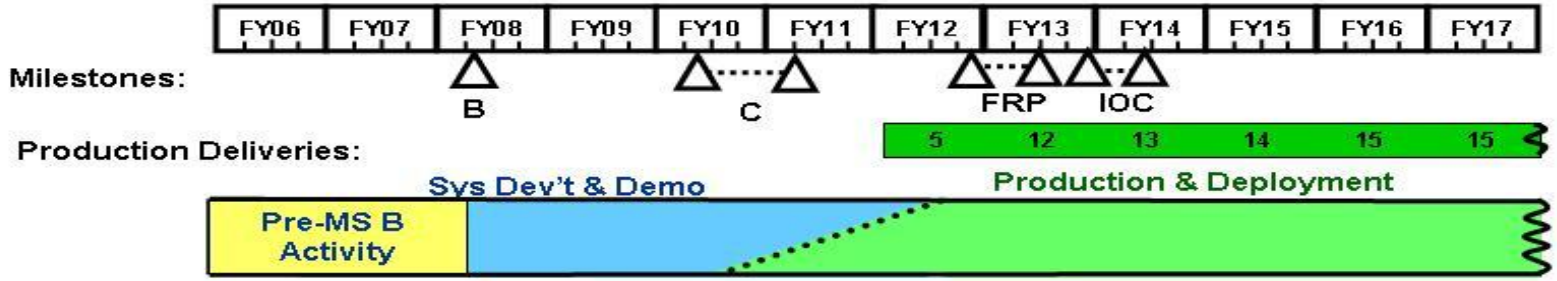

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401221F KC-135 Replacement Tanker	PROJECT NUMBER AND TITLE: 4927 KC-135 Replacement Tanker

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Non-recurring engineering, RDT&E tanker aircraft and support		2-4Q	1-4Q
(U) Test	1-4Q	1-4Q	1-4Q
(U) Studies	1-4Q	1-4Q	1-4Q
(U) Mission Support	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0401314F
PE TITLE: OPERATIONAL SUPPORT AIRLIFT

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401314F OPERATIONAL SUPPORT AIRLIFT

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	4.837	0.000	0.000	0.000	0.000	0.000	0.000	140.178
5233 C-32 Airlift	0.000	4.837	0.000	0.000	0.000	0.000	0.000	0.000	140.178

(U) A. Mission Description and Budget Item Justification

Cancelled C-32 executive support aircraft program reduced program line to $4.837M. The $4.837M is to transfer residual efforts to the VC-25A Airborne Information Management System (AIMS) upgrade.

The VC-25A is the military variant of the Boeing 747-200 that supports the President of the United States. Residual efforts include providing the President with survivable, enduring, worldwide national command and control capabilities that operate throughout the threat spectrum. The RDT&E effort funds engineering design, integration, test and evaluation, and product improvements for modifying two VC-25A aircraft.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.000	4.868	0.000
(U)	Current PBR/President's Budget	0.000	4.837	0.000
(U)	Total Adjustments	0.000		
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.031	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			
	None			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401314F OPERATIONAL SUPPORT AIRLIFT

PROJECT NUMBER AND TITLE: 5233 C-32 Airlift

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5233 C-32 Airlift	0.000	4.837	0.000	0.000	0.000	0.000	0.000	0.000	140.178
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Cancelled C-32 executive support aircraft program reduced program line to $4.837M. The $4.837M is to transfer residual efforts to the VC-25A Airborne Information Management System (AIMS) upgrade.

The VC-25A is the military variant of the Boeing 747-200 that supports the President of the United States. Residual efforts include providing the President with survivable, enduring, worldwide national command and control capabilities that operate throughout the threat spectrum. The RDT&E effort funds engineering design, integration, test and evaluation, and product improvements for modifying two VC-25A aircraft.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Engineering design, integration, test and evaluation of AIM System modification on two VC-25A Presidential aircraft.		4.837	
(U) Total Cost	0.000	4.837	0.000

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) None									

(U) D. Acquisition Strategy

Modify two VC-25A presidential aircraft with Airborne Information Management Systems. Contract type and competition to be determined.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401314F OPERATIONAL SUPPORT AIRLIFT**

PROJECT NUMBER AND TITLE: **5233 C-32 Airlift**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
	TBD	TBD				3.700	Jan-08				3.700	3.700
Subtotal Product Development			0.000	0.000		3.700		0.000		0.000	3.700	3.700
Remarks:												
(U) Support												
	TBD	TBD				0.100					0.100	0.100
Subtotal Support			0.000	0.000		0.100		0.000		0.000	0.100	0.100
Remarks:												
(U) Test & Evaluation												
	TBD	TBD				0.968					0.968	0.968
Subtotal Test & Evaluation			0.000	0.000		0.968		0.000		0.000	0.968	0.968
Remarks:												
(U) Management												
	TBD	TBD				0.100					0.100	0.100
Subtotal Management			0.000	0.000		0.100		0.000		0.000	0.100	0.100
Remarks:												
(U) Total Cost			0.000	0.000		4.868		0.000		0.000	4.868	4.868

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401314F OPERATIONAL SUPPORT AIRLIFT	PROJECT NUMBER AND TITLE 5233 C-32 Airlift

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401314F OPERATIONAL SUPPORT AIRLIFT	PROJECT NUMBER AND TITLE: 5233 C-32 Airlift

(U) Schedule Profile

(U)	FY 2007	FY 2008	FY 2009
		2Q	

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PE NUMBER: 0401839F
PE TITLE: Airlift/Other Tactical Data Link

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401839F Airlift/Other Tactical Data Link

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	6.785	0.000	0.000	0.000	0.000	0.000	0.000	0.000	22.016
5040	Airlift/Other Tactical Data Link	6.785	0.000	0.000	0.000	0.000	0.000	0.000	0.000	22.016

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL), as a subset of the broader, crucial Airborne Network, are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs are used by all service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data Link (SADL), and Variable Message Format (VMF), Integrated Broadcast Service (IBS), and Tactical Targeting Network Technology (TTNT).

This effort provides critical capability and enhancements to the Airborne Network by creating common development, integration and interoperability across the Air Mobility and Special Operations Forces (SOF) Fleets. This development effort incorporates Line of Sight (LOS) and Beyond Line of Sight (BLOS) TDL capability into the Air Mobility and SOF Fleets to include, but not be limited to: C-17, KC-135, C-130, KC-10, C-5 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 other data link interoperability standards including necessary Interface Change Proposals (ICPs); interoperability certification testing with the Joint Interoperability Test Center (JITC); future development, integration, and verification of TDL Operational Flight Program (OFP) upgrades and federated networking components and applications; data gathering processes for future network-centric assessments for all Air Mobility Command (AMC) and Air Force Special Operations Command (AFSOC) platforms; and Joint Tactical Radio System (JTRS) migration activities.

Airlift/Other Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401839F Airlift/Other Tactical Data Link

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	22.000	0.000	0.000
(U)	Current PBR/President's Budget	6.785	0.000	0.000
(U)	Total Adjustments	-15.215		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings	-14.596		
	SBIR/STTR Transfer	-0.619		

(U) Significant Program Changes:

In FY07, Airlift/Other Tactical Link funding was reduced due to higher Air Force priorities.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5040	Airlift/Other Tactical Data Link	6.785	0.000	0.000	0.000	0.000	0.000	0.000	0.000	22.016
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL), as a subset of the broader, crucial Airborne Network, are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs are used by all service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data Link (SADL), and Variable Message Format (VMF), Integrated Broadcast Service (IBS), and Tactical Targeting Network Technology (TTNT).

This effort provides critical capability and enhancements to the Airborne Network by creating common development, integration and interoperability across the Air Mobility and Special Operations Forces (SOF) Fleets. This development effort incorporates Line of Sight (LOS) and Beyond Line of Sight (BLOS) TDL capability into the Air Mobility and SOF Fleets to include, but not be limited to: C-17, KC-135, C-130, KC-10, C-5 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 other data link interoperability standards including necessary Interface Change Proposals (ICPs); interoperability certification testing with the Joint Interoperability Test Center (JITC); future development, integration, and verification of TDL Operational Flight Program (OFP) upgrades and federated networking components and applications; data gathering processes for future network-centric assessments for all Air Mobility Command (AMC) and Air Force Special Operations Command (AFSOC) platforms; and Joint Tactical Radio System (JTRS) migration activities.

Airlift/Other Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Data Link Integration (DLI) program support.	1.341		
(U)	Data Link Integration (DLI) Group A Risk Reduction.	4.800		
(U)	Data Link Integration (DLI) Information Support Plan/Capability Development Document (ISP/CDD) Documentation at AMC.	0.504		
(U)	Data Link Integration (DLI) Test.	0.140		
(U)	Total Cost	6.785	0.000	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	RDT&E (3600)									
(U)	0207434F (Link 16 Sup & Sus)	156.169	194.652	186.213	151.735	164.954	175.223	191.891	Continuing	TBD
(U)	0207445F (Fighter TDL)	88.094	38.944	62.788	90.709	0.000	0.000	0.000		280.535
(U)	0207446F (Bomber TDL)	87.613	36.875	11.702	0.000	0.000	0.000	0.000		136.190
(U)	0207448F (C2ISR TDL)	4.126	1.795	1.727	1.695	1.627	1.659	1.693	Continuing	TBD
(U)	Procurement (3010)									
(U)	0207434F (Link 16 Sup & Sus)	0.735	0.001	0.008	35.674	88.253	92.337	64.443	Continuing	TBD
(U)	0207445F (Fighter TDL)	51.047	35.434	5.804	9.790	0.778	0.776	0.000		103.629
(U)	0207446F (Bomber TDL)	11.775	4.488	0.000	0.000	0.000	0.000	0.000		16.263
(U)	0401839F (Airlift TDL)	2.000	12.394	12.612	26.284	26.616	27.138	27.679	Continuing	TBD
(U)	Procurement (3080)									
(U)	0207434F (Link 16 Sup & Sus)	36.886	25.756	16.126	39.612	41.093	22.144	7.110	Continuing	TBD
(U)	O&M (3400)									
(U)	0207434F (Link 16 Sup & Sus)	16.156	12.998	22.364	12.947	14.825	17.383	18.784	Continuing	TBD
(U)	0207445F (Fighter RD)	0.000	0.276	0.286	0.284	0.281	0.285	0.291		
(U)	0401839F (Airlift TDL)	4.301	5.468	6.537	11.351	17.311	17.673	18.037	Continuing	TBD

(U) D. Acquisition Strategy

The 653rd Electronics Systems Group (ELSG), formerly the Air Force Tactical Data Networks System Program Office (SPO), provides for common development of integration and interoperability across the entire Airborne Network and ensures that TDLs are procured and maintained as joint, end-to-end, command-and-control systems. Platform acquisition strategies vary by program, but the majority of development and integration is normally accomplished by the weapon system prime contractor.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Group A Risk Reduction/Design	Various	AFRL, Wright-Patterson AFB, OH		4.800	May-07					0.000	4.800	TBD
Subtotal Product Development			0.000	4.800		0.000		0.000		0.000	4.800	TBD
Remarks:												
(U) Support												
Information Support Plan/Capability Development Document (ISP/CDD) Documentation at AMC	MIPR	NAVSEA Indian Head, MD		0.504	Sep-07						0.504	
Subtotal Support			0.000	0.504		0.000		0.000		0.000	0.504	0.000
Remarks:												
(U) Test & Evaluation												
Test	Air Force Project Order	46th Test Squadron, Eglin AFB, FL		0.140	Jan-07						0.140	TBD
Subtotal Test & Evaluation			0.000	0.140		0.000		0.000		0.000	0.140	TBD
Remarks:												
(U) Management												
Program Office and Contractor				0.000		0.000		0.000		0.000	0.000	TBD
Support	C/FFP	Various		1.341	Jan-07						1.341	TBD
Subtotal Management			0.000	1.341		0.000		0.000		0.000	1.341	TBD
Remarks:												
(U) Total Cost			0.000	6.785		0.000		0.000		0.000	6.785	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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

MAF DATA LINK INTEGRATION SCHEDULE

(As of 10 January 2008)

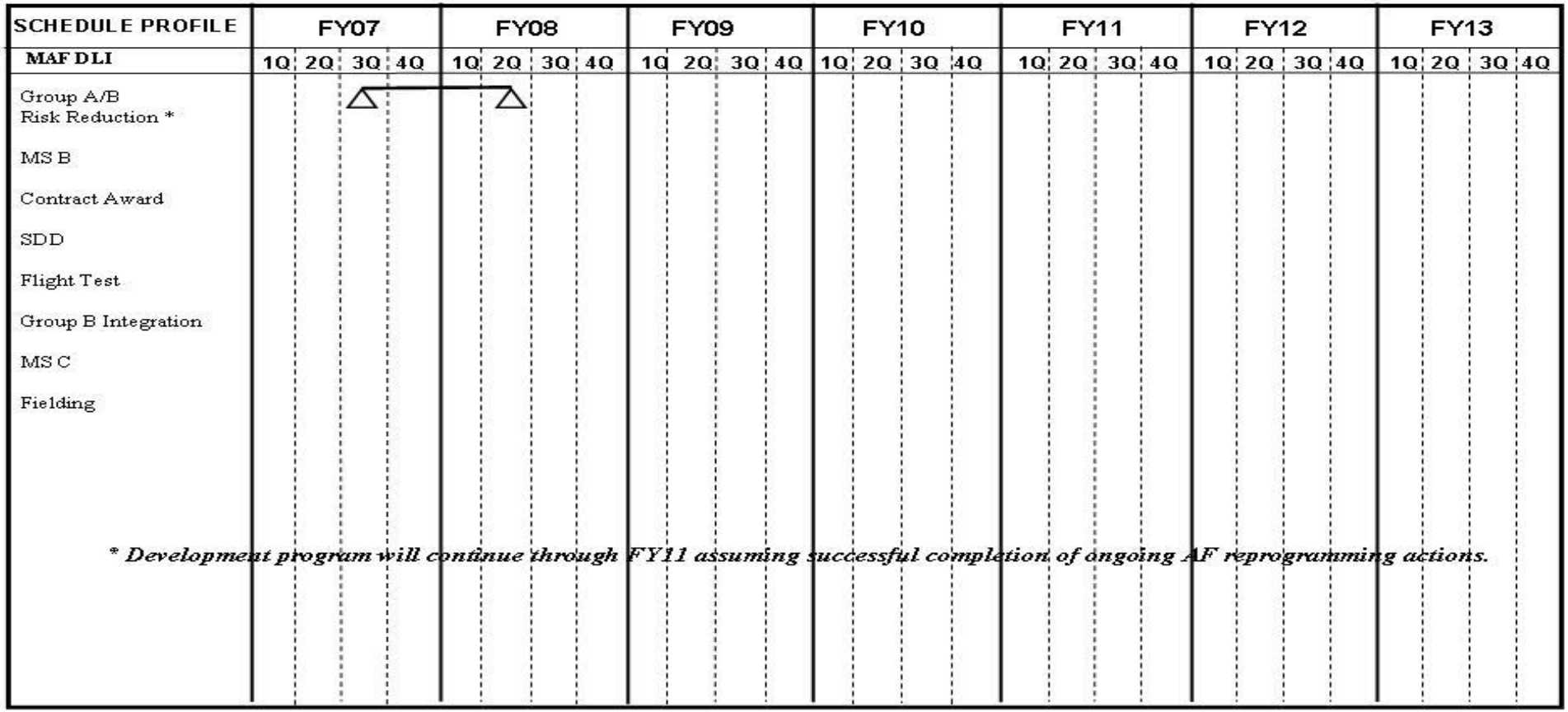

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401839F Airlift/Other Tactical Data Link**	PROJECT NUMBER AND TITLE **5040 Airlift/Other Tactical Data Link**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Group A/B Risk Reduction	3-4Q	1-2Q	

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PE NUMBER: 0408011F
PE TITLE: SPECIAL TACTICS/COMBAT CONTROL

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0408011F SPECIAL TACTICS/COMBAT CONTROL

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	1.962	8.074	5.728	8.363	7.546	7.691	7.849	Continuing	TBD
5138 ST System Development	1.962	8.074	5.728	8.363	7.546	7.691	7.849	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Battlefield Air Operations (BAO) Kit is a program within the overarching Battlefield Airmen Modernization (BA-Mod) Program. BAO Kit will develop a Family of Systems (FoS) that provides a state-of-the-art Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) suite for AFSOC's Battlefield Airmen. BAO Kit will enhance the three core capabilities of Line of Sight (LOS) targeting, Beyond Line of Sight (BLOS) targeting, and Battlefield Air Operations Human Machine Interface (BAO HMI) while reducing the risk of fratricide and substantially reducing the weight carried. This program will develop and enhance technologies for Battlefield Airmen Combat Controllers (CCT) to recognize, identify, range, nominate and designate targets during both day and night. BAO Kit will also significantly reduce the time required to find, fix, track, target and engage the enemy by providing highly accurate target grid coordinates in three dimensions, generating target imagery both pre and post-strike, and transmitting target data to Command and Control centers. All BAO Kit systems are light, compact and portable for use by dismounted Battlefield Airmen. The significant improvements in operational capability, coupled with dramatic weight reduction, will provide increased mission effectiveness across the conflict spectrum.

This program is in Budget Activity 7, Operational System Development, since it improves the already fielded capabilities of the Battlefield Airmen Combat Control Teams by demonstrating technology, component and subsystem maturity.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	2.013	5.225	5.776
(U)	Current PBR/President's Budget	1.962	8.074	5.728
(U)	Total Adjustments	-0.051		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.051		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5138 ST System Development	1.962	8.074	5.728	8.363	7.546	7.691	7.849	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Battlefield Air Operations (BAO) Kit is a program within the overarching Battlefield Airmen Modernization (BA-Mod) Program. BAO Kit will develop a Family of Systems (FoS) that provides a state-of-the-art Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) suite for AFSOC's Battlefield Airmen. BAO Kit will enhance the three core capabilities of Line of Sight (LOS) targeting, Beyond Line of Sight (BLOS) targeting, and Battlefield Air Operations Human Machine Interface (BAO HMI) while reducing the risk of fratricide and substantially reducing the weight carried. This program will develop and enhance technologies for Battlefield Airmen Combat Controllers (CCT) to recognize, identify, range, nominate and designate targets during both day and night. BAO Kit will also significantly reduce the time required to find, fix, track, target and engage the enemy by providing highly accurate target grid coordinates in three dimensions, generating target imagery both pre and post-strike, and transmitting target data to Command and Control centers. All BAO Kit systems are light, compact and portable for use by dismounted Battlefield Airmen. The significant improvements in operational capability, coupled with dramatic weight reduction, will provide increased mission effectiveness across the conflict spectrum.

