Department of Defense
Fiscal Year (FY) 2014 President's Budget Submission

April 2013

Air Force

Justification Book Volume 3a of 3

Research, Development, Test & Evaluation, Air Force

Vol-III Part 1

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Department of Defense
FY 2014 President's Budget
Exhibit R-1 FY 2014 President's Budget
Total Obligational Authority
(Dollars in Thousands)

28 Mar 2013

Appropriation	FY 2012 (Base & OCO)	FY 2013 Base Request with CR Adj*	FY 2013 OCO Request with CR Adj*	Emergency Disaster Relief Act of 2013	FY 2013 Total Request with CR Adj*	FY 2014 Base
Research, Development, Test & Eval, AF	26,630,843	26,642,260	53,150		26,695,410	25,702,946
Total Research, Development, Test & Evaluation	26,630,843	26,642,260	53,150		26,695,410	25,702,946

R-1C: FY 2014 President's Budget (Published Version), as of March 28, 2013 at 10:18:35
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Department of Defense
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Summary Recap of Budget Activities	FY 2012 (Base & OCO)	FY 2013 Base Request with CR Adj*	FY 2013 OCO Request with CR Adj*	Emergency Disaster Relief Act of 2013	FY 2013 Total Request with CR Adj*	FY 2014 Base
Basic Research	493,609	516,034			516,034	524,770
Applied Research	1,235,584	1,109,053			1,109,053	1,127,893
Advanced Technology Development	662,751	596,737			596,737	617,526
Advanced Component Development & Prototypes	1,494,043	1,181,177			1,181,177	876,709
System Development & Demonstration	3,706,414	4,966,724			4,966,724	5,078,715
Management Support	1,697,349	1,190,349			1,190,349	1,179,791
Operational Systems Development	17,341,093	15,867,972			15,921,122	16,297,542
Undistributed		1,214,214			1,214,214	
Total Research, Development, Test & Evaluation	26,630,843	26,642,260			26,695,410	25,702,946

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Summary Recap of FYDP Programs						
Strategic Forces	440,383	222,582			222,582	254,061
General Purpose Forces	1,882,333	1,820,202			1,820,202	1,825,912
Intelligence and Communications	2,248,279	1,916,639			1,916,639	1,611,731
Mobility Forces	269,125	244,314			244,314	295,056
Research and Development	9,508,419	9,750,681			9,750,681	9,553,906
Central Supply and Maintenance	136,436	179,795			179,795	136,415
Training Medical and Other	1,895	1,760			1,760	1,727
Administration and Associated Activities	94,329	1,330,253			1,330,253	145,825
Support of Other Nations	3,798	3,851			3,851	3,785
Classified Programs	12,045,846	11,172,183	53,150		11,225,333	11,874,528
Total Research, Development, Test & Evaluation	26,630,843	26,642,260	53,150		26,695,410	25,702,946

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Department of the Air Force
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28 Mar 2013