This program is in Budget Activity 7, Operational System Development, since it improves the already fielded capabilities of the Battlefield Airmen Combat Control Teams by demonstrating technology, component and subsystem maturity.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continue BAO Kit system and equipment development	0.842	3.900	4.660
(U) Continue BAO Kit software development (rolled into BAO Kit system and equipment development in FY08 and 09)	0.942	3.349	0.452
(U) Continue system test and evaluation efforts	0.095	0.725	0.516
(U) Continue program office operations effort	0.083	0.100	0.100
(U) Total Cost	1.962	8.074	5.728

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Tactical C-E Equipment Other Procurement, AF PE 0408011F	4.176	6.197	10.050	13.305	14.952	15.296	15.635	Continuing	TBD

(U) D. Acquisition Strategy

The evolutionary acquisition strategy will focus on meeting immediate requirements with current technology while pursuing future increments for improved accuracy, increased vertical and horizontal integration, and reduced weight. Future spirals will be incorporated as funding and technology allow.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Human Machine Interface (HMI)	C/Various	Various		0.351	Jul-07	6.149	Jun-08	4.152	Jun-09	Continuing	TBD	
Machine-To-Machine C4ISR System	C/CPFF	Systems Research & Applications Corp, Dayton, Ohio		0.942	Dec-06					Continuing	TBD	TBD
Beyond Line of Sight Targeting System	C/CPFF	Aerovironment, Monrovia, CA		0.491	Jan-07	0.600	Jun-08	0.460	Jun-09	Continuing	TBD	
Subtotal Product Development			0.000	1.784		6.749		4.612		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												
Test Agency Support	MIPR	46TS, Eglin AFB, FL		0.095	Dec-06	0.132	Dec-07				0.227	
Integration and Certification	Various	Various		0.000		0.600	Dec-07	0.516	Dec-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.095		0.732		0.516		Continuing	TBD	TBD
Remarks:												
(U) Management												
Program Office Support	Various	Various		0.083	Oct-06	0.593	Oct-07	0.600	Oct-08	Continuing	TBD	TBD
Subtotal Management			0.000	0.083		0.593		0.600		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			0.000	1.962		8.074		5.728		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0408011F SPECIAL TACTICS/COMBAT CONTROL**	PROJECT NUMBER AND TITLE **5138 ST System Development**

BAO Kit Program Schedules

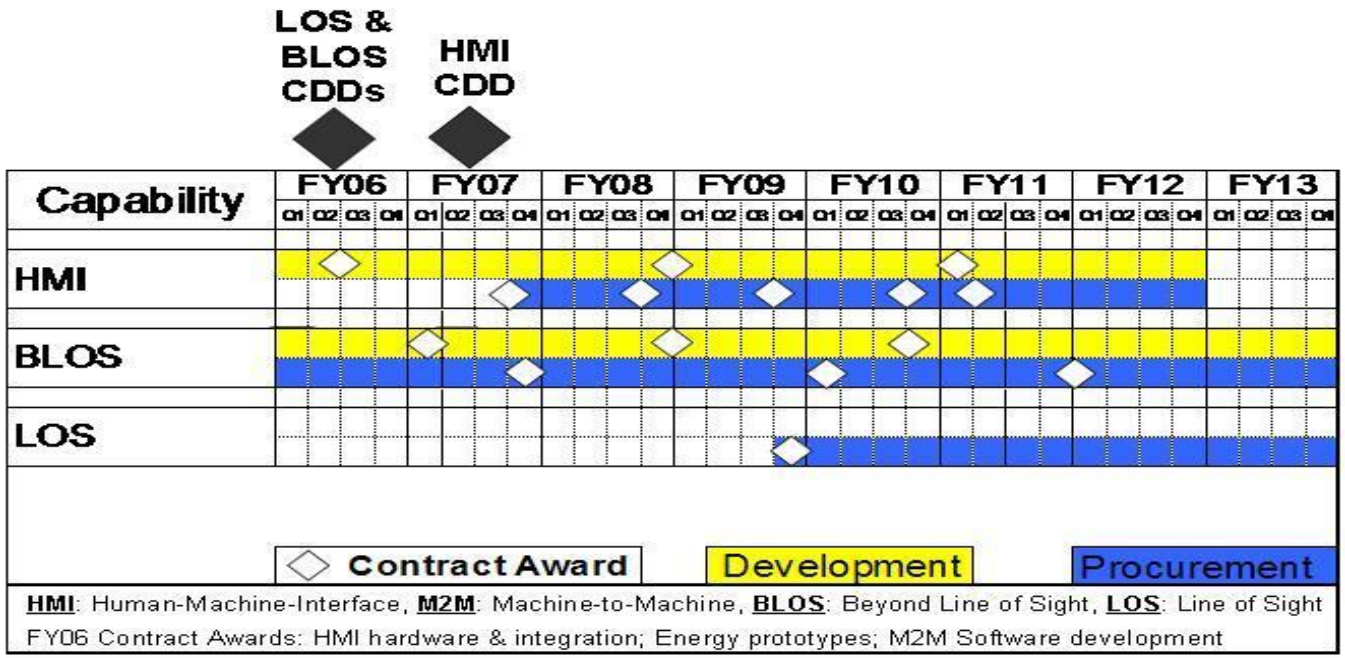

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0408011F SPECIAL TACTICS/COMBAT CONTROL	PROJECT NUMBER AND TITLE: 5138 ST System Development

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) HMI Research & Development	1-4Q	1-4Q	1-4Q
(U) Beyond LOS Development		1Q	
(U) HMI TAC Ear		2Q	
(U) HMI Headmounted Display		4Q	
(U) Line of Sight Development		4Q	
(U) HMI Power Generation and Management			1Q

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PE NUMBER: 0702207F
PE TITLE: Depot Maintenance (Non-IF)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0702207F Depot Maintenance (Non-IF)

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	1.411	1.501	1.531	1.562	1.583	1.613	1.646	Continuing	TBD
3326 Precision Measurement & Calibration	1.411	1.501	1.531	1.562	1.583	1.613	1.646	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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	1.452	1.510	1.544
(U)	Current PBR/President's Budget	1.411	1.501	1.531
(U)	Total Adjustments	-0.041		
(U)	Congressional Program Reductions		-0.009	
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.041		
(U)	Significant Program Changes:			
	None			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3326	Precision Measurement & Calibration	1.411	1.501	1.531	1.562	1.583	1.613	1.646	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 2007	FY 2008	FY 2009
(U)	Continue development of national measurement standards to support Air Force infrared / laser / electro-optical weapon systems and support equipment.	0.696	0.470	0.511
(U)	Continue development of standards for electrical measurements to support high accuracy electronic test equipment.	0.165	0.280	0.265
(U)	Continue development of standards for radar support, RF communication systems, and radar cross section range measurements.	0.203	0.318	0.250
(U)	Continue the development of improved calibration standards to support physical, mechanical and electro-mechanical support equipment.	0.143	0.175	0.180
(U)	Continue the development of national standards for calibration of ionizing radiation hazard instrumenation.	0.037	0.038	0.040
(U)	Continue development of improved standards and procedures to support chemical/biological measurements	0.110	0.135	0.140
(U)	Continue development of standards and procedures to support analytical metrology applications	0.057	0.085	0.145
(U)	Total Cost	1.411	1.501	1.531

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not Applicable									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 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
National Institute of Standards & Technology	MIPR (DD FORM 448)			1.286		1.302		1.451		Continuing	TBD	
Department of Energy	MIPR (DD FORM 448)			0.102		0.000		0.000		Continuing	TBD	
DoD Army	MIPR (DD FORM 448)			0.000		0.070		0.050		Continuing	TBD	
AFMC	In-House			0.023		0.029		0.030		Continuing	TBD	
Contract	RFP=SF33					0.100		0.000		Continuing	TBD	
Subtotal Product Development			0.000	1.411		1.501		1.531		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	1.411		1.501		1.531		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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 2008
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 2007	FY 2008	FY 2009

(U) A schedule for Depot Maintenance PE is Not Applicable due to the nature of this project.

PE NUMBER: 0702806F
PE TITLE: ACQUISITION AND COMMAND SUPPORT

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0702806F ACQUISITION AND COMMAND SUPPORT

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	26.645	22.141	34.428	36.633	36.576	37.094	37.538	0.000	0.000
5252	ACS1	26.645	22.141	34.428	36.633	36.576	37.094	37.538	0.000	0.000

(U) A. Mission Description and Budget Item Justification

Supporting Congressional and SECDEF mandates, program funding provides the framework for Air Force business and acquisition transformation in developing capabilities-based architectures, re-engineering and enabling technologies, integrating robust systems engineering into early acquisition processes, and developing and managing a larger, more relevant technical workforce with the expertise to uniformly implement OSD and Air Force engineering guidance and policies. Leveraging the Defense Acquisition Performance Assessment, restores stability in Air Force acquisition systems by integrating major processes to reverse trends toward unpredictable program cost, schedule, and performance to facilitate quick response to urgent operational needs from across the entire spectrum of potential conflicts. The 554th Electronic Systems Wing, formerly known as Information System Activity Group (ISAG), designs, tests, and evaluates combat support system architectures, operating environments, and computer platforms.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	17.614	22.317	18.801
(U)	Current PBR/President's Budget	26.645	22.141	34.428
(U)	Total Adjustments	9.031	-0.176	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.176	
	Congressional Increases			
	Reprogrammings	9.526		
	SBIR/STTR Transfer	-0.495		

(U) Significant Program Changes:

FY07:

· A reprogramming of +$8M occurred 13 Mar 07 and +1.526M in 05 Jun 07 in support of AF Chief of Staff-directed transformation efforts/activities (AF Smart Operations 21).

· IAW Congressional and SECDEF priorities and Defense Acquisition Performance Assessment recommendations, increasing acquisition and systems engineering process improvements in the Air Force Acquisition Transformation Program

· Increasing technical and analytical support through training development; independent cost estimating and assessment to help analyze cost/risk growth and create defendable risk analyses for cost, schedule, and technical risks; information technology infrastructure development; and economic, statistical, and engineering analyses of acquisition programs

· Initiating performance measures for capability-based planning constructs, aligning relevant science and technology areas with operational requirements to include systems integration modeling and architecture analysis
· Increasing activities to recruit, develop, and manage the technical workforce, enhancing business and engineering processes to develop leaders to manage the acquisition and engineering transformation and interface with the academic community
· Transforming acquisition review processes to re-establish clean lines of responsibility, authority, and accountability at appropriate levels
· Exploring methods to operate a materiel solution development process that is responsive to COCOM capability needs, aligned with the OSD Joint Task Assignment Process

FY08-09:
· IAW Congressional and SECDEF priorities and Defense Acquisition Performance Assessment recommendations, increasing acquisition and systems engineering process improvements in the Air Force Acquisition Transformation Program
· Increasing technical and analytical support through training development; independent cost estimating and assessment to help analyze cost/risk growth and create defendable risk analyses for cost, schedule, and technical risks; information technology infrastructure development; and economic, statistical, and engineering analyses of acquisition programs
· Initiating performance measures for capability-based planning constructs, aligning relevant science and technology areas with operational requirements to include systems integration modeling and architecture analysis
· Increasing activities to recruit, develop, and manage the technical workforce, enhancing business and engineering processes to develop leaders to manage the acquisition and engineering transformation and interface with the academic community
· Transforming acquisition review processes to re-establish clean lines of responsibility, authority, and accountability at appropriate levels
· Exploring methods to operate a materiel solution development process that is responsive to COCOM capability needs, aligned with the OSD Joint Task Assignment Process

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0702806F ACQUISITION AND COMMAND SUPPORT

PROJECT NUMBER AND TITLE: 5252 ACS1

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5252	ACS1	26.645	22.141	34.428	36.633	36.576	37.094	37.538	0.000	0.000
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Supporting Congressional and SECDEF mandates, program funding provides the framework for Air Force business and acquisition transformation in developing capabilities-based architectures, re-engineering and enabling technologies, integrating robust systems engineering into early acquisition processes, and developing and managing a larger, more relevant technical workforce with the expertise to uniformly implement OSD and Air Force engineering guidance and policies. Leveraging the Defense Acquisition Performance Assessment, restores stability in Air Force acquisition systems by integrating major processes to reverse trends toward unpredictable program cost, schedule, and performance to facilitate quick response to urgent operational needs from across the entire spectrum of potential conflicts. The 554th Electronic Systems Wing, formerly known as Information System Activity Group (ISAG), designs, tests, and evaluates combat support system architectures, operating environments, and computer platforms.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Acquisition/engineering process research/cost estimating	3.298	4.800	6.300
(U) Systems integration modeling/architecture analysis	12.026	4.037	5.000
(U) IT infrastructure development	0.372	3.732	8.500
(U) Technical workforce management	10.949	9.572	14.628
(U) Total Cost	26.645	22.141	34.428

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not Applicable									

(U) D. Acquisition Strategy

Contracts will be awarded through full and open competition. Due to the nature of these efforts, they should be transferred to BA06.

(U) E. Major Performers

(Major contractors, universities, colleges, government facilities, federally funded research and development centers, laboratories, or other organizations contributing to this effort that received 15% or over $10 million.)

Name/Title	Location	Work	Projected Award Date
(U) N/A			

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

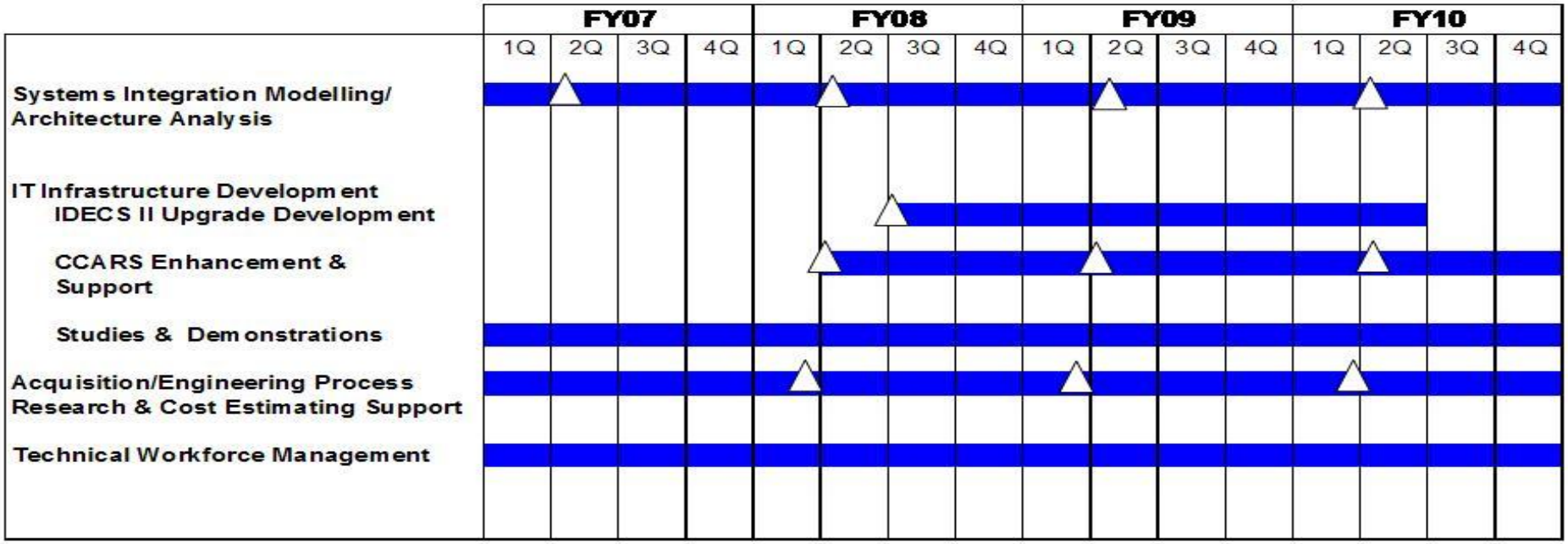
PE NUMBER AND TITLE: 0702806F ACQUISITION AND COMMAND SUPPORT

PROJECT NUMBER AND TITLE: 5252 ACS1

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Acquisition/engineering process research/cost estimating												
CRET	Firm Fixed Price	DSD Labs, Inc		2.100	Dec-05	2.400		2.500		Continuing	TBD	TBD
Federally Funded Research Development Center	FFRDC	Software Engineering Institute (Carnegie Mellon University)		1.300		1.400		1.500		Continuing	TBD	TBD
Council for Logistics Research	Time & Materials	AFMC, Wright-Patterson AFB		1.700		0.000		0.000		1.700	3.400	
Council for Logistics Research	Time & Materials	AFLDM		2.100		1.000		2.300		Continuing	TBD	TBD
Subtotal Acquisition/engineering process research/cost estimating			0.000	7.200		4.800		6.300		Continuing	TBD	TBD
Remarks:												
(U) Systems integration modeling/architecture analysis												
Council for Logistics Research	Time & Materials	AFTAS		0.000		4.037		5.000		Continuing	TBD	TBD
Subtotal Systems integration modeling/architecture analysis			0.000	0.000		4.037		5.000		Continuing	TBD	TBD
Remarks:												
(U) IT infrastructure development												
Firm Fixed Price	IDECS II	TBD		0.000		1.632		2.000		Continuing	TBD	TBD
CCARS				0.000		2.100		6.500		Continuing	TBD	TBD
Council for Logistics Research				2.245		0.000		0.000			2.245	
Subtotal IT infrastructure development			0.000	2.245		3.732		8.500		Continuing	TBD	TBD
Remarks:												
(U) Technical workforce management												
Aerospace MBA Program	Time & Materials	University of Tennessee	0.000	5.000		5.100		5.200		Continuing	TBD	TBD
Council for Logistics Research	AFTAS			12.200		4.472		9.428			26.100	
Subtotal Technical workforce management			0.000	17.200		9.572		14.628		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	26.645		22.141		34.428		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0702806F ACQUISITION AND COMMAND SUPPORT	PROJECT NUMBER AND TITLE 5252 ACS1

Acquisition & Command Support Master Schedule



△ = Contract Award

Fly – Fight – Win

1

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0702806F ACQUISITION AND COMMAND SUPPORT**	PROJECT NUMBER AND TITLE **5252 ACS1**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Systems Integration Modelling/Architecture Analysis	2Q	2Q	2Q

PE NUMBER: 0708011F
PE TITLE: Industrial Preparedness

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0708011F Industrial Preparedness

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	65.543	50.186	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
2865 Manufacturing Technology	65.543	50.186	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

Note: In FY 2009 the program will transfer from PE 0708011F, Industrial Preparedness, to Budget Activity 3 in PE 0603680F, Manufacturing Technologies, to better align with the Office of the Secretary of Defense's ManTech PE.

(U) A. Mission Description and Budget Item Justification

This program is mandated by Section 2521, Title 10, United States Code, to create an affordable, world-class industrial base manufacturing capability responsive to the warfighter's needs. The Air Force ManTech major program tenets are: improvement of manufacturing processes and technologies; collaboration with government program offices, industry, and academia; investments in technologies beyond reasonable risk level for industry alone; cost-sharing; multiple system/customer applications; potential for significant return on investment; and customer commitment to implement. To this end, ManTech develops, demonstrates, and transitions advanced manufacturing processes and technologies to reduce costs, improve quality/capability, and shorten cycle times of weapon systems during design, development, production, and sustainment. ManTech projects include efforts that respond to government program office acquisition and sustainment requirements to reduce cost, schedule, cycle time, and risks during transition of technology. Where mature processes are not available, laboratory-developed initial process capabilities are matured and inserted into weapon system programs. ManTech objectives are conducted through partnership with all industry levels, from large prime contractors to small material and parts vendors. Program planning centers on the Aeronautical, Sustainment, Armament/Directed Energy, and Command/ Control/Intelligence/Surveillance/Reconnaissance (C2ISR), and Space sectors of the industrial base. Note: In FY 2008, Congress added $10.6 million for Technical Insertion Demonstration and Evaluation (TIDE) Program ($1.2 million), High Temperature Laser Sintered Polymeric Material Digital Product Definition ($2.0 million), Laser Peening for Friction Stir Welded (FSW) Aerospace Structures ($1.0 million), Prepreg Thickness Variability Reduction Program ($1.6 million), Production of Nanocomposites for Aerospace Applications ($1.6 million), Rapid Manufacturing and Repair of Composite Components ($1.6 million), Reconfigurable Tooling Systems ($1.6 million). ManTech is in Budget Activity 7, Operational System Development, since it provides support for systems in design, production, and/or operational use. ManTech is part of the Industrial Preparedness Program Element supporting the Defense Planning Guidance and the Air Force Planning Guidance.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708011F Industrial Preparedness

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	66.122	39.906	40.173
(U)	Current PBR/President's Budget	65.543	50.186	
(U)	Total Adjustments	-0.579	10.280	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.320	
	Congressional Increases		10.600	
	Reprogrammings	1.000		
	SBIR/STTR Transfer	-1.579		
(U)	Significant Program Changes:			
	Not Applicable.			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0708011F Industrial Preparedness

PROJECT NUMBER AND TITLE: 2865 Manufacturing Technology

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2865 Manufacturing Technology	65.543	50.186	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

Note: In FY 2009 the program will transfer from PE 0708011F, Industrial Preparedness, to Budget Activity 3 in PE 0603680F, Manufacturing Technologies, to better align with the Office of the Secretary of Defense's ManTech PE.

(U) A. Mission Description and Budget Item Justification

This program is mandated by Section 2521, Title 10, United States Code, to create an affordable, world-class industrial base manufacturing capability responsive to the warfighter's needs. The Air Force ManTech major program tenets are: improvement of manufacturing processes and technologies; collaboration with government program offices, industry, and academia; investments in technologies beyond reasonable risk level for industry alone; cost-sharing; multiple system/customer applications; potential for significant return on investment; and customer commitment to implement. To this end, ManTech develops, demonstrates, and transitions advanced manufacturing processes and technologies to reduce costs, improve quality/capability, and shorten cycle times of weapon systems during design, development, production, and sustainment. ManTech projects include efforts that respond to government program office acquisition and sustainment requirements to reduce cost, schedule, cycle time, and risks during transition of technology. Where mature processes are not available, laboratory-developed initial process capabilities are matured and inserted into weapon system programs. ManTech objectives are conducted through partnership with all industry levels, from large prime contractors to small material and parts vendors. Program planning centers on the Aeronautical, Sustainment, Armament/Directed Energy, and Command/Control/Intelligence/Surveillance/Reconnaissance (C2ISR), and Space sectors of the industrial base. Note: In FY 2008, Congress added $10.6 million for Technical Insertion Demonstration and Evaluation (TIDE) Program ($1.2 million), High Temperature Laser Sintered Polymeric Material Digital Product Definition ($2.0 million), Laser Peening for Friction Stir Welded (FSW) Aerospace Structures ($1.0 million), Prepreg Thickness Variability Reduction Program ($1.6 million), Production of Nanocomposites for Aerospace Applications ($1.6 million), Rapid Manufacturing and Repair of Composite Components ($1.6 million), Reconfigurable Tooling Systems ($1.6 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 2007	FY 2008	FY 2009
(U) MAJOR THRUST: Pursues affordable and efficient manufacturing investigations for critical, high quality, reliable structural, propulsion, stealth, and electronic components and assemblies required for existing and next generation aircraft.	6.340	4.242	0.000

(U) In FY 2007: 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 2008: Continue high value efforts to verify advantages of flexible manufacturing, commercial/military integration, quality processing, and supplier improvements. Continue development of manufacturing capabilities for

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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 2007	FY 2008	FY 2009
	more affordable low-observable structures. Develop manufacturing capabilities for advanced propulsion technologies. Continue rapid response productivity improvement efforts with selected high value programs. Conduct manufacturing readiness assessments on critical technologies in lab and acquisition programs to ensure affordable, producible technology transition.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	MAJOR THRUST: Pursues cost-effective repair and manufacturing technologies for affordable sustainment components.	4.635	7.157	0.000
(U)	In FY 2007: Continued cost-effective repair and manufacturing technologies for affordable sustainment of aircraft and turbine engine components. Continued Engine Rotor Life Extension (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 2008: Continued cost-effective repair and manufacturing technologies for affordable sustainment of aircraft and turbine engine components. Continued ERLE spiral II technical effort to extend the life of critical, high value rotating engine components, which have been in service and scheduled for retirement. Begin assessments and manufacturing technology development to reduce costs and lead times for hi-value supply chain commodities. Continue rapid response productivity improvement efforts with selected high value programs.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	MAJOR THRUST: Develops efficient and cost-effective manufacturing methods for high performance, high reliability components and materials for advanced tactical missiles, aircraft missile sensors, and directed energy systems.	6.809	3.150	0.000
(U)	In FY 2007: Continued to pursue cost-effective manufacturing methods for high performance, reliable components for next generation miniaturized munitions. Continued Phase 1 Precision Guided Munition (PGM) Components effort for advanced guidance and seekers and directed energy systems.			
(U)	In FY 2008: Continue to pursue cost-effective manufacturing methods for high performance, reliable components for next generation munitions. Conduct manufacturing readiness assessments on critical technologies in lab and acquisition programs to ensure affordable, producible technology transition.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	MAJOR THRUST: Addresses critical manufacturing issues for various Command, Control, Intelligence, Surveillence and Reconnaissance (C2ISR) and space platforms.	18.878	25.117	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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 2007	FY 2008	FY 2009
(U)	In FY 2007: Continued efforts to address critical electronics manufacturing technologies for various C2ISR and space systems in order to improve affordability and producibility. Continued effort on AESA to enable improved manufacturing processes, reduce integration and test, and reduce production costs for armament, aeronautical, C2ISR, and space users of AESA systems. Continued 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. Continued effort to reduce manufacturing cost of weapon datalink through investments in reduction of touch labor and insertion of automated test processes in addition to subsystem integration efforts at board level. Insertion of power device technologies to achieve unique size, weight, and power requirements necessary for munition applications.			
(U)	In FY 2008: Continue efforts to address critical electronics manufacturing technologies for various C2ISR and space systems in order to improve affordability and producibility. Continue effort on AESA to enable improved manufacturing processes, for reduced costs and cycle times and greater production capacity. Continue efforts on Affordable Datalink components to enable improved manufacturing processes for reduced costs and cycle times and increased production throughput. Conduct manufacturing readiness assessments on critical technologies in lab and acquisition programs to ensure affordable, producible technology transition.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: High Tempature, Laser Sintered Polymeric Material Digital Product	0.000	1.989	0.000
(U)	In FY 2007: Not Applicable.			
(U)	In FY 2008: Conducted Congressionally-directed effort for High Tempature, Laser Sintered Polymeric Material Digital Product.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Prepreg Thickness Variability Reduction Program	0.000	1.589	0.000
(U)	In FY 2007: Not applicable			
(U)	In FY 2008: Conducted Congressionally-directed effort for Prepreg Thickness Varibility Redcuction Program			
(U)	In FY 2009: Not applicable			
(U)				
(U)	CONGRESSIONAL ADD: Laser Peening for Friction Stir Welded (FW) Aerospace Structures	0.000	0.983	0.000
(U)	In FY 2007: Not Applicable.			
(U)	In FY 2008: Conducted Congressionally-directed effort for Laser Peening for Friction Stir Welded (FSW) Aerospace Structures			

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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 2007	FY 2008	FY 2009
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Production of Nanocomposites for Aerospace Applications	0.000	1.589	0.000
(U)	In FY 2007: Not Applicable.			
(U)	In FY 2008: Conducted Congressionally-directed effort for Production of nanocomposites for Aerospace Applications			
(U)	In FY 2009: Not Applicable.			
(U)	CONGRESSIONAL ADD: Reconfigurable Tooling Systems	0.000	1.589	0.000
(U)	FY 2007: Not Applicable.			
(U)	FY 2008: Conducted Congressionally-directed effort for Reconfigurable Tooling Systems			
(U)	FY 2009: Not Applicable.			
(U)	CONGRESSIONAL ADD: Technical Insertion Demonstration and Evaluation (TIDE) Program.	2.918	1.192	0.000
(U)	In FY 2007: Completed development of a suite of commercial collaboration supply chain assessment processes/tools for Government and OEM program managers. Deployed into the weapon system supply chain and demonstrated accelerated development/production processes, reduced cycle times and corresponding costs.			
(U)	In FY 2008: Conducted Congressionally-drected effort for Technical Insertion Demonstration and Evaluation (TIDE) Program.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Aerial Multi-Axis Platform.	2.140	0.000	0.000
(U)	In FY 2007: Continued demonstration and development of operator controlled de-paint manipulator performing abrasive blasting and hazmat friendly and ergonomically friendly operator interface.			
(U)	In FY 2008: Not Applicable.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Supply Chain Optimization Universal Tool Kit (SCOUT).	1.944	0.000	0.000
(U)	In FY 2007: Continued efforts to utilize radio frequency identification technology, lean six sigma practices, and e-commerce to effect improvements in DoD value chain.			
(U)	In FY 2008: Not Applicable.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Wright Brothers Institute (WBI) - Radio Frequency Identification (RFID) Rapid	4.862	0.000	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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 2007	FY 2008	FY 2009
	Adoption Collaboration Initiative.			
(U)	In FY 2007: Continued development and application of RFID for stand-off monitoring inventory and shipment of cargo and parts. Developed an electronically coordinated lean manufacturing toolkit and methodical adoption process for using RFID technology by small and medium enterprise (SME) suppliers.			
(U)	In FY 2008: Not Applicable.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Ceramic Ballistic Armor for Soldier and Vehicle Protection	0.972	0.000	0.000
(U)	In FY 2007: Demonstrated manufacturing capability for contoured ceramic armor for vehicle and body armor applications, including new conformal body armor and appendage armor designs. Demonstrated manufacturability/process control to consistently produce ballistic ceramic to meet DoD requirements.			
(U)	In FY 2008: Not Applicable.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: EFG (Edge defined Film-fed Growth) Sapphire Sheets for Large Aperture EO/IR (Electro-Optics/Infrared) Windows	1.944	0.000	0.000
(U)	In FY 2007: Identified/prioritized manufacturing, cost and technology drivers and their associated risks that limit the ability to manufacture large EFG Sapphire Sheets for use as an EO/IR window. Implemented solutions to drivers/risks based on resources available and impact to success of large sheet production.			
(U)	In FY 2008: Not Applicable.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: F-35 Joint Strike Fighter Composite Engine Case	3.890	0.000	0.000
(U)	In FY 2007: Conducted efforts to reduce the total cycle time for producing an F135 OMC engine duct and reduce the cost of the prepreg used in making an F135 OMC engine duct.			
(U)	In FY 2008: Not Applicable.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Improving MANPADS Survivability Coatings	1.166	0.000	0.000
(U)	In FY 2007: Initiated development of advanced manufacturing technologies for improving MANPADS survivability coatings.			
(U)	In FY 2008: Not Applicable.			

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
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 2007	FY 2008	FY 2009
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Laser Penning Fatigue Life Extension Technology for Military Aircraft Landing Gear	1.362	0.000	0.000
(U)	In FY 2007: Initiated development of application of laser peening fatigue life extension technology for military aircraft landing gear.			
(U)	In FY 2008: Not Applicable.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Rapid Manufacturing and Repair of Composites for High Temp Applications.	1.264	1.589	0.000
(U)	In FY 2007: Conducted Congressionally-directed effort for Rapid Manufacturing and Repair of Composites for High Temp Applications.			
(U)	In FY 2008: Conduct Congressionally-directed effort for Rapid Manufacturing and Repair of Composites for High Temp Applications.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Reactive Plastic CO2 Absorbent Production Capacity.	1.944	0.000	0.000
(U)	In FY 2007: Initiated development of advanced manufacturing technologies for reactive plastic CO2 absorbent production capacity.			
(U)	In FY 2008: Not Applicable.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Nanomaterial Advanced Prototyping	4.475	0.000	0.000
(U)	In FY 2007: Developed prototype process for optimized nanomaterial yield and reduced product variation.			
(U)	In FY 2008: Not Applicable.			
(U)	In FY 2009: Not Applicable.			
(U)				
(U)	Total Cost	65.543	50.186	0.000

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708011F Industrial Preparedness	PROJECT NUMBER AND TITLE 2865 Manufacturing Technology

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

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 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Anteon	Various			0.470						0.000	0.470	
Argonne	Various										0.000	
Bell											0.000	
Boeing	Various									0.000	0.000	
Booz-Allen				0.600							0.600	
Doyle Center for MTech, PA	Various										0.000	
GE	Coop Agmt			1.047						0.000	1.047	
H.N. Burns											0.000	
Harris				2.050							2.050	
Honeywell	Various			1.200						0.000	1.200	
Infoscribe	Various			0.231							0.231	
Killdeer Mountain Manufacturing Inc.											0.000	
L3 Communications				1.800							1.800	
Lockheed Martin	Various									0.000	0.000	
Luna Technologies											0.000	
NASA Glenn											0.000	
Northrop Grumman	Various			4.173						0.000	4.173	
Pratt & Whitney	Tech Int Agr			1.430						0.000	1.430	
Raytheon	Coop Agmt			4.431						0.000	4.431	
Renaissance Service Inc.											0.000	
Rockwell				1.550							1.550	
Rolls Royce				0.160							0.160	
Surmet	Various										0.000	
Tiburon				0.200							0.200	
Univ Dayton Res Inst	Cost Plus			0.851						0.000	0.851	
US Technology	Various										0.000	
UTC	Various			0.700						0.000	0.700	
Wright Brothers Institute				4.981							4.981	
Wyle				0.433							0.433	
Various	Various			39.236	Sep-07	50.186				Continuing	TBD	
Subtotal Product Development			0.000	65.543		50.186		0.000		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	

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0708011F Industrial Preparedness**	**2865 Manufacturing Technology**

	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	65.543	50.186	0.000	Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708011F Industrial Preparedness	PROJECT NUMBER AND TITLE: 2865 Manufacturing Technology

ManTech Schedule Summary

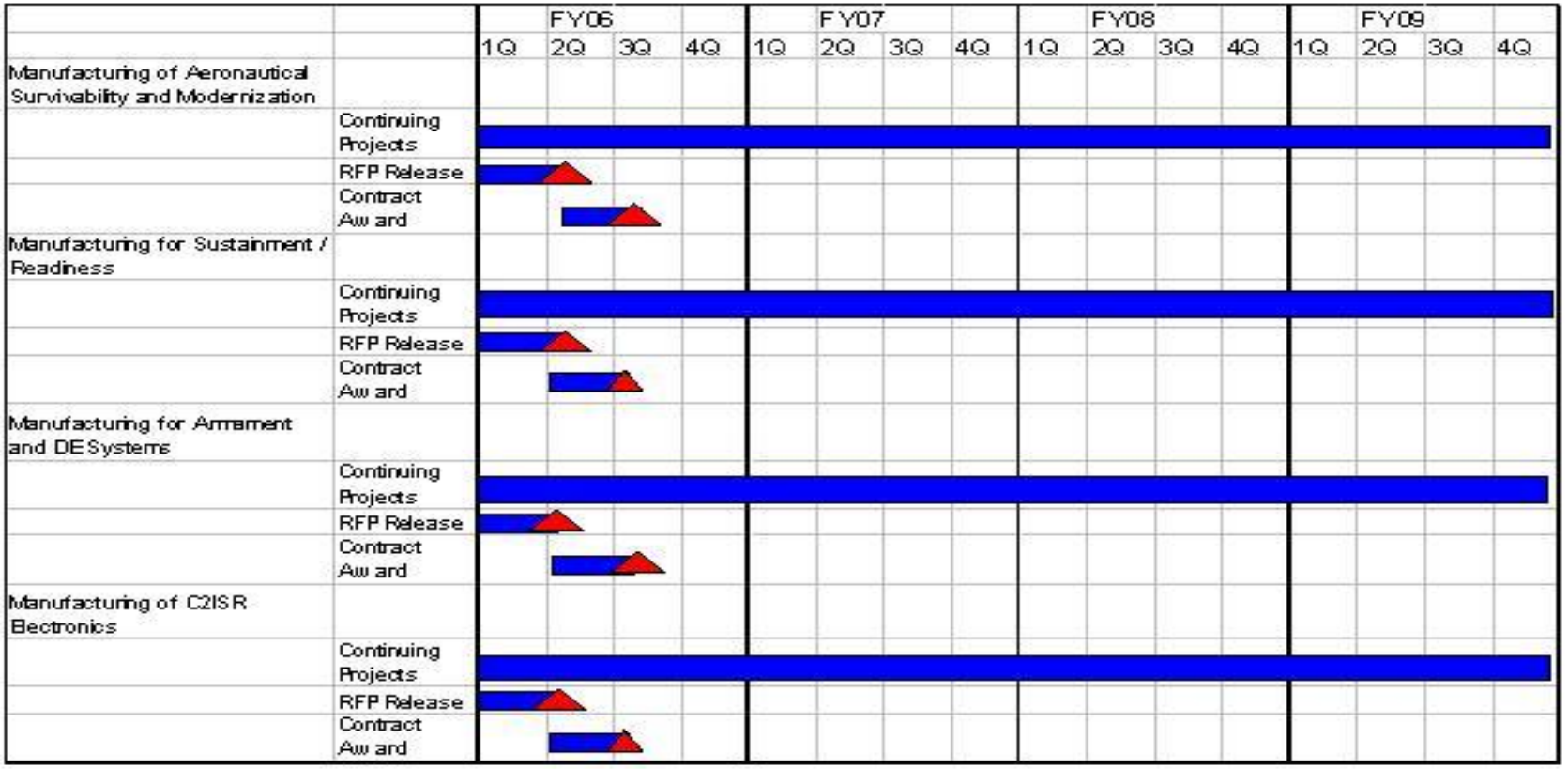


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708011F Industrial Preparedness	PROJECT NUMBER AND TITLE 2865 Manufacturing Technology

(U)	Schedule Profile	FY 2007	FY 2008	FY 2009
(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 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708012F Logistic Support Activities

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	2.132	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5054 CAM Modernization	2.132	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This Project was set up to fund the development of the Air Force Core Automated Maintenance System (CAMS) which is the standard Air Force base-level automated maintenance information management system for managing weapon systems worldwide. The system supports aircraft, communications-electronics, and support equipment maintenance activities at worldwide operating bases, Air National Guard/AF Reserve sites, and selected North Atlantic Treaty Organization (NATO) locations. CAMS provides on-line remote terminals connected to the Standard Base-Level Computer (SBLC) system throughout the maintenance complexes. CAMS automates aircraft history, aircraft scheduling, aircrew debriefing processes, and provides a common interface for entering base-level maintenance data into other logistics management systems. That development was completed in FY2003.

The FY 2007 funds are for a Congressional add for the Reliability and Maintainability Information System (REMIS) and Omnibus add for Cargo Movement Operations System (CMOS). REMIS provides a single, primary Air Force data system for collecting and processing equipment maintenance data which is used to provide information on reliability and maintainability, trend analysis, failure prediction and weapon system availability. REMIS funds are being used to support the migration/modernization of REMIS to Global Combat Support System - Air Force.

CMOS is a joint-use system that integrates computer hardware, software, and communications to effectively plan, document and manage outbound and inbound cargo and passengers; and to plan, schedule, and monitor the execution of transportation activities in support of deployment and reception of forces. CMOS provides joint warfighters with an end-to-end distribution capability and real time in-transit visibility during all passenger and cargo movements. CMOS is operational at 247 US Air Force, US Army, US Navy, US Marine Corps, National Security Agency, and Defense Contract Management Agency sites, with plans to activate additional US Army sites. This RDT&E funding will be used primarily to install/implement CMOS software and provide implementation training at new US Army sites. Funding will also be used to develop new software capabilities required by US Army customers.

No FY 2009 funds are being requested.

This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapon systems already in existence.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708012F Logistic Support Activities

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	1.295	0.000	0.000
(U)	Current PBR/President's Budget	2.132	0.000	0.000
(U)	Total Adjustments	0.837		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases	0.000		
	Reprogrammings	0.873		
	SBIR/STTR Transfer	-0.036		

(U) Significant Program Changes:

In FY2007 Congress added $1.3M RDT&E funds to PE0708012F Logistic Support Activities for REMIS.

FY2007 Omnibus added $873K to be used to modify CMOS software for use by the Army's Transportation Coordinators' - Automated Information for Movements Systems (TC-AIMS).

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5054 CAM Modernization	2.132	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

This Project was set up to fund the development of the Air Force Core Automated Maintenance System (CAMS) which is the standard Air Force base-level automated maintenance information management system for managing weapon systems worldwide. The system supports aircraft, communications-electronics, and support equipment maintenance activities at worldwide operating bases, Air National Guard/AF Reserve sites, and selected North Atlantic Treaty Organization (NATO) locations. CAMS provides on-line remote terminals connected to the Standard Base-Level Computer (SBLC) system throughout the maintenance complexes. CAMS automates aircraft history, aircraft scheduling, aircrew debriefing processes, and provides a common interface for entering base-level maintenance data into other logistics management systems. That development was completed in FY2003.

The FY 2007 funds are for a Congressional add for the Reliability and Maintainability Information System (REMIS) and Omnibus add for Cargo Movement Operations System (CMOS). REMIS provides a single, primary Air Force data system for collecting and processing equipment maintenance data which is used to provide information on reliability and maintainability, trend analysis, failure prediction and weapon system availability. REMIS funds are being used to support the migration/modernization of REMIS to Global Combat Support System - Air Force.