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

Line No	Program Element Number	Item	Act	FY 2012 (Base & OCO)	FY 2013 Base Request with CR Adj*	FY 2013 OCO Request with CR Adj*	Emergency Disaster Relief Act of 2013	FY 2013 Total Request with CR Adj*	FY 2014 Base	Sec
1	0601102F	Defense Research Sciences	01	347,833	361,787			361,787	373,151	U
2	0601103F	University Research Initiatives	01	131,957	141,153			141,153	138,333	U
3	0601108F	High Energy Laser Research Initiatives	01	13,819	13,094			13,094	13,286	U
	Basic Research			493,609	516,034			516,034	524,770	
4	0602102F	Materials	02	142,417	114,166			114,166	116,846	U
5	0602201F	Aerospace Vehicle Technologies	02	145,392	120,719			120,719	119,672	U
6	0602202F	Human Effectiveness Applied Research	02	93,034	89,319			89,319	89,483	U
7	0602203F	Aerospace Propulsion	02	207,768	232,547			232,547	197,546	U
8	0602204F	Aerospace Sensors	02	136,327	127,637			127,637	127,539	U
9	0602601F	Space Technology	02	117,986	98,375			98,375	104,063	U
10	0602602F	Conventional Munitions	02	60,725	77,175			77,175	81,521	U
11	0602605F	Directed Energy Technology	02	139,769	106,196			106,196	112,845	U
12	0602788F	Dominant Information Sciences and Methods	02	139,980	104,362			104,362	138,161	U
13	0602890F	High Energy Laser Research	02	52,186	38,557			38,557	40,217	U
	Applied Research			1,235,584	1,109,053			1,109,053	1,127,893	
14	0603112F	Advanced Materials for Weapon Systems	03	60,626	47,890			47,890	39,572	U
15	0603199F	Sustainment Science and Technology (S&T)	03	5,618	6,565			6,565	12,800	U
16	0603203F	Advanced Aerospace Sensors	03	119,227	37,657			37,657	30,579	U
17	0603211F	Aerospace Technology Dev/Demo	03	64,544	81,376			81,376	77,347	U
18	0603216F	Aerospace Propulsion and Power Technology	03	115,725	151,152			151,152	149,321	U

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19	0603270F	Electronic Combat Technology	03	21,896	32,941			32,941	49,128	U
20	0603401F	Advanced Spacecraft Technology	03	70,643	64,557			64,557	68,071	U
21	0603444F	Maui Space Surveillance System (MSSS)	03	13,313	29,256			29,256	26,299	U
22	0603456F	Human Effectiveness Advanced Technology Development	03	24,082	21,523			21,523	20,967	U
23	0603601F	Conventional Weapons Technology	03	44,057	36,352			36,352	33,996	U
24	0603605F	Advanced Weapons Technology	03	45,823	19,004			19,004	19,000	U
25	0603680F	Manufacturing Technology Program	03	39,165	37,045			37,045	41,353	U
26	0603788F	Battlespace Knowledge Development and Demonstration	03	36,944	31,419			31,419	49,093	U
27	0603924F	High Energy Laser Advanced Technology Program	03	1,088						U
		Advanced Technology Development		662,751	596,737			596,737	617,526	
28	0603260F	Intelligence Advanced Development	04	4,013	3,866			3,866	3,983	U
29	0603287F	Physical Security Equipment	04	476	3,704			3,704	3,874	U
30	0603430F	Advanced EHF MILSATCOM (SPACE)	04	385,013	229,171			229,171		U
31	0603432F	Polar MILSATCOM (SPACE)	04	103,098	120,676			120,676		U
32	0603438F	Space Control Technology	04	43,553	25,144			25,144	27,024	U
33	0603742F	Combat Identification Technology	04	37,039	32,243			32,243	15,899	U
34	0603790F	NATO Research and Development	04	4,424	4,507			4,507	4,568	U
35	0603791F	International Space Cooperative R&D	04	615	652			652	379	U
36	0603830F	Space Protection Program (SPP)	04	7,074	10,429			10,429	28,764	U

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37	0603850F	Integrated Broadcast Service - Dem/Val	04	19,442	19,938			19,938		U
38	0603851F	Intercontinental Ballistic Missile - Dem/Val	04	71,824	71,181			71,181	86,737	U
39	0603854F	Wideband Global SATCOM RDT&E (Space)	04	12,077	12,027			12,027		U
40	0603859F	Pollution Prevention - Dem/Val	04	2,300	2,054			2,054	953	U
41	0603860F	Joint Precision Approach and Landing Systems - Dem/Val	04	7,076	57,975			57,975		U
42	0604015F	Long Range Strike	04	289,573	291,742			291,742	379,437	U
43	0604283F	Battle Mgmt Com & Ctrl Sensor Development	04	30,362	114,417			114,417		U
44	0604317F	Technology Transfer	04	2,474	2,576			2,576	2,606	U
45	0604327F	Hard and Deeply Buried Target Defeat System (HDBTDS) Program	04	120,838	16,711			16,711	103	U
46	0604330F	Joint Dual Role Air Dominance Missile	04	28,871						U
47	0604337F	Requirements Analysis and Maturation	04	22,794	16,343			16,343	16,018	U
48	0604422F	Weather System Follow-on	04	123,681	2,000			2,000		U
49	0604458F	Air & Space Ops Center	04						58,861	U
50	0604618F	Joint Direct Attack Munition	04						2,500	U
51	0604635F	Ground Attack Weapons Fuze Development	04	23,729	9,423			9,423	21,175	U
52	0604857F	Operationally Responsive Space	04	108,014						U
53	0604858F	Tech Transition Program	04	2,683	37,558			37,558	13,636	U
54	0105921F	Service Support to STRATCOM - Space Activities	04						2,799	U
55	0207455F	Three Dimensional Long-Range Radar (3DELRR)	04						70,160	U