CMOS is a joint-use system that integrates computer hardware, software, and communications to effectively plan, document and manage outbound and inbound cargo and passengers; and to plan, schedule, and monitor the execution of transportation activities in support of deployment and reception of forces. CMOS provides joint warfighters with an end-to-end distribution capability and real time in-transit visibility during all passenger and cargo movements. CMOS is operational at 247 US Air Force, US Army, US Navy, US Marine Corps, National Security Agency, and Defense Contract Management Agency sites, with plans to activate additional US Army sites. This RDT&E funding will be used primarily to install/implement CMOS software and provide implementation training at new US Army sites. Funding will also be used to develop new software capabilities required by US Army customers.

No FY 2009 funds are being requested.

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 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Program			
(U) REMIS GCSS-AF migration/Modernization	1.259	0.000	0.000
(U) CMOS Modification	0.873	0.000	0.000
(U) Total Cost	2.132	0.000	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708012F Logistic Support Activities	PROJECT NUMBER AND TITLE 5054 CAM Modernization

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

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

(U) Not Applicable

(U) D. Acquisition Strategy

REMIS is executing an incremental code conversion and migration approach of its current functionality from a stand alone mainframe HP/TANDEM environment to the GCSS-AF framework. Code conversion and migration efforts will be obtained under a directed award (sole source), Time and Material with Award Fee Incentives contract.

CMOS will be installing/implementing CMOS software and providing implementation training at new US Army sites. CMOS will also be developing new software functionality to comply with Defense Transportation Regulation mandated electronic data interchange upgrades and will address other compliancy and maintenance issues. Functional upgrades will be added to improve in-transit visibility. Software implementation and training will be provided under an existing contract vehicle. Actual software development will be via a competitively awarded contract expected to be FFP.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

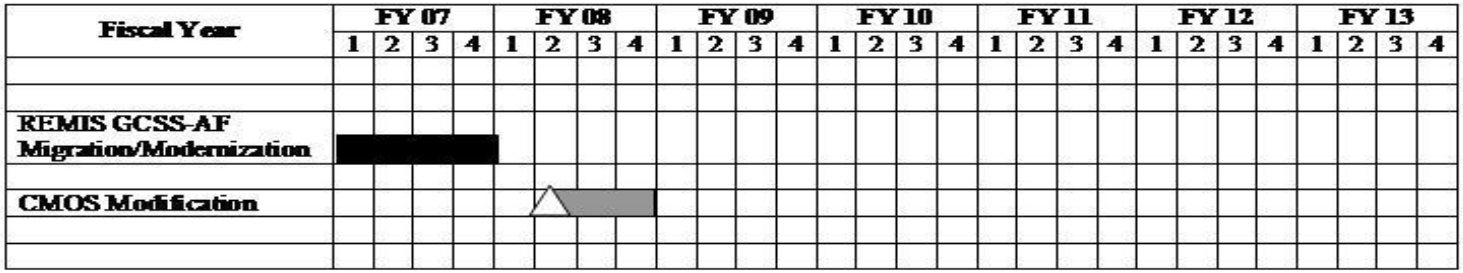
PE NUMBER AND TITLE: 0708012F Logistic Support Activities

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
REMIS GCSS-AF Migration/Modernization	C & CPAF	Northrop Grumman Information Technology, Wright Patterson AFB, OH	0.000	1.259	Jun-07	0.000		0.000		0.000	1.259	1.259
CMOS Modification	T & M	Northrop Grumman Information Technology, Maxwell AFB-Gunter Annex, AL	0.000	0.873	Jan-08	0.000		0.000		0.000	0.873	0.873
Subtotal Product Development			0.000	2.132		0.000		0.000		0.000	2.132	2.132
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	2.132		0.000		0.000		0.000	2.132	2.132

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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 and CMOS



As of 7 January 2008

☆ *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 2008
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 2007	FY 2008	FY 2009
(U) REMIS GCSS-AF Migration/Modernization	1-4Q		
(U) CMOS Modification		2-4Q	

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PE NUMBER: 0708610F
PE TITLE: Logistics Information Technology (LOGIT)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0708610F Logistics Information Technology (LOGIT)

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	90.557	114.599	189.679	40.561	41.058	41.854	42.702	Continuing	TBD
5208	Expeditionary Combat Support System (ECSS)	90.557	114.599	189.679	40.561	41.058	41.854	42.702	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

ECSS will be composed of a Commercial-Off-The-Shelf (COTS) Enterprise Resource Planning (ERP) application and other potential COTS solutions replacing 400+ wholesale and retail legacy logistics and procurement Information Technology (IT) systems. Use of ERP/COTS products will provide the warfighter, and AF enterprise in general, with DoD and industry best business practices and capabilities, at all AF enterprise echelons in areas of product support & engineering, supply chain management, expeditionary logistics Command & Control, acquisition & procurement, maintenance, repair and overhaul. ECSS will be compliant with the Joint Technical Architecture (JTA) and Business Enterprise Architecture (BEA), will meet Chief Financial Officer (CFO) Act and Joint Financial Management Improvement Program (JFMIP) requirements, and will reside on the Global Combat Support System-Air Force (GCSS-AF) Integration Framework (IF).

This program is in Budget Activity 7, Operational System Development because the program modernizes Automated Information Systems (AIS).

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	120.851	114.176	137.012
(U)	Current PBR/President's Budget	90.557	114.599	189.679
(U)	Total Adjustments	-30.294	0.423	
(U)	Congressional Program Reductions		-0.045	
	Congressional Rescissions		-0.732	
	Congressional Increases		1.200	
	Reprogrammings	-27.000		
	SBIR/STTR Transfer	-3.294		

(U) Significant Program Changes:

FY2009 increase represents changing development funding from working capital to RDT&E and delays due to contract protests. All contract protests denied by GAO as of March 07.

In FY2008, Congress added funds for the Expert Organizational Development System ($1.2M) which is for work other than the ECSS effort. The AF is working to identify and transfer these funds to the correct program office for execution.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5208	Expeditionary Combat Support System (ECSS)	90.557	114.599	189.679	40.561	41.058	41.854	42.702	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

ECSS will be composed of a Commercial-Off-The-Shelf (COTS) Enterprise Resource Planning (ERP) application and other potential COTS solutions replacing 400+ wholesale and retail legacy logistics and procurement Information Technology (IT) systems. Use of ERP/COTS products will provide the warfighter, and AF enterprise in general, with DoD and industry best business practices and capabilities, at all AF enterprise echelons in areas of product support & engineering, supply chain management, expeditionary logistics Command & Control, acquisition & procurement, maintenance, repair and overhaul. ECSS will be compliant with the Joint Technical Architecture (JTA) and Business Enterprise Architecture (BEA), will meet Chief Financial Officer (CFO) Act and Joint Financial Management Improvement Program (JFMIP) requirements, and will reside on the Global Combat Support System-Air Force (GCSS-AF) Integration Framework (IF).

This program is in Budget Activity 7, Operational System Development because the program modernizes Automated Information Systems (AIS).

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) ERP System Integration	90.557	113.399	189.679
(U) Expert Organizational Development System	0.000	1.200	0.000
(U) Total Cost	90.557	114.599	189.679

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement AF, ECSS (PE 0708610F)	16.460	10.493	39.214	2.809	2.847	2.903	2.960	Continuing	TBD
(U) Operations & Maintenance AF, ECSS (PE 0708610F)	27.849	35.834	38.636	91.268	55.864	56.984	58.121	Continuing	TBD

(U) D. Acquisition Strategy

Acquisition strategy is two fold. A COTS solution was awarded, followed by the selection of a System Integrator. ECSS System was awarded using GSA schedule and/or Enterprise Software Agreement (ESA) and the Blanket Purchase Agreement (BPA) under the Enterprise Software Initiative (ESI).

The contract is awarded on a fixed price basis. Under the provisions of the contract, funds are incrementally obligated up-front; however, the contractor cannot invoice for payment until the performance based milestone events are achieved and accepted by the AF.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
ERP/COTS System Integration	C/FFP	AFMC/554th ELSG/EC, Wright Patterson AFB, OH	11.162	54.890	Feb-07	62.410	Jan-08	107.587	Nov-08	Continuing	TBD	TBD
OEM Technical Support (COTS Product)	C/FFP	AFMC/554th ELSG/EC, Numerous Locations	0.000	4.417	May-07	5.363	May-08	4.198	May-09	Continuing	TBD	TBD
Product Lifecycle Management/Bill of Materials (PLM/BOM) (Teamcenter product integration w/GCSS-AF)	MIPR	754th ELSG, Maxwell AFB - Gunter Annex, AL	1.903	2.305	Mar-07	0.000		0.000		0.000	4.208	4.208
Advanced Planning and Scheduling (APS) Pathfinder	C/FFP	Bearing Point, Tinker AFB OK	7.136	0.574	Feb-07	0.000		0.000		0.000	7.710	7.710
Training Business Area (TBA) and Enhanced Maintenance Operations Center (EMOC)	MIPR	754th ELSG, Maxwell AFB - Gunter Annex, AL	3.600	1.390	Jul-07	0.000		0.000		0.000	4.990	4.990
Expert Organizational Development System	TBD	TBD	0.000	0.000		1.200	Jun-08	0.000		Continuing	TBD	TBD
Subtotal Product Development			23.801	63.576		68.973		111.785		Continuing	TBD	TBD
Remarks:												
(U) Support Costs												
Contractor Support	C/LOE Mulitple Contracts	MCR, Oasis, Sumaria, Morgan Consulting, Wright Patterson AFB, OH	2.823	7.131	Dec-06	7.284	Dec-07	7.699	Dec-08	Continuing	TBD	TBD
Engineering Support	C/LOE	Oasis, Wright Patterson AFB, OH	3.213	4.235	Dec-06	4.000	Dec-07	4.393	Dec-08	Continuing	TBD	TBD
Subtotal Support Costs			6.036	11.366		11.284		12.092		Continuing	TBD	TBD
Remarks:												
(U) Management Services												
Program Office Operations	Allotment	AFMC/554th	2.432	1.464	Oct-06	1.785	Oct-07	1.930	Oct-08	Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0708610F Logistics Information Technology (LOGIT)

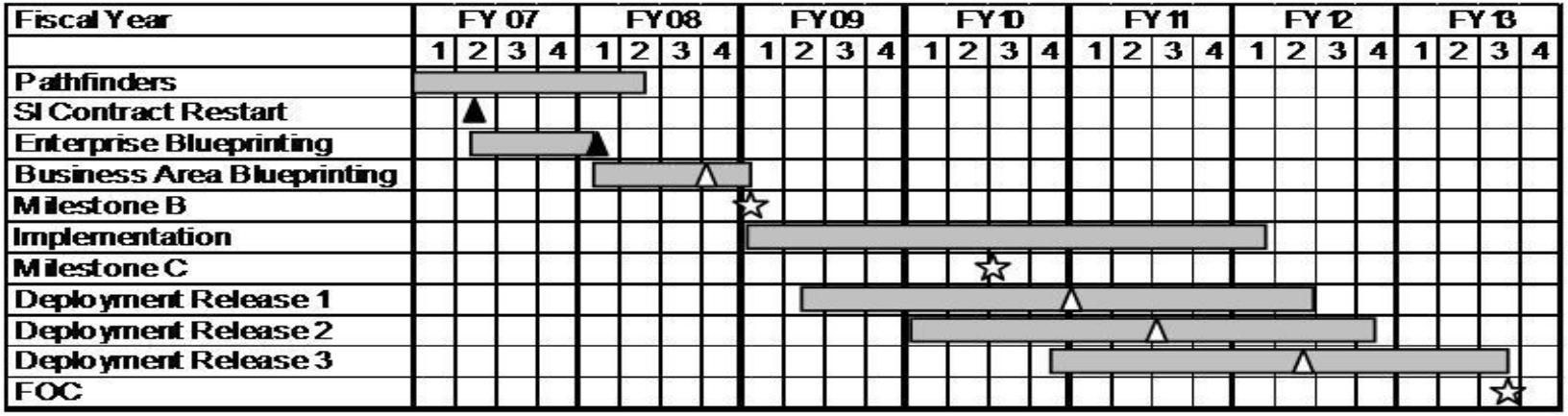
PROJECT NUMBER AND TITLE: 5208 Expeditionary Combat Support System (ECSS)

	FFRDC - MITRE Engineering Support	C/FFP	ELSG/EC, Wright Patterson AFB, OH MITRE, Wright Patterson AFB, OH	1.891	0.715	Oct-06	2.152	Oct-07	2.160	Oct-08	Continuing	TBD	TBD
	Subtotal Management Services			4.323	2.179		3.937		4.090		Continuing	TBD	TBD
	Remarks:												
(U)	Capabilities Integration Enviroment (Development & Test)												
	Hardware/Software/Contractor Support	FFP/LOE	643rd ELSS Maxwell AFB Gunter Annex, AL	0.000	10.786	Apr-07	4.620	Jan-08	3.404	Jan-09	Continuing	TBD	TBD
	Subtotal Capabilities Integration Enviroment (Development & Test)			0.000	10.786		4.620		3.404		Continuing	TBD	TBD
	Remarks:												
(U)	Data ETL												
	Legacy Data Extract Transform and Load.	TBD	TBD	0.000			25.485	Mar-08	41.058	Nov-08	Continuing	TBD	TBD
	Subtotal Data ETL			0.000	0.000		25.485		41.058		Continuing	TBD	TBD
	Remarks:												
(U)	Logistics Training Development												
	AETC Course Development	TBD	TBD	0.000	0.000		0.000		17.250	Nov-08	Continuing	TBD	TBD
	Subtotal Logistics Training Development			0.000	0.000		0.000		17.250		Continuing	TBD	TBD
	Remarks:												
(U)	Global Combat Support System-Air Force (GCSS-AF)												
	Risk Reduction Activities	C/LOE	754th ELSG/GC Maxwell AFB - Gunter Annex - Lockheed Martin	1.300	2.650	Feb-07	0.300	Nov-07	0.000		0.000	4.250	4.250
	Subtotal Global Combat Support System-Air Force (GCSS-AF)			1.300	2.650		0.300		0.000		0.000	4.250	4.250
	Remarks:												
(U)	Total Cost			35.460	90.557		114.599		189.679		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
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

▲ *Completed Event*

△ *Planned Task(s)*

As of 7 January 2008

Integrity - Service - Excellence

1

Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2008**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0708610F Logistics Information Technology (LOGIT)**	**5208 Expeditionary Combat Support System (ECSS)**

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) Pathfinders	1-4Q	1-2Q	
(U) System Integration Contract Restart	2Q		
(U) Enterprise Blueprinting	2-4Q	1Q	
(U) Business Area Blueprinting		1-4Q	1Q
(U) Milestone B			1Q
(U) Implementation			1-4Q
(U) Deployment Release 1			2-4Q

PE NUMBER: 0708611F
PE TITLE: Support Systems Development

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0708611F Support Systems Development

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	23.651	33.859	8.145	8.294	8.469	8.639	8.811	Continuing	TBD
3318	Product Data Systems Modernization (PDSM)	2.002	3.488	0.495	0.587	0.577	0.594	0.600	Continuing	TBD
5042	Log Application Logisitics Integration (LALI)	21.649	30.371	7.650	7.707	7.892	8.045	8.211	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program element supports two 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. 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.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	32.755	11.076	11.294
(U)	Current PBR/President's Budget	23.651	33.859	8.145
(U)	Total Adjustments	-9.104	22.783	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.217	
	Congressional Increases		23.000	
	Reprogrammings	-8.494		
	SBIR/STTR Transfer	-0.610		

(U) Significant Program Changes:

In FY2007, Congress added $22.3M for tasks that were placed in project 5042 but were for non LALI activities. The AF has transferred these funds to the correct program office for execution. $7.3M of the total $22.3M was moved out of PE 0708611F to the Defense Health Program (DHP) for execution.

In FY2008, Congress added $23M for tasks that were placed in project 5042 but were for non LALI activities. The AF is working to identify and transfer these funds to the correct program office for execution.

FY2009 Reductions fund higher AF needs.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0708611F Support Systems Development

PROJECT NUMBER AND TITLE: 3318 Product Data Systems Modernization (PDSM)

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3318	Product Data Systems Modernization (PDSM)	2.002	3.488	0.495	0.587	0.577	0.594	0.600	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. The Enhanced Technical Information Management System (ETIMS) is the first step towards achieving the Air Force (AF) TO Vision. It will provide user friendly, technically accurate, and up-to-date digital technical data at the point of use that is acquired, sustained, distributed and available in digital format from a single point of access for all technical data users. ETIMS will develop new software and integrate existing TO databases.

This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapon systems already in existence.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Program			
(U) Manage and support AF technical data activities	0.533	2.643	0.299
(U) Technical Data Integrator/Developer Support	1.160	0.000	0.000
(U) Systems Program Office (SPO) Operations	0.309	0.845	0.196
(U) Total Cost	2.002	3.488	0.495

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not Applicable									

(U) D. Acquisition Strategy

ETIMS will incrementally develop a user friendly, technically accurate, and current digital TO management solution at the point of use. The acquisition will execute a Cost Plus Award Fee contract competitively awarded utilizing the Enterprise Information Technology Acquisition (EITA) vehicle.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

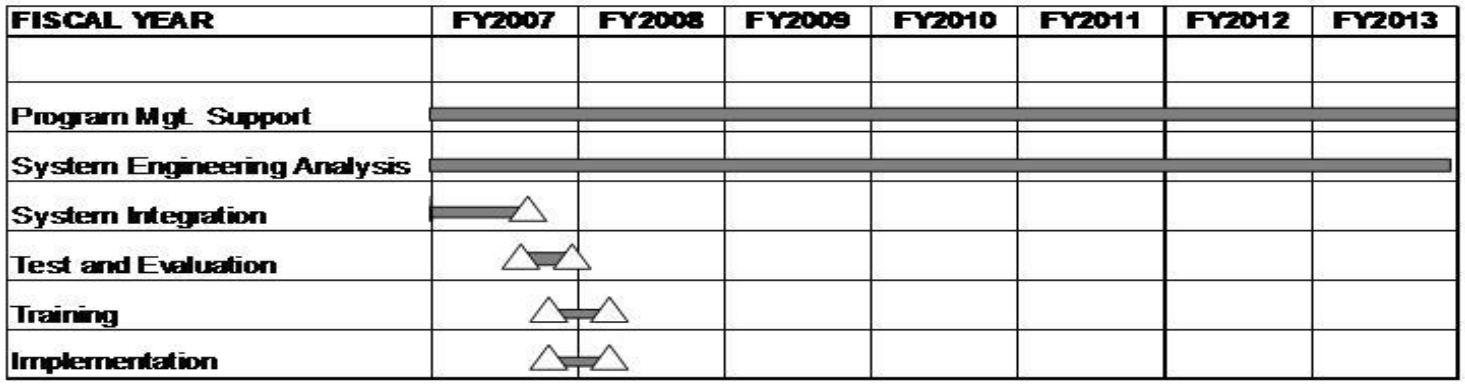
PE NUMBER AND TITLE: 0708611F Support Systems Development

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Support												
Manage and Support Technical Data activies	C/FP	ITSP Vehicle, 754 ELSG/ILMT, Wright Patterson AFB, OH		0.533	Jul-07	1.277	Oct-07	0.299	Oct-08	Continuing	TBD	TBD
Technical Data Integrator/Developer Support	C/CP	SAIC, 754 ELSG/ILMT, Wright Patterson AFB, OH		1.160	Aug-06	1.692	Oct-07	0.000		Continuing	TBD	TBD
Subtotal Support			0.000	1.693		2.969		0.299		Continuing	TBD	TBD
Remarks:												
(U) Management												
System Program Office (SPO) Operations	MIPR	754 ELSG/ILMT, Wright Patterson AFB, OH		0.309	Oct-06	0.519	Jan-08	0.196	Oct-08	Continuing	TBD	TBD
Subtotal Management			0.000	0.309		0.519		0.196		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	2.002		3.488		0.495		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708611F Support Systems Development	PROJECT NUMBER AND TITLE: 3318 Product Data Systems Modernization (PDSM)

Exhibit R-4 BA 07 PEC 78611F Project 3318 PDSM



As of 7 January 2008

Planned Ongoing Activity Planned Task(s)

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
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 2007	FY 2008	FY 2009
(U) Program Mgt Support	1-4Q	1-4Q	1-4Q
(U) System Engineering Analysis	1-4Q	1-4Q	1-4Q
(U) System Integration	1-3Q		
(U) Test and Evaluation	3-4Q		
(U) Training	4Q	1-2Q	
(U) Implementation	4Q	1-2Q	

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5042	Log Application Logisitics Integration (LALI)	21.649	30.371	7.650	7.707	7.892	8.045	8.211	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 Logistics Installations and Mission Support (LIMS) legacy systems to the common GCSS-AFDS 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 provide data discovery and data migration in support the Expeditionary Combat Support System (ECSS).

Activities in this Project also include FY2007 Congressional Adds for non LALI work. The AF has transferred these funds to the correct program office for execution. These projects include: Heavy Duty Hybrid Electric Vehicle ($3.0M), Air Force Advanced Power and Energy Initiative ($2.9M), Production of Alternative Energy for Defense from Alaskan Raw Materials ($1.0M), Fuel Cell Power - Non Tactical Vehicle ($1.0M), WR-ALC C-5 Maintenance Transformation ($2.6M), Advanced Modular Lithium-Ion Energy Storage ($1.1M), Defense Assured Fuels Initiative ($2.0M), and WR-ALC Aircraft Sustainment Wing Aircraft Availability ($1.4M). Composite Occupation Health and Operation Risk Tracking System ($3.0M), Air Force Medical Service Personnel Health Record ($1.1M), and RFID inventory Management and Patient ID ($3.2M) was transferred out of PE 0708611F to the Defense Health Program (DHP) for execution.

Activities in this Project also include $23.0M FY2008 Congressional Adds for non LALI work. The AF is working to identify and transfer these funds to the correct program office for execution. These projects include: Alternative Energy Fuel Cell Power Generation ($2.0M), Strategic Airlift Aircraft Availability Improvements ($2.8M), Heavy Duty Hybrid Electric Vehicle ($2.0M), Alternate Carbon Stationary Fuel Cell Demonstrator ($3.2M), WR-ALC Special Operations Forces ($3.0M), and Alternative Energy Research ($10.0M).

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 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Program			
(U) Continue LALI Program Management Office (PMO) Support	0.092	0.095	0.096
(U) Continue LALI PMO Tasks (Supporting Integration and Development)	1.707	1.761	1.789
(U) Provide LALI Systems Engineering Base Support & Test Development Range	0.050	0.052	0.053
(U) Continue LALI Systems Engineering Contractor Support (Product Development)	5.070	5.332	5.578
(U) Continue LALI Integration Task Contracts	0.100	0.131	0.134

Exhibit R-2a, RDT&E Project Justification		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708611F Support Systems Development	PROJECT NUMBER AND TITLE 5042 Log Application Logisitics Integration (LALI)

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Heavy Duty Hybrid Electric Vehicle Congressional Add	2.930	2.000	0.000
(U)	Air Force Advanced Power and Energy Initiative Congressional Add	2.830	0.000	0.000
(U)	Production of Alternative Energy for Defense from Alaskan Raw Materials Congressional Add	0.980	0.000	0.000
(U)	Fuel Cell Power - Non Tactical Vehicle Congressional Add	0.960	0.000	0.000
(U)	WR-ALC C-5 Maintenance Transformation Congressional Add	2.550	0.000	0.000
(U)	Advanced Modular Lithium-Ion Energy Storage Congressional Add	1.070	0.000	0.000
(U)	Defense Assured Fuels Initiative Congressional Add	1.950	0.000	0.000
(U)	WR-ALC Aircraft Sustainment Wing Aircraft Availability Congressional Add	1.360	0.000	0.000
(U)	Alternative Energy Fuel Cell Power Generation Congressional Add	0.000	2.000	0.000
(U)	Strategic Airlift Aircraft Availability Improvements Congressional Add	0.000	2.800	0.000
(U)	Alternate Carbon Stationary Fuel Cell Demonstrator Congressional Add	0.000	3.200	0.000
(U)	WR-ALC Special Operations Forces Congressional Add	0.000	3.000	0.000
(U)	Alternative Energy Research Congressional Add	0.000	10.000	0.000
(U)	Total Cost	21.649	30.371	7.650

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not Applicable									

(U) D. Acquisition Strategy

The Engineering & Integration Architecture (EIPA) Flight of the 643rd Electronic Systems Squadron (ELSS) manages the logistics systems engineering and integration issues for the Air Force. EIPA performs a set of activities required by the 643rd ELSS to deliver world-class capabilities to our customers. This includes enterprise architecture, engineering technical and functional support of services for the development, integration, installation of modernized Logistics Information Systems, maintenance, and deactivation of redundant systems. The focus is on facilitating the improvement of the systems efficiency through integration and technology insertion.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
LALI Support Contractor (Portfolio Management, Architecture, & Data Management)	C/FP	BTAS, Inc Montgomery, Alabama		0.662	Mar-07	0.791	Mar-08	0.959	Mar-09	Continuing	TBD	TBD
LALI Support Contractor (Data Management, Enterprise Architecture, & System Modernization support)	C/FP	Smartronix, Inc Maxwell AFB-Gunter Annex, AL		1.296	Mar-07	1.335	Mar-08	1.358	Mar-09	Continuing	TBD	TBD
LALI Support Contractor (Data Migration/Warehousing)	MIPR	GCSS-AFDS, WPAFB, Ohio		2.057	Aug-07	2.119	Aug-08	2.155	Aug-09	Continuing	TBD	TBD
LALI Support Contractor (Data Management)	C/FP	TBD		1.055	Jan-07	1.087	Jan-08	1.106	Jan-09	Continuing	TBD	TBD
Heavy Duty Hybrid Electric Vehicle Congressional Add	C/FP	Mack Truck (Vlovo Powertrain) Hagerstown, MD		2.930	Jun-07	0.000		0.000		Continuing	TBD	TBD
Air Force Advanced Power and Energy Initiative Congressional Add	C/FP	Concurrect Technologies Inc., Johnstown, PA		2.830	Jun-07	0.000		0.000		Continuing	TBD	TBD
Production of Alternative Energy for Defense from Alaskan Raw Materials Congressional Add	C/FP	Biomass Energy Systems Inc., Novi, MI		0.980	Jun-07	0.000		0.000		Continuing	TBD	TBD
* Composite Occupation Health and Operation Risk Tracking System Congressional Add	TBD	TBD		0.000	Oct-07	0.000		0.000		Continuing	TBD	TBD
* Air Force Medical Service Personnel Health Record Congressional Add	TBD	TBD		0.000	Oct-07	0.000		0.000		Continuing	TBD	TBD
Fuel Cell Power - Non Tactical Vehical Congressional Add	C/FP	ePower Synergies Inc, Port Byron, IL		0.960	Jun-07	0.000		0.000		Continuing	TBD	TBD
WR-ALC C-5 Maintenance Transformation Congressional Add	C/FP	Intergraph, Huntsville, Alabama		2.550	Jun-07	0.000		0.000		Continuing	TBD	TBD
Advanced Modular Lithium-Ion Energy Storage Congressional Add	C/FP	Boundless Inc, Denver, CO		1.070	Jun-07	0.000		0.000		Continuing	TBD	TBD
Defense Assured Fuels Initiative Congressional Add	C/FP	Integrated Concepts and Research Copr,		1.950	Jun-07	0.000		0.000		Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0708611F Support Systems Development

PROJECT NUMBER AND TITLE: 5042 Log Application Logisitics Integration (LALI)

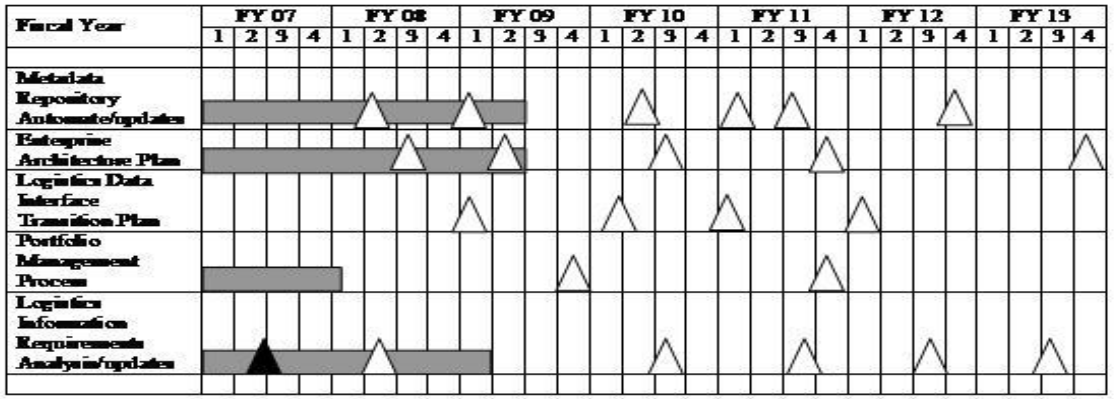
			Anchorage, AK										
	WR-ALC Aircraft Sustainment Wing Aircraft Availability Congressional Add	TBD	Intergraph, Huntsville, Alabama		1.360	Jun-07	0.000		0.000		Continuing	TBD	TBD
	* RFID inventory Management and Patient ID Congressional Add	TBD	TBD		0.000	Oct-07	0.000		0.000		Continuing	TBD	TBD
	Alternative Energy Fuel Cell Power Generation Congressional Add	TBD	TBD		0.000		2.000	May-08	0.000		Continuing	TBD	TBD
	Strategic Airlift Aircraft Availability Improvements Congressional Add	TBD	TBD		0.000		2.800	May-08	0.000		Continuing	TBD	TBD
	Heavy Duty Hybride Electric Vehicle	TBD	TBD		0.000		2.000	May-08			Continuing	TBD	TBD
	Alternate Carbon Stationary Fuel Cell Demonstrator Congressional Add	TBD	TBD		0.000		3.200	May-08	0.000		Continuing	TBD	TBD
	WR-ALC Special Operations Forces Congressional Add	TBD	TBD		0.000		3.000	May-08	0.000		Continuing	TBD	TBD
	Alternative Energy Research Congressional Add	TBD	TBD		0.000		10.000	May-08	0.000		Continuing	TBD	TBD
	Subtotal Product Development			0.000	19.700		28.332		5.578		Continuing	TBD	TBD
	Remarks: Programs with an * have been moved to Defense Health Program (DHP)												
(U)	Support												
	PMO Tasks (supporting Integration & Development)	C/FP	DSD, Maxwell AFB-Gunter Annex, AL		1.707	Jan-07	1.761	Jan-08	1.789	Jan-09	Continuing	TBD	TBD
	Portal/Systems Engineering Support (Integration Task)	C/FP	Various, Maxwell AFB-Gunter Annex, AL		0.100	Feb-07	0.131	Feb-08	0.134	Feb-09	Continuing	TBD	TBD
	Subtotal Support			0.000	1.807		1.892		1.923		Continuing	TBD	TBD
	Remarks:												
(U)	Test & Evaluation												
	Support Contractor (Test Development Range)	C/FP	Various, Maxwell AFB-Gunter Annex, AL		0.050	Jan-07	0.052	Jan-08	0.053	Jan-09	Continuing	TBD	TBD
	Subtotal Test & Evaluation			0.000	0.050		0.052		0.053		Continuing	TBD	TBD
	Remarks:												
(U)	Management												
	PMO Support (System Program Office management and operations)	N/A	643rd ELSS, Maxwell AFB-Gunter Annex, AL		0.092	Dec-06	0.095	Dec-07	0.096	Dec-08	Continuing	TBD	TBD
	Subtotal Management			0.000	0.092		0.095		0.096		Continuing	TBD	TBD
	Remarks:												

Exhibit R-3, RDT&E Project Cost Analysis			DATE: February 2008
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) Total Cost	0.000	21.649	30.371	7.650	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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 3 Jan 08

☆ *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 2008
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 2007	FY 2008	FY 2009
(U) Metadata Repository (Automate/Updates)	1-4Q	1-4Q	1-2Q
(U) Enterprise Architecture Plan	1-4Q	1-4Q	1-2Q
(U) Logistics Data Interface Transition Plan			1Q
(U) Portfolio Management Process Updates	1-4Q		4Q
(U) Logistics Information Requirements Analysis/Updates	1-4Q	1-4Q	1Q

PE NUMBER: 0804757F
PE TITLE: JOINT NATIONAL TRAINING CENTER

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0804757F JOINT NATIONAL TRAINING CENTER

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	2.964	3.108	3.214	3.290	3.341	3.405	3.474	0.000	0.000
5124 Training Transformation	2.964	3.108	3.214	3.290	3.341	3.405	3.474	0.000	0.000

(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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	3.050	3.128	3.240
(U)	Current PBR/President's Budget	2.964	3.108	3.214
(U)	Total Adjustments	-0.086		
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.020	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.086		

(U) Significant Program Changes:

FY07
- Decreased by Congressional General Reductions and SBIR Contribution

FY08
- Decreased by Congressional General Reductions

FY09
- Decreased to reflect updated economic assumptions

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5124 Training Transformation	2.964	3.108	3.214	3.290	3.341	3.405	3.474	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

FY 04 and FY 05 efforts are in BA03 PE0804757F

(U) A. Mission Description and Budget Item Justification

Supports the SECDEF's Transformation in Training/Joint National Training Capability (JNTC). Develops capabilities that integrate live, virtual, and constructive elements into a seamless joint training environment. Using a scientific and phased approach, researches new technologies and methods that provide a crucial technology-based foundation supporting all JNTC operations.

This program is in budget activity 7- Operational Systems Development because it supports rapid transformation of Department of Defense training into a Joint National Training Capability.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Continue Air Force Modeling and Simulations Tool Kit (AFMSTT) Air Warfare Simulation (AWSIM) Upgrades	0.600	1.000	1.043
(U) Continue basic operations support, systems acquisition, engineering and development studies/efforts	0.706	0.796	0.974
(U) Begin/Continue Multi-level security (Radiant Mercury) for Distributed Mission Operations Center (DMOC)	0.496	0.200	0.197
(U) Begin/Continue Concept of Operations for Space DMOC into JNTC Live -Virtual-Constructive events	0.975	1.112	1.000
(U) Begin Command and Control, Intelligence, Surveillance and Reconnaissance (C2ISR) replay tool development; Terrain/visual/IR/SAR database to support CONUS and OCONUS	0.187	0.000	0.000
(U) Total Cost	2.964	3.108	3.214

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) PE 0804757, Joint National Training Center, APAF	2.732	0.057	2.450	2.772	2.574	2.191	2.129	Continuing	TBD
(U) PE 0804757, Joint National Training Center, OPAF	21.707	12.723	10.767	10.788	11.013	11.617	12.150	Continuing	TBD
(U) PE 0804757, Joint National Training Center, O&M	16.622	17.964	18.163	18.526	18.894	19.310	19.734	Continuing	TBD

(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 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
AFMSTT		L3, Mesa , AZ Northrop Grumman, McLean, VA		0.472	Jan-07	1.000	Jan-08	1.043	Jan-09	Continuing	TBD	
DMOC-S		SPARTA, Schriever AFB, CO		0.975	Jan-07	1.112	Jan-08	1.000	Jan-09	Continuing	TBD	
Ops Support, System Acq, Engineering & Development Studies		Various		0.706		0.796		0.974		Continuing	TBD	
DMOC (DTNG)		Lockheed Martin Corp, Kirtland AFB, NM		0.496	Mar-07	0.200	Mar-08	0.197	Mar-09	Continuing	TBD	
C2ISR Replay tool development		Lockheed Martin Corp Kirtland AFB, NM		0.187	Nov-06	0.000		0.000			0.187	
		Scientific Research Corp Kirtland AFB, NM										
Subtotal Product Development			0.000	2.836		3.108		3.214		Continuing	TBD	0.000
Remarks: FY 04 and FY 05 efforts in BA03 PE0804757F												
(U) Support												
AFMSTT		Northrop Grumman, McLean, VA		0.128	Mar-07					Continuing	TBD	
DMOC-S		Northrop Grumman, McLean, VA									0.000	
Subtotal Support			0.000	0.128		0.000		0.000		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management											0.000	

Exhibit R-3, RDT&E Project Cost Analysis

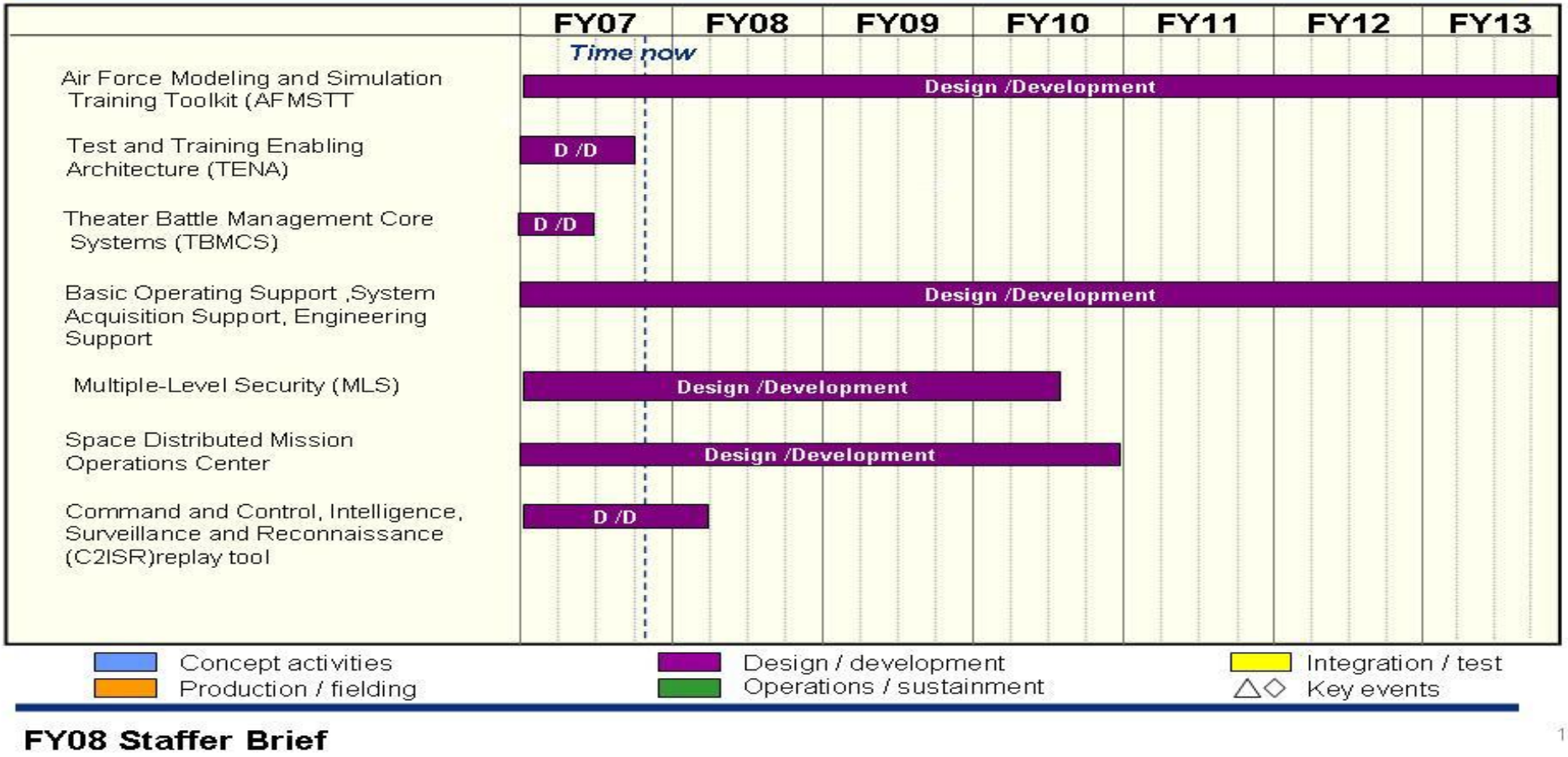
DATE: **February 2008**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0804757F JOINT NATIONAL TRAINING CENTER**	**5124 Training Transformation**

	Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:							
(U)	Total Cost	0.000	2.964	3.108	3.214	Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0804757F JOINT NATIONAL TRAINING CENTER	PROJECT NUMBER AND TITLE 5124 Training Transformation

JNTC Schedule



FY08 Staffer Brief

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
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 2007	FY 2008	FY 2009
(U) AFMSTT	2Q	2Q	2Q
(U) Basic Operating Support, System Acquisition, Engineering Support	1Q	1Q	1Q
(U) Multi-Level Security	2Q	2Q	2Q
(U) Concept of Operations for Space DMOC-S	3Q	3Q	3Q
(U) C2ISR replay tool development	1Q		

PE NUMBER: 0808716F
PE TITLE: OTHER PERSONNEL ACTIVITIES

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0808716F OTHER PERSONNEL ACTIVITIES

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.110	0.114	0.116	0.118	0.120	0.122	0.124	0.000	0.000
4236 Engineering Analysis	0.110	0.114	0.116	0.118	0.120	0.122	0.124	0.000	0.000

(U) A. Mission Description and Budget Item Justification

The Defense Equal Opportunity Management Institute (DEOMI) provides grants to the civilian academic community to conduct research on military and civilian equal opportunity issues using standard social science methodology. The research methodology includes developing a literature review proposing hypotheses and methods of research. The grantee will then gather appropriate data, draw conclusions and present discussions, recommendations and reports based on their funding.

Previously the US Air Force provided Operations & Maintenance (O&M) funding to DEOMI as their contribution. However, beginning with 2005, it was determined that Research, Development, Test & Evaluation (RDT&E) funding would be more proper.

This program is in Budget Activity 7 as it provides support to operational forces.

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.113	0.114	0.115
(U)	Current PBR/President's Budget	0.110	0.114	0.116
(U)	Total Adjustments	-0.003		
(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 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4236 Engineering Analysis	0.110	0.114	0.116	0.118	0.120	0.122	0.124	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 2007	FY 2008	FY 2009
(U) Conduct engineering analysis on military and civilian equal opportunity issues.	0.110	0.114	0.116
(U) Total Cost	0.110	0.114	0.116

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

Grants will be awarded competitively.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Eng Analysis	Grant	Various		0.110	Apr-07	0.114	Apr-08	0.116	Apr-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.110		0.114		0.116		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	0.110		0.114		0.116		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0808716F OTHER PERSONNEL ACTIVITIES**	PROJECT NUMBER AND TITLE **4236 Engineering Analysis**

Engineering Analysis

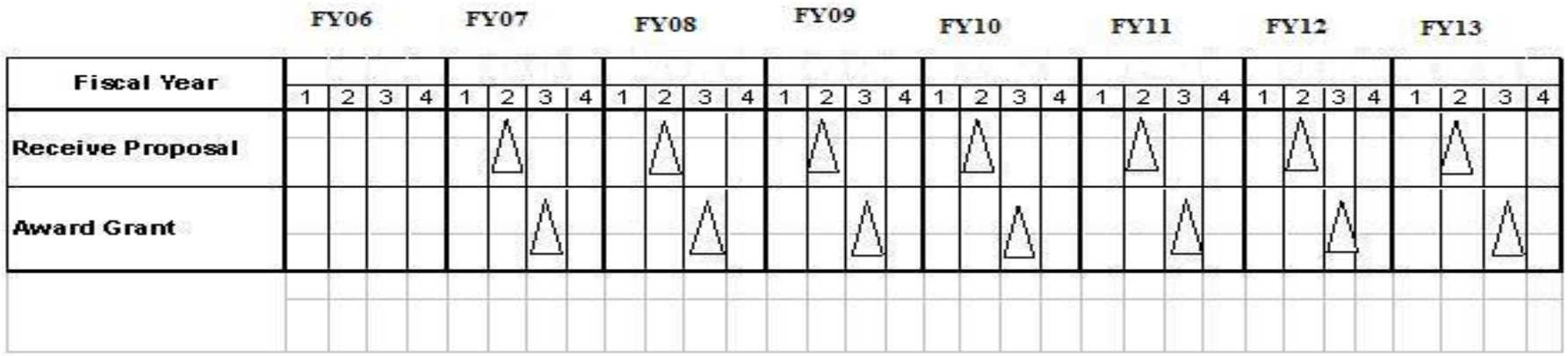


Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0808716F OTHER PERSONNEL ACTIVITIES	PROJECT NUMBER AND TITLE: 4236 Engineering Analysis

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(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 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901202F JOINT PERSONNEL RECOVERY AGENCY (JPRA)

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.960	5.342	5.768	6.599	6.506	6.512	6.528	0.000	0.000
691X	EO/IR Warning & Countermeasures Tech	0.960	5.342	5.768	6.599	6.506	6.512	6.528	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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.992	5.377	5.816
(U)	Current PBR/President's Budget	0.960	5.342	5.768
(U)	Total Adjustments	-0.032		
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.004		
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.028		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
691X	EO/IR Warning & Countermeasures Tech	0.960	5.342	5.768	6.599	6.506	6.512	6.528	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 2007	FY 2008	FY 2009
(U) Personnel Recovery Mission Software Development (PRMS)	0.426	1.827	1.900
(U) Personnel Recovery Extraction using Smart Sensors (PRESS)	0.132	1.120	0.200
(U) Technology Assessment	0.402	2.395	3.668
(U) Total Cost	0.960	5.342	5.768

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

Contracts will be awarded based on full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Personnel Recovery Mission Software Development (PRMS)	TBD	TBD		0.430	Mar-07	0.500	Mar-08	0.600	Apr-09	Continuing	TBD	TBD
Personnel Recovery Extraction using Smart Sensors (PRESS)	TBD	TBD		0.132	May-07	0.140	May-08	0.200	May-09	Continuing	TBD	TBD
Tech Assessment				0.398	Mar-07	4.702	Mar-08	4.968	Apr-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.960		5.342		5.768		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	0.960		5.342		5.768		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
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

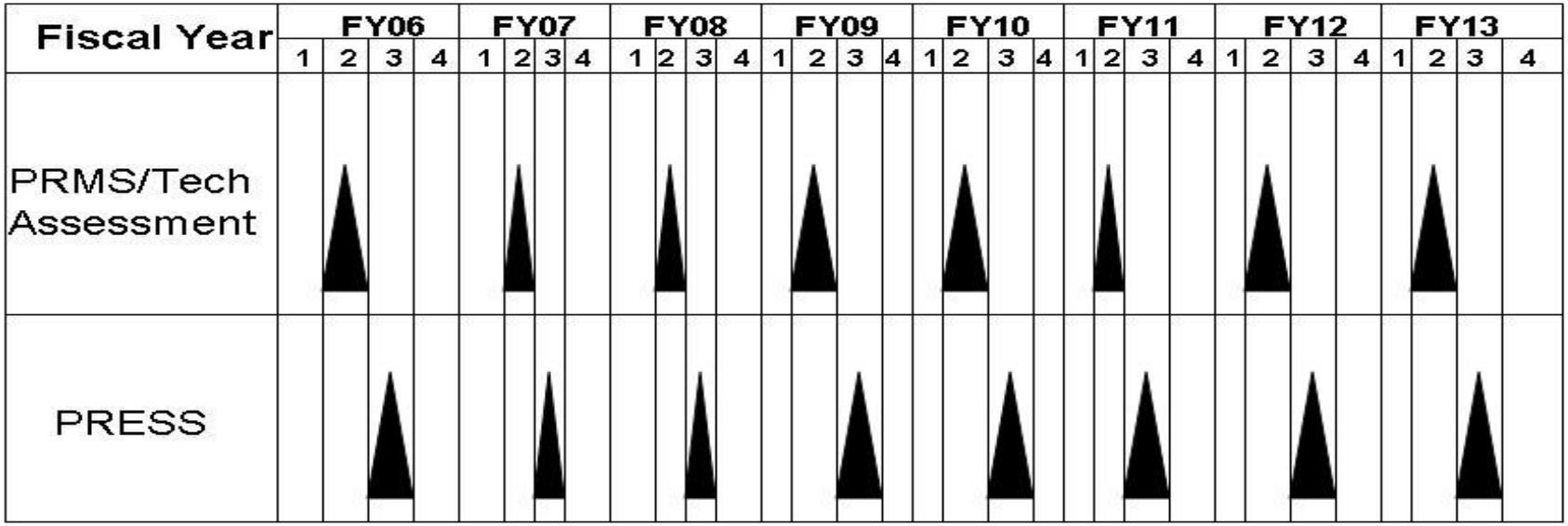

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901202F JOINT PERSONNEL RECOVERY AGENCY (JPRA)	PROJECT NUMBER AND TITLE: 691X EO/IR Warning & Countermeasures Tech

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) PRMS	2Q	2Q	2Q
(U) PRESS	3Q	3Q	3Q
(U) Technology Assessment	2Q	2Q	2Q

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PE NUMBER: 0901212F
PE TITLE: SERVICE-WIDE SUPPORT

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0901212F SERVICE-WIDE SUPPORT

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	6.454	3.016	0.000	0.000	0.000	0.000	0.000	0.000
5256 Military Flight Operations Quality A	0.000	6.454	3.016	0.000	0.000	0.000	0.000	0.000	0.000

(U) A. Mission Description and Budget Item Justification

Following direction from the Office of the Secretary of Defense provided through Mishap Reduction Initiatives, 4 Dec 2004, and the OSD Military Flight Operations Quality Assurance (MFOQA) Program Implementation memo of 11 Oct 2005, the Air Force has initiated development of MFOQA processes for various aircraft across the mission spectrum.

MFOQA is the analysis and trending of aircraft system and flight performance data to proactively enhance combat readiness through improvements in operations, maintenance, training and safety functions. Analysis of recorded data identifies and quantifies both normal and hazardous flight environments, identifies mishap precursors and potential mitigation measures, and where applicable, enables the monitoring of control measure effectiveness. Benefits are derived through a variety of analysis processes, including the operational trending of aggregate data and post-mission playback features for both aircrew flight operations training and maintenance diagnostics.

MFOQA provides tools for commanders to: establish a baseline for normal operations; identify, mitigate, and monitor operational risks while detecting precursors to aviation mishaps; and identify operational inefficiencies. MFOQA gives capabilities to multiple levels and functional areas to improve and enhance mission-effectiveness through awareness of abnormal trends, continuous knowledge of aircraft systems performance, and insight into the effectiveness of procedures, policy, and aircrew training on actual mission accomplishment.

MFOQA programs realize the following goals:
Mishap Reduction - Reduces the statistical rate of aviation mishaps by identifying risks, implementing effective control measures, and enabling continuous monitoring of risk mitigation.
Operational Efficiency - improves aircrew training effectiveness, reduces aircraft downtime, and modifies operations to reduce consumption and increase system component life cycles.
Operational Readiness - Enhances war-fighting capabilities by preserving resources available for operational requirements and improving mission performance.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0901212F SERVICE-WIDE SUPPORT

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget		6.495	3.041
(U)	Current PBR/President's Budget	0.000	6.454	3.016
(U)	Total Adjustments	0.000		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901212F SERVICE-WIDE SUPPORT	PROJECT NUMBER AND TITLE: 5256 Military Flight Operations Quality A	

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5256	Military Flight Operations Quality A	0.000	6.454	3.016	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

Following direction from the Office of the Secretary of Defense provided through Mishap Reduction Initiatives, 4 Dec 2004, and the OSD Military Flight Operations Quality Assurance (MFOQA) Program Implementation memo of 11 Oct 2005, the Air Force has initiated development of MFOQA processes for various aircraft across the mission spectrum.

MFOQA is the analysis and trending of aircraft system and flight performance data to proactively enhance combat readiness through improvements in operations, maintenance, training and safety functions. Analysis of recorded data identifies and quantifies both normal and hazardous flight environments, identifies mishap precursors and potential mitigation measures, and where applicable, enables the monitoring of control measure effectiveness. Benefits are derived through a variety of analysis processes, including the operational trending of aggregate data and post-mission playback features for both aircrew flight operations training and maintenance diagnostics.

MFOQA provides tools for commanders to: establish a baseline for normal operations; identify, mitigate, and monitor operational risks while detecting precursors to aviation mishaps; and identify operational inefficiencies. MFOQA gives capabilities to multiple levels and functional areas to improve and enhance mission-effectiveness through awareness of abnormal trends, continuous knowledge of aircraft systems performance, and insight into the effectiveness of procedures, policy, and aircrew training on actual mission accomplishment.

MFOQA programs realize the following goals:
Mishap Reduction - Reduces the statistical rate of aviation mishaps by identifying risks, implementing effective control measures, and enabling continuous monitoring of risk mitigation.
Operational Efficiency - improves aircrew training effectiveness, reduces aircraft downtime, and modifies operations to reduce consumption and increase system component life cycles.
Operational Readiness - Enhances war-fighting capabilities by preserving resources available for operational requirements and improving mission performance.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Develop flight data collection modifications on aviation platforms, including but not limited to airlift such as the C-17, C-5 and C-130m trainers such as the T-5 and T-38, bombers such as the B-1 and B-2, fighters such as the F-15, F-16, F-22 and F-35, refuelers suchas the KC-10 and KC-135, the CV-22, and Unmanned Aerial Systems such asd the Predator and Global Hawk, providing insight into world-wide transportation operations. These upgrades provide information generated inflight for routine analysis to identify deviations from expected procedures and parameters.		6.454	3.016
(U) Total Cost	0.000	6.454	3.016

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901212F SERVICE-WIDE SUPPORT	PROJECT NUMBER AND TITLE: 5256 Military Flight Operations Quality A

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	91212F-3010 BP 10	0.627	7.483	10.692	4.024					
(U)	41130F-3010 BP 11		0.470	0.470						
(U)	84740F-3010 BP 11	2.803	0.613							
(U)	91212F-3400	2.990	2.586	3.996	5.031	5.598	5.390	5.440		

(U) D. Acquisition Strategy

The Lead Operating MAJCOMs (as defined by AFPD 10-9, Lead Operating Command Weapons System Management), in conjunction with the Air Force Safety Center and the Aeronautical System Center will determine the feasibility of each aircraft platform for MFOQA process implementation. Analysis software development and process implementation will occur on a staggered schedule, approximately 2 aircraft fleets per year.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0901212F SERVICE-WIDE SUPPORT**

PROJECT NUMBER AND TITLE: **5256 Military Flight Operations Quality A**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Boeing (C-17)	Unknown	Wright Patterson				5.995	Dec-08	3.016	Dec-09	Continuing	TBD	TBD
Hawker Beachcraft (T-6)	Unknown	Wright Patterson				0.459	Dec-08			Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		6.454		3.016		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		6.454		3.016		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0901212F SERVICE-WIDE SUPPORT	PROJECT NUMBER AND TITLE 5256 Military Flight Operations Quality A

Military Flight Operations Quality Assurance (MFOQA)

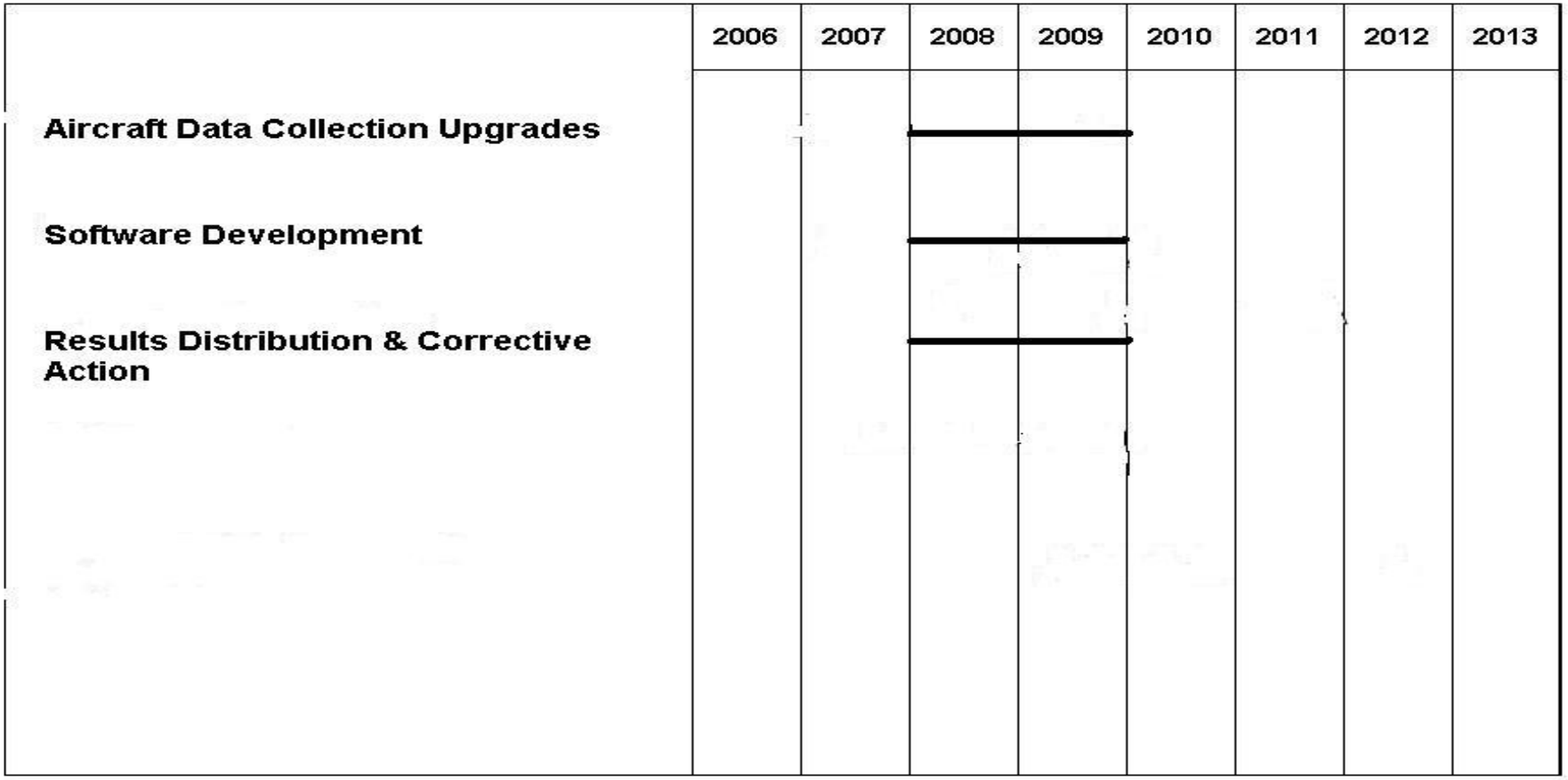

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901212F SERVICE-WIDE SUPPORT**	PROJECT NUMBER AND TITLE **5256 Military Flight Operations Quality A**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Aircraft Data Collection Upgrades		1-4Q	1-4Q
(U) Aircraft Data Collection Upgrades		1-4Q	1-4Q
(U) Aircraft Fleet MFOQA Analysis Software Development		1-4Q	1-4Q
(U) T-6 IDARS Upgrade		1Q	
(U) C-17 Data Recorder Upgrade		1Q	1Q

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PE NUMBER: 0901218F
PE TITLE: Civilian Compensation Program

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901218F Civilian Compensation Program

Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	13.160	8.019	8.123	8.313	8.442	8.607	8.782	Continuing	TBD
4139 Civilian Compensation Program	13.160	8.019	8.123	8.313	8.442	8.607	8.782	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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	7.750	8.070	8.191
(U)	Current PBR/President's Budget	13.160	8.019	8.123
(U)	Total Adjustments	5.410		
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings	5.410		
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			
	N/A			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4139	Civilian Compensation Program	13.160	8.019	8.123	8.313	8.442	8.607	8.782	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 2007	FY 2008	FY 2009
(U)	Accomplishments/Planned Program			
(U)	Continue a program to compensate employees assigned to RDT&E facilities for worked-related injury or disease.	13.160	8.019	8.123
(U)	Total Cost	13.160	8.019	8.123

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

	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

Not Applicable.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Continue development of compensation plan				13.160	Aug-07	8.019	Aug-08	8.123	Aug-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	13.160		8.019		8.123		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	13.160		8.019		8.123		Continuing	TBD	TBD
Remarks:												

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0901218F Civilian Compensation Program	PROJECT NUMBER AND TITLE 4139 Civilian Compensation Program

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
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 2007	FY 2008	FY 2009
(U) Continue development of compensation program	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0901220F
PE TITLE: PERSONNEL ADMINISTRATION

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901220F PERSONNEL ADMINISTRATION

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	18.787	16.714	18.625	10.672	12.073	12.308	12.558	Continuing	TBD
5194	Force Development Transformation	18.787	12.214	16.425	10.672	12.073	12.308	12.558	Continuing	TBD
5272	Defense Integrated Military Human Resources System (DIMHRS)	0.000	4.500	2.200	0.000	0.000	0.000	0.000	0.000	0.000

(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, which includes the Military Personnel Data System (MilPDS) and other AF unique applications, into a Global Combat Support System-Air Force (GCSS-AF) compliant enterprise that supports the deployment of the Defense Integrated Military Human Resources System (DIMHRS). 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 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 2007	FY 2008	FY 2009
(U)	Previous President's Budget	18.193	16.832	18.781
(U)	Current PBR/President's Budget	18.787	16.714	18.625
(U)	Total Adjustments	0.594	-0.118	
(U)	Congressional Program Reductions		-0.011	
	Congressional Rescissions		-0.107	
	Congressional Increases			
	Reprogrammings	1.100		
	SBIR/STTR Transfer	-0.506		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

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 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5194	Force Development Transformation	18.787	12.214	16.425	10.672	12.073	12.308	12.558	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, which includes the Military Personnel Data System (MilPDS) and other AF unique applications, into a Global Combat Support System-Air Force (GCSS-AF) compliant enterprise that supports the deployment of the Defense Integrated Military Human Resources System (DIMHRS). 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 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.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Develop application modules for the Force Development Tool Kit (FDTK) and legacy system migration	16.271	10.576	14.195
(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.	0.938	0.219	0.630
(U)	Program Management Support	1.578	1.419	1.600
(U)	Total Cost	18.787	12.214	16.425

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Other Procurement, AF WSC 834010 General Information Technologies	3.894	1.626	1.015	0.708	0.697	0.710	0.725	Continuing	TBD
(U)	Operations and Maintenance, AF	24.952	19.737	16.472	12.560	9.423	10.441	11.357	Continuing	TBD

(U) D. Acquisition Strategy

Force Development Transformation employs an evolutionary acquisition strategy with spiral development contracts that are awarded in a competitive environment.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

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 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
FDTK	IDIQ	CellExchange Federal, Inc. Framingham, MA		9.916	Oct-06	9.207	Dec-07	14.195	Oct-08	Continuing	TBD	TBD
Enterprise Framework	IDIQ	CellExchange, Federal, Inc. Framingham, MA		1.955	Dec-06	1.369	Jan-08	0.000		0.000	3.324	TBD
Air Force Deployment of DIMHRS	TBD	TBD		4.400							4.400	
Subtotal Product Development			0.000	16.271		10.576		14.195		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Hardware/Software Test & Evaluation	T&M	Diversified Technical Services Inc, Randolph AFB, TX		0.938	Oct-07	0.219	Jan-08	0.630	Jan-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.938		0.219		0.630		Continuing	TBD	TBD
Remarks:												
(U) Management												
Program Management Office Support	FFP/LOE	Dynamics Research Corp, San Antonio, TX		1.578	Mar-07	1.419	Mar-08	1.600	Mar-09	Continuing	TBD	TBD
Subtotal Management			0.000	1.578		1.419		1.600		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	18.787		12.214		16.425		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901220F PERSONNEL ADMINISTRATION	PROJECT NUMBER AND TITLE: 5194 Force Development Transformation

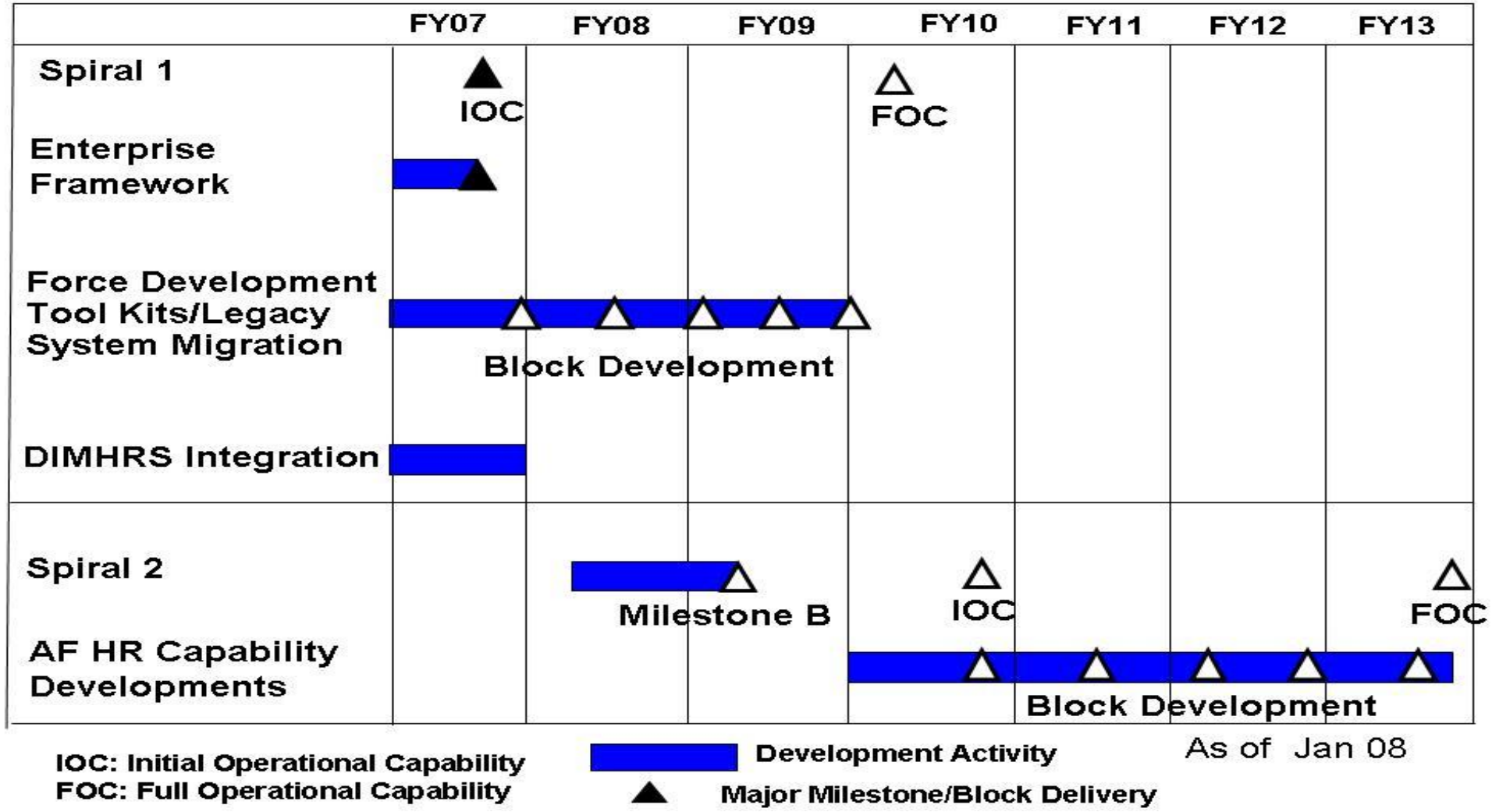


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901220F PERSONNEL ADMINISTRATION**	PROJECT NUMBER AND TITLE **5194 Force Development Transformation**

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) vPSC Spiral 1 IOC	3Q		
(U) Enterprise Framework Development	1-3Q		
(U) Force Development Toolkit Development	1-4Q	1-4Q	1-4Q
(U) DIMHRS Integration	1-4Q		
(U) vPSC Spiral 2 MS B			2Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901220F PERSONNEL ADMINISTRATION

PROJECT NUMBER AND TITLE: 5272 Defense Integrated Military Human Resources System (DIMHRS)

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5272	Defense Integrated Military Human Resources System (DIMHRS)	0.000	4.500	2.200	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

DIMHRS is a Department of Defense (DoD) Enterprise Resource Planning (ERP) product, and requires specific Air Force (AF) management and budget control to prepare for implementation. To enable AF efforts, DoD will allocate funds to AF for DIMHRS RDT&E integration efforts. Activities will include communication, change management, testing, training, systems transition, deployment, data migration and schedule control. The AF must ensure full range of Human Resource (HR) & Pay requirements are presented to the DoD DIMHRS developer, are properly incorporated into DIMHRS, fully tested and then deployed. AF unique HR functionality, not provided by DIMHRS, will be provided by vPSC (BPAC 675194). vPSC will also support the migration of legacy applications and will be the basis for other information technology capabilities associated with AF Force Development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U) Integrate legacy systems with DIMHRS		1.406	1.210
(U) Program Management		2.544	0.440
(U) Tools Acquisition		0.550	0.550
(U) Total Cost	0.000	4.500	2.200

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

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

(U) D. Acquisition Strategy

Defense Integrated Military Human Resource System employs 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 2008**

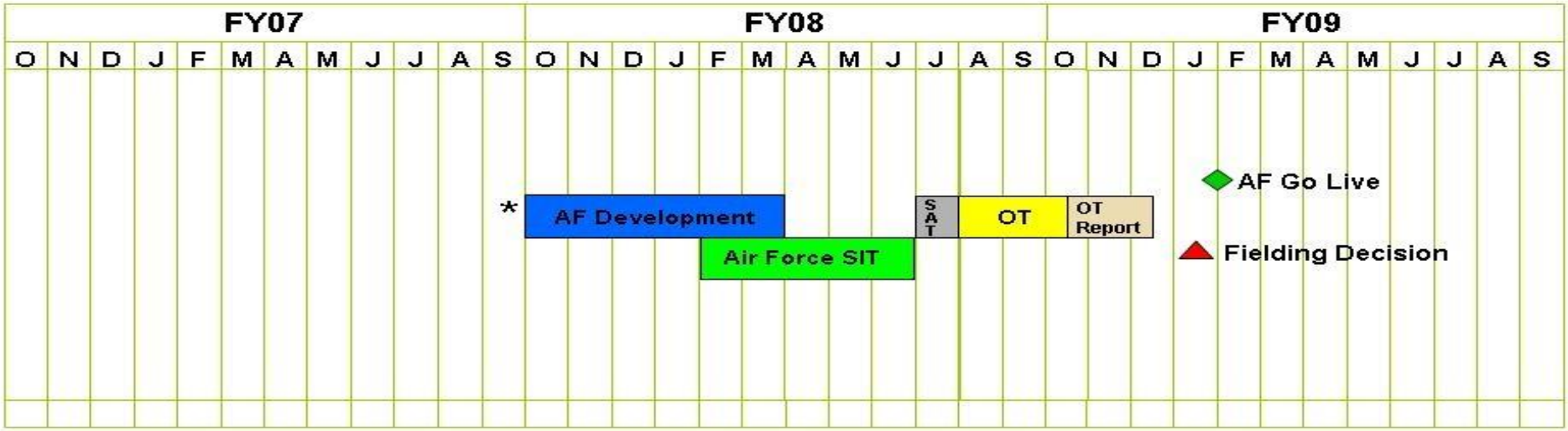
BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0901220F PERSONNEL ADMINISTRATION**

PROJECT NUMBER AND TITLE: **5272 Defense Integrated Military Human Resources System (DIMHRS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
DIMHRS Interface Design/Integration	FFP	Boze, Allen, Hamilton, Inc McLean, VA				2.139	Aug-07	0.990	Aug-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		2.139		0.990		Continuing	TBD	TBD
Remarks:												
(U) Support												
DIMHRS PMO Support	FFP	Boze, Allen, Hamilton, Inc McLean, VA				1.171	Aug-07	0.920	Aug-08	Continuing	TBD	TBD
Functional Transition Study	FFP	Oracle San Antonio, TX				0.100	Aug-07	0.100	Aug-08	Continuing	TBD	
DIMHRS Forms Analysis	FFP	SAIC Falls Church, VA				0.050	Sep-07	0.050	Sep-08	Continuing	TBD	
Subtotal Support			0.000	0.000		1.321		1.070		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Systems Integration Testing	FFP	Boze, Allen, Hamilton, Inc. McLean, VA				0.200	Aug-07	0.000	Aug-08	0.000	0.200	
Subtotal Test & Evaluation			0.000	0.000		0.200		0.000		0.000	0.200	0.000
Remarks:												
(U) Management												
Finance Support to Enterprise Program Management Office	FFP	Clearinghouse				0.560	Aug-07	0.140	Aug-08	Continuing	TBD	
Program Management of AF DIMHRS Integration	FFP	Boze, Allen, Hamilton, Inc McLean, VA				0.280	Aug-07			0.000	0.280	
Subtotal Management			0.000	0.000		0.840		0.140		Continuing	TBD	0.000
Remarks:												
(U) Total Cost			0.000	0.000		4.500		2.200		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0901220F PERSONNEL ADMINISTRATION	PROJECT NUMBER AND TITLE 5272 Defense Integrated Military Human Resources System (DIMHRS)



*** FY07 DIMHRS – AF development was accomplished under BPAC 675194 in this same PE**

SIT: System Integration Testing

SAT: System Acceptance Testing

OT: Operational Testing

As of Jan 08

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901220F PERSONNEL ADMINISTRATION**	PROJECT NUMBER AND TITLE **5272 Defense Integrated Military Human Resources System (DIMHRS)**

(U) **Schedule Profile**	FY 2007	FY 2008	FY 2009
(U) Air Force Development		1-2Q	
(U) Air Force System Integration and Acceptance Testing		3-4Q	
(U) Air Force Operational Testing		4Q	1Q
(U) Air Force Field Decision			2Q
(U) Air Force Go Live			2Q

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PE NUMBER: 0901538F
PE TITLE: Financial Management Information Systems (FMIS)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901538F Financial Management Information Systems (FMIS)

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	25.408	36.836	31.782	19.314	0.000	0.000	0.000	Continuing	TBD
5036	Financial Information Resource System (FIRST)	15.371	4.381	4.458	4.261	0.000	0.000	0.000	Continuing	TBD
5179	Defense Enterprise Accounting Management System - AF (DEAMS)	10.037	32.455	27.324	15.053	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Financial Information Resource System (FIRST) is a software effort that will provide an integrated, modern, seamless financial management system capability that enables authorized users (from Air Staff to MAJCOM level) to plan, program, and formulate their budgets. FIRST is ultimately envisioned to be the foundation for the Air Force (AF) planning, programming, and budgeting system. FIRST is being developed using the spiral development approach and maximizes use of commercial-off-the-shelf (COTS) products. The Budget Formulation (BF) increment capability supports force programming, formulation of budget requirements and deliberation of budget options, budget justification processes, and documentation. FIRST BF encompasses the budget exercise process, which affects all organizational levels, and is based on core financial and selected program information used to build the AF budget. The intent of FIRST is to provide the capability necessary to eventually replace the Automated Budget Interactive Data Environment System (ABIDES), Resource Allocation Programming Information Decision System (RAPIDS), and the Program Data System (PDS). FIRST will comply with: the Clinger-Cohen Act; the Business Enterprise Architecture (BEA); Chief Financial Officer (CFO) Act; DoD Information Technology Standards Registry (DISR) guidelines, and; Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) guidelines. FIRST will be integrated into the GCSS-AF architecture.

Defense Enterprise Accounting Management System (DEAMS) is a commercial-off-the-shelf (COTS) based software configuration effort that will provide a modern accounting and finance system. DEAMS will replace existing accounting and finance legacy systems to provide core funds execution management functions consistent with financial management laws, regulations and policy, general ledger, funds management, payments, receivables, cost and revenues, and fiduciary reporting. The AF increment will build on a USTRANSCOM technology demonstration to include AF investment funding, commitment accounting, cost accounting, Foreign Military Sales (FMS) accounting, AF Working Capital Fund (AFWCF) management and contingency operations management. DEAMS will be compliant with the Clinger-Cohen Act, Business Enterprise Architecture (BEA), and integrate into Global Combat Support System-Air Force (GCSS-AF).

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 2008
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0901538F Financial Management Information Systems (FMIS)

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

		FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	27.425	47.105	32.047
(U)	Current PBR/President's Budget	25.408	36.836	31.782
(U)	Total Adjustments	-2.017	-10.269	
(U)	Congressional Program Reductions		-10.033	
	Congressional Rescissions		-0.236	
	Congressional Increases			
	Reprogrammings	-1.400		
	SBIR/STTR Transfer	-0.617		

(U) Significant Program Changes:

FY 2008 funds were reduced by Congress due to DEAMS Contract Award delay.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901538F Financial Management Information Systems (FMIS)	PROJECT NUMBER AND TITLE: 5036 Financial Information Resource System (FIRST)	

	Cost ($ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5036	Financial Information Resource System (FIRST)	15.371	4.381	4.458	4.261	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 Financial Information Resource System (FIRST) is a software effort that will provide an integrated, modern, seamless financial management system capability that enables authorized users (from Air Staff to MAJCOM level) to plan, program, and formulate their budgets. FIRST is ultimately envisioned to be the foundation for the Air Force (AF) planning, programming, and budgeting system. FIRST is being developed using the spiral development approach and maximizes use of commercial-off-the-shelf (COTS) products. The Budget Formulation (BF) increment capability supports force programming, formulation of budget requirements and deliberation of budget options, budget justification processes, and documentation. FIRST BF encompasses the budget exercise process, which affects all organizational levels, and is based on core financial and selected program information used to build the AF budget. The intent of FIRST is to provide the capability necessary to eventually replace the Automated Budget Interactive Data Environment System (ABIDES), Resource Allocation Programming Information Decision System (RAPIDS), and the Program Data System (PDS).

FIRST will comply with: the Clinger-Cohen Act; the Business Enterprise Architecture (BEA); Chief Financial Officer (CFO) Act; DoD Information Technology Standards Registry (DISR) guidelines, and; Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) guidelines. FIRST will be integrated into the GCSS-AF architecture.

The BF increment includes three spirals as well as planned follow on capabilities. Spiral One was deployed on the GCSS-AF and provided data query and reporting capability (to include trend and statistical analysis). Spiral Two and Three were combined and a Pilot was deployed to the GCSS-AF in June 2007 which enabled the user to conduct an operational assessment of key budget options and deliberation functions as well as selected force programming capabilities. Spiral Two/Three will provide budget programming, budget requirement formulation, budget option deliberation, force programming, flying hour cost modeling, civilian personnel cost modeling and exhibits, interfaces to related systems, and electronic submission of budget to OSD. Post-Spiral Two/Three efforts will implement customer-identified enhancements to enable replacement of legacy budget and force programming systems. Follow on plans expected to be baselined by the customer in FY 2008 consist of post-FOC changes to address the future evolution of the budget process such as Standard Financial Information Structure (SFIS) and replacement of legacy budget justification systems.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	Application Development & Test for Budget Formulation (BF) Increment capability	11.234	3.381	0.000
(U)	Future Evolution	0.000	0.000	3.240
(U)	Integration/Support/Analysis (Includes Program Management Spt, GCSS-AF Test & Integration, Government Independent Test & Assessment (JITC), and Responsible Test Organization (RTO))	4.137	1.000	1.218
(U)	Total Cost	15.371	4.381	4.458

Exhibit R-2a, RDT&E Project Justification		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901538F Financial Management Information Systems (FMIS)	PROJECT NUMBER AND TITLE: 5036 Financial Information Resource System (FIRST)

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Other Procurement, AF (PE 0901538F)	0.782	0.808	0.829	0.849	0.864	0.880	0.898	Continuing	TBD
(U)	O&M, AF (PE 0308610F)	1.076	3.695	3.765	3.269	2.888	3.974	4.062	Continuing	TBD

(U) D. Acquisition Strategy

The FIRST program will execute an incremental delivery of budget formulation and force programming capability that enables legacy system replacement. FIRST capability is being developed using the existing Cost Plus Award Fee (CPAF) contract. Follow on Future Evolution work will be awarded through full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0901538F Financial Management Information Systems (FMIS)**

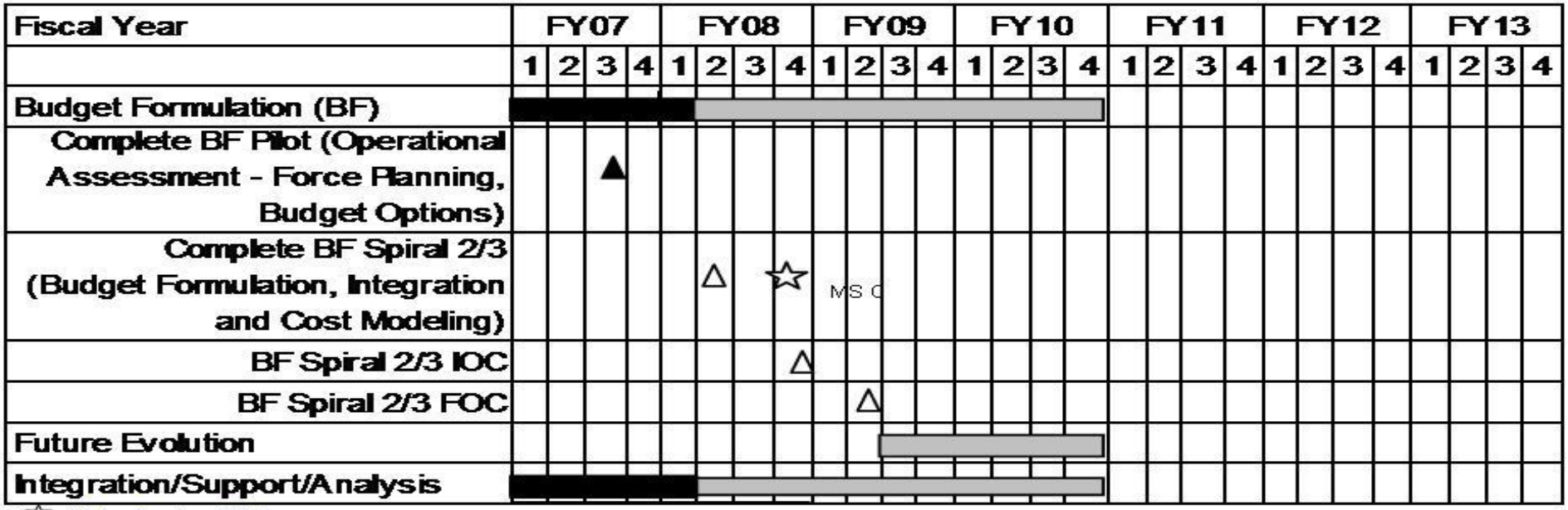
PROJECT NUMBER AND TITLE: **5036 Financial Information Resource System (FIRST)**

(U)	Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U)	Product Development												
	Application Development and Test for BF & Future Evolution	C/CPAF	Accenture, Fairborn, Ohio	65.316	11.234	Jan-07	3.381	Nov-07	3.240	Nov-08	Continuing	TBD	83.171
	Subtotal Product Development			65.316	11.234		3.381		3.240		Continuing	TBD	83.171
	Remarks:												
(U)	Test & Evaluation												
	GCSS-AF Integration	C/CPAF	LM. Fairborn, Ohio		1.550	Jan-07	0.300	Dec-07	0.300	Dec-08	Continuing	TBD	TBD
	Joint Interoperability Test Center (JITC)	MIPR	JITC, Fort Huachuca, Arizona		0.110	Jan-07	0.050	Oct-07	0.050	Oct-08	Continuing	TBD	TBD
	Responsible Test Organization (RTO)	MIPR	643 ELSS/EIRT, Gunter AFB, Al		0.176	Jan-07	0.045	Jan-08	0.045	Jan-09	Continuing	TBD	TBD
	Capabilities Integration Environment (CIE)	MIPR	643 ELSS/EIRT, Gunter AFB, Al		0.100	Apr-07	0.050	Apr-08	0.050	Apr-09	Continuing	TBD	TBD
	Subtotal Test & Evaluation			0.000	1.936		0.445		0.445		Continuing	TBD	TBD
	Remarks:												
(U)	Program Management Activities												
	A&AS Support	C/LOE	Quantech/Engility		1.368	Jan-07	0.255	Jan-08	0.473	Jan-09	Continuing	TBD	TBD
	Program Office Spt	Various	Various		0.833	Jan-07	0.300	Oct-07	0.300	Oct-08	Continuing	TBD	
	Subtotal Program Management Activities			0.000	2.201		0.555		0.773		Continuing	TBD	TBD
	Remarks:												
(U)	Total Cost			65.316	15.371		4.381		4.458		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901538F Financial Management Information Systems (FMIS)	PROJECT NUMBER AND TITLE: 5036 Financial Information Resource System (FIRST)

U.S. AIR FORCE

FIRST SCHEDULE



As of 07 Jan 2008

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901538F Financial Management Information Systems (FMIS)	PROJECT NUMBER AND TITLE: 5036 Financial Information Resource System (FIRST)

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) Complete Budget Formulation Pilot	3Q		
(U) Complete Budget Formulation Spiral 2/3 (Milestone C)		3Q	
(U) Budget Formulation Spiral 2/3 IOC		4Q	
(U) Budget Formulation Spiral 2/3 FOC			2Q
(U) Future Evolution			2Q
(U) Integration/Support/Analysis	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2008

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901538F Financial Management Information Systems (FMIS)

PROJECT NUMBER AND TITLE: 5179 Defense Enterprise Accounting Management System - AF (DEAMS)

Cost ($ in Millions)		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5179	Defense Enterprise Accounting Management System - AF (DEAMS)	10.037	32.455	27.324	15.053	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

Defense Enterprise Accounting Management System (DEAMS) is a commercial-off-the-shelf (COTS) based software configuration effort that will provide a modern accounting and finance system. DEAMS will replace existing accounting and finance legacy systems to provide core funds execution management functions consistent with financial management laws, regulations and policy, general ledger, funds management, payments, receivables, cost and revenues, and fiduciary reporting. The AF increment will build on a USTRANSCOM technology demonstration to include AF investment funding, commitment accounting, cost accounting, Foreign Military Sales (FMS) accounting, AF Working Capital Fund (AFWCF) management and contingency operations management. DEAMS will be compliant with the Clinger-Cohen Act, Business Enterprise Architecture (BEA), and integrate into Global Combat Support System-Air Force (GCSS-AF).

	B. Accomplishments/Planned Program ($ in Millions)	FY 2007	FY 2008	FY 2009
(U)	DEAMS Application Development and Test for AF Increment Capability (includes GCSS-AF/DISA hardware)	2.496	12.498	6.077
(U)	Integration/Support/Analysis (Includes Independent Verification and Validation (IV&V), Responsible Test Organization (RTO), Capabilities Integration Environment (CIE), Functional Management Office Support, MITRE).	6.998	19.040	20.298
(U)	Program Management Office Support	0.543	0.917	0.949
(U)	Total Cost	10.037	32.455	27.324

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

		FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Transportation Working Capital Fund (TWCF)	10.200	13.019	11.746	20.654	3.532	1.621	1.644	Continuing	TBD
(U)	3400 (PE 38610F)	9.011	5.500	8.130	7.690	28.760	20.700	15.610	Continuing	TBD
(U)	3080 (PE 91538F)	0.000	0.038	1.511	15.549	17.433	17.774	18.125	Continuing	TBD

(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 2008**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0901538F Financial Management Information Systems (FMIS)**

PROJECT NUMBER AND TITLE: **5179 Defense Enterprise Accounting Management System - AF (DEAMS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2007 Cost	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
DEAMS Application Development and Test for AF Increment Capability	Various	Various		1.495	Mar-07	11.098	Feb-08	4.877	Nov-08	Continuing	TBD	TBD
GCSS/DISA Hardware	MIPR	754 ELSG, Gunter AFB, AL		1.001	Apr-07	1.400	Oct-07	1.200	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	2.496		12.498		6.077		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Capabilities Integration Environment (CIE)	MIPR	754 ELSG, Gunter AFB, AL		0.403	Jan-07	0.373	Dec-07	0.386	Dec-08	Continuing	TBD	TBD
Responsible Test Organization (RTO)	MIPR	754 ELSG, Gunter AFB, AL	0.201	0.308	Dec-06	0.322	Dec-07	0.330	Dec-08	Continuing	TBD	TBD
Joint Interoperability Test Center (JITC)	MIPR	JITC, Fort Huachuca, AZ	0.051	0.112	Dec-06	0.419	Dec-07	0.434	Dec-08	Continuing	TBD	TBD
Air Force Operational Test & Evaluation Center (AFOTEC)	MIPR	AFOTEC, Kirtland AFB, NM	0.006	0.099	Oct-06	0.112	Oct-07	0.114	Oct-08	Continuing	TBD	TBD
Independent Verification and Validation (IV&V)	C/T&M	CACI, Fairborn OH	0.961	1.242	Feb-07	4.047	Nov-07	1.000	Nov-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			1.219	2.164		5.273		2.264		Continuing	TBD	TBD
Remarks:												
(U) Program Management Activities												
A&AS Support	C/LOE	Various	1.819	3.792	Jan-07	4.055	Dec-07	4.197	Dec-08	Continuing	TBD	TBD
Program Office Support	Various	Various	0.082	0.543	Jan-07	0.917	Oct-07	0.949	Oct-08	Continuing	TBD	TBD
Functional Management Office Support (Change Management, Enterprise Resource Planning, Functional & Acquisition Support, Functional Test Center, Facilities, Strategic Communications	Various	Various		0.000		8.277	Oct-07	12.352	Oct-08	Continuing	TBD	TBD
MITRE	MIPR	MITRE, FFRDC, Hanscom AFB, MA	0.471	1.042	Jan-07	1.435	Nov-07	1.485	Nov-08	Continuing	TBD	TBD
Subtotal Program Management Activities			2.372	5.377		14.684		18.983		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			3.591	10.037		32.455		27.324		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2008
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901538F Financial Management Information Systems (FMIS)	PROJECT NUMBER AND TITLE: 5179 Defense Enterprise Accounting Management System - AF (DEAMS)

U.S. AIR FORCE

DEAMS AF Schedule

Fiscal Year	FY 07				FY 08				FY 09				FY 10				FY 11				FY12-FY13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
AF Inc 2 MS A							*																	
AF Inc 2 SI Award									*															
AF Inc 2 Sys Dev Blueprinting										■	■	■	■											
AF Inc 2 Sys Dev MS B												*												
AF Inc 2 Sys Dev Spiral 4 Commitment Accounting / General Funds (Cut-Over/Trans)																△								
AF Inc 2 Sys Dev Spiral 5 FMS, Cost Accounting, Contingency Operations (Cut-Over/Trans)																△								
AF Inc 2 FDDR																			*					
Integration/Support/Analysis	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■								

Legend:

- ■ Completed Event
- ■ Future Event
- * Key Event/Milestone
- △ Capability Delivery

As of 07 Jan 08

Note: Schedule notional-subject to BCL/ERAM impacts and contract award

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2008
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901538F Financial Management Information Systems (FMIS)**	PROJECT NUMBER AND TITLE **5179 Defense Enterprise Accounting Management System - AF (DEAMS)**

(U) Schedule Profile	FY 2007	FY 2008	FY 2009
(U) AF Inc 2 MS A		3Q	
(U) AF Inc 2 SI Award			1Q
(U) AF Inc 2 Sys Dev Blueprinting			2-4Q
(U) Integration/Support/Analysis	1-4Q	1-4Q	1-4Q
(U) AF Increment 2 System Development MS B			4Q

1. COMPONENT	FY 2008 CONSTRUCTION PROJECT DATA COMPUTER GENERATED	2. DATE
AF (AFMC)		10 Jan 2008

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
WRIGHT-PATTERSON AFB OH (AFMC)	RELOCATE TUBE TRAILERS TO NEAR 71D

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
62203	318612	ZHTV 082807A	EEIC 529: $40.0

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
Relocate Tube Trailers	LS			40.0

10. DESCRIPTION OF PROPOSED WORK: Excavate, provide parking slab, concrete foundation blocks, for trailers, gate, and fence.

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11. PROJECT: Relocate Tube Trailers to Near 71D

REQUIREMENT: Security and safe storage for laboratory gas and chemicals needed for military aerospace research, development, testing and evaluation

CURRENT SITUATION: The propulsion laboratory stores tube trailers filled with laboratory gas and chemicals at a large and isolated parking lot three quarters of a mile from the laboratory complex. This site is unsecured and unmonitored, and poses a risk for terrorist attack and for mishap due to people smoking near the trailers. The laboratory proposes to expand and secure an existing storage/parking area that is adjacent to a fuel farm to house the tube trailers. .

IMPACT IF NOT PROVIDED: Failure to relocate the tube trailers will continue a risky situation at the current storage area. In the event of a mishap or attack the propulsion lab will be without experminetal gas and chemicals, disrupting experiments, tests, and evaluations for an indefinite time, delaying the development of advanced propulsion systems for aerospace weapons systems.

ADDITIONAL: Companion repair project ZHTV082807B resurfaces and repairs the existing lot.

1. COMPONENT	FY 2008 CONSTRUCTION PROJECT DATA COMPUTER GENERATED	2. DATE
AF (AFMC)		10 Jan 2008

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
WRIGHT-PATTERSON AFB OH (AFMC)	INSTALL NITROGEN TRAILERS near 20018C

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
62203	318612	ZHTV 082808	EEIC 529: $50.0

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
Install Nitrogen Trailers	SF	800	62.50	50.0

10. DESCRIPTION OF PROPOSED WORK: Excavate, provide parking slab and nitrogen piping, including valves and connections, backfill and restore surface

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11. PROJECT: Install Nitrogen Trailers near 20018C

REQUIREMENT: Research, Development, Testing and Evaluation to develop propulsion systems for military aerospace weapons systems.

CURRENT SITUATION: The propulsion laboratory is preparing an experiment supporting the development of cooling systems for aerospace propulsion systems. The tests will require the provision of liquid nitrogen to a portion of laboratory 18C. At present there are no places to park and connect liquid nitrogen trailer tanks to the laboratory. A parking area and a pipeline are proposed for the liquid nitrogen trailers.

IMPACT IF NOT PROVIDED: Failure to provide a supply of nitrogen to the laboratory will result in delay or cancellation of the experiment. The propulsion lab will not be able to conduct research required to develop propulsion system cooling, adversely affecting the ability of the Air Force to maintain technological superiority in military aerospace.

1. COMPONENT	FY 2008 CONSTRUCTION PROJECT DATA COMPUTER GENERATED	2. DATE
AF (AFRC)		10 Jan 2008

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
WRIGHT-PATTERSON AFB OH (AFMC)	INSTALL MACHINE FOUNDATION 20252

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
62203	318612	ZHTV 071864	EEIC 522: $2.3

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
Install Machine Foundation				2.3

10. DESCRIPTION OF PROPOSED WORK: Saw cut and remove 4 3' x 3' foundation slab squares, compact the sub base and pour 4 reinforced concrete footers to support a turbine testing machine.

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11. PROJECT: Install Machine Foundation 20252

REQUIREMENT: Research, Development, Testing and Evaluation for military aviation technology.

CURRENT SITUATION: The propulsion laboratory is undergoing a research program evolution to develop precision geometry databases for finite element analyses (FEA) and other vibration, prediction, and modeling programs critical to the design and analyses of turbine engine components. As part of this program a machine is to be installed to enable the scanning of turbine engine components so as to generate information and measurements to populate the precision geometry databases.

IMPACT IF NOT PROVIDED: Development of advanced turbine engine components will be hampered without a database to use as part of experimentation during the research and evaluation process, adversely affecting the Air Force's ability to maintain a technological advantage in military aviation.

1. COMPONENT	FY 2008 CONSTRUCTION PROJECT DATA COMPUTER GENERATED	2. DATE
AF (AFMC)		10 Jan 2008

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
WRIGHT-PATTERSON AFB OH (AFMC)	CNST SHELTER FOR ASSURED FUELS PDU

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
63216F	318632	ZHTV 080009	EEIC 529: $750.0

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
Construct Shelter for Process Demonstration Unit (PDU)	SF	3000	250.00	750.0

10. DESCRIPTION OF PROPOSED WORK: Excavate, provide foundation, structural system, building skin, interior facility utilities, roof, and exterior doors, frames, and hardware.

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11. PROJECT: Construct Shelter for Assured Fuels Process Demonstration Unit

REQUIREMENT: Research, Development, Testing and Evaluation to develop aerospace fuels from biomass, coal, and natural gas. Assured fuel sources for aerospace weapons systems.

CURRENT SITUATION: The propulsion laboratory is acquiring a process demonstration unit to develop and test and evaluate industrial processes for generating aerospace fuel from unconventional sources, such as coal, biomass, etc, with the goal of reducing dependence on petroleum as a fuel source. This process test is scheduled to run from FY10 to FY20. The apparatus comprising the process demonstration unit requires protection from the elements, and is proposed to be sheltered in a pre-engineered facility near the present fuels laboratory.

IMPACT IF NOT PROVIDED: Failure to provide a shelter for the apparatus will result in the process test being cancelled or delayed. Apparatus will be acquired and not be able to be assembled and installed due to failure to provide a facility to house the PDU. The research program involving alternative fuel sources will be delayed indefinitely, adversely impacting the ability to assure a reliable fuel source for aerospace weapons systems in the event of depletion of oil reserves or the disruption of oil supply due to terrorist attack or hostile foreign military action.

1. COMPONENT	FY 2008 PROJECT DATA	2. DATE
AIR FORCE	(computer generated)	11 JAN 08

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
EGLIN AIR FORCE BASE, FLORIDA	REPLACE RANGE GATES AND FENCE SITE B-71

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
65978	872-247	FTFA051247	EEIC 522 200.0

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITIES				200.0
FENCE SCTY/VEH BAR	LF	1,500	133	(200.0)
SUBTOTAL				200.0
PROFIT AND OVERHEAD (.0%)				0.0
TOTAL FUNDED COST				200.0
UNFUNDED COST (.0%)				0.0
TOTAL REQUEST				200.0

10. Description of Proposed Work: Repair/replace 200 FT West of gate # 632W250 and progress to gate # 250N632 and continue 200 FT East of gate. Fence will consist of 200 new 4X4X8 treated lumber posts, 6000 FT of barb wire and 25 gallons of exterior enamel paint w/glass beading for reflective properties. Fence posts and fence material to be painted red and be reflective. Install new restricted area signage every 50 FT along the new fence run. Fence shall be 4 FT high with posts buried 4 FT to allow structural integrity. Demolition will entail removal of current fence materials including removal of all residual construction material.

11. Requirement: As Required.

PROJECT: Repair/replace 200 FT West of gate # 632W250 and progress to gate # 250N632 and continue 200 FT East of gate. Fence will consist of 200 new 4X4X8 treated lumber posts, 6000 FT of barb wire and 25 gallons of exterior enamel paint w/glass beading for reflective properties. Fence posts and fence material to be painted red and be reflective. Install new restricted area signage every 50 FT along the new fence run. Fence shall be 4 FT high with posts buried 4 FT to allow structural integrity. Demolition will entail removal of current fence materials including removal of all residual construction material.

REQUIREMENT: Repair/replace 200 FT West of gate # 632W250 and progress to gate # 250N632 and continue 200 FT East of gate. Fence will consist of 200 new 4X4X8 treated lumber posts, 6000 FT of barb wire and 25 gallons of exterior enamel paint w/glass beading for reflective properties. Fence posts and fence material to be painted red and be reflective. Install new restricted area signage every 50 FT along the new fence run. Fence shall be 4 FT high with posts buried 4 FT to allow structural integrity. Demolition will entail removal of current fence materials including removal of all residual construction material.

CURRENT SITUATION: The present fence and gates have deteriorated to the point of not providing the necessary range safety needed to prevent personnel access to the test range during test item detonations.

IMPACT IF NOT PROVIDED: Site will continue to be vulnerable to the condition of not being able to provide the necessary range safety needed to prevent personnel access to the test range during test item detonations.

APPROVED:

JAMES D. EATON III, Lt Col, USAF
Commander, 796th Civil Engineer Squadron