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56	0305164F	NAVSTAR Global Positioning System (User Equipment) (SPACE)	04		96,840			96,840	137,233	U
57	0305178F	National Polar-Orbiting Operational Environmental Satellite System (NPOESS)	04	43,000						U
		Advanced Component Development & Prototypes		1,494,043	1,181,177			1,181,177	876,709	
58	0603260F	Intelligence Advanced Development	05						977	U
59	0603840F	Global Broadcast Service (GBS)	05	5,631	14,652			14,652		U
60	0604222F	Nuclear Weapons Support	05	22,170	25,713			25,713		U
61	0604233F	Specialized Undergraduate Flight Training	05	19,725	6,583			6,583	3,601	U
62	0604270F	Electronic Warfare Development	05	16,397	1,975			1,975	1,971	U
63	0604280F	Joint Tactical Radio	05		2,594			2,594		U
64	0604281F	Tactical Data Networks Enterprise	05	45,104	24,534			24,534	51,456	U
65	0604287F	Physical Security Equipment	05	51	51			51	50	U
66	0604329F	Small Diameter Bomb (SDB) - EMD	05	133,902	143,000			143,000	115,000	U
67	0604421F	Counterspace Systems	05	28,946	28,797			28,797	23,930	U
68	0604425F	Space Situation Awareness Systems	05	216,212	267,252			267,252	400,258	U
69	0604429F	Airborne Electronic Attack	05	31,821	4,118			4,118	4,575	U
70	0604441F	Space Based Infrared System (SBIRS) High EMD	05	621,629	448,594			448,594	352,532	U
71	0604602F	Armament/Ordnance Development	05	7,755	9,951			9,951	16,284	U
72	0604604F	Submunitions	05	2,427	2,567			2,567	2,564	U
73	0604617F	Agile Combat Support	05	7,649	13,059			13,059	17,036	U

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74	0604706F	Life Support Systems	05	8,017	9,720			9,720	7,273	U
75	0604735F	Combat Training Ranges	05	7,869	9,222			9,222	33,200	U
76	0604740F	Integrated Command & Control Applications (IC2A)	05	10						U
77	0604750F	Intelligence Equipment	05	995	803			803		U
78	0604800F	F-35 - EMD	05	1,366,147	1,210,306			1,210,306	816,335	U
79	0604851F	Intercontinental Ballistic Missile - EMD	05	129,728	135,437			135,437	145,442	U
80	0604853F	Evolved Expendable Launch Vehicle Program (SPACE) - EMD	05	14,081	7,980			7,980	27,963	U
81	0604932F	Long Range Standoff Weapon	05		2,004			2,004	5,000	U
82	0604933F	ICBM Fuze Modernization	05		73,512			73,512	129,411	U
83	0605213F	F-22 Modernization Increment 3.2B	05		140,100			140,100	131,100	U
84	0605221F	KC-46	05	818,947	1,815,588			1,815,588	1,558,590	U
85	0605229F	CSAR HH-60 Recapitalization	05	11,113	123,210			123,210	393,558	U
86	0605278F	HC/MC-130 Recap RDT&E	05	21,554	19,039			19,039	6,242	U
87	0605431F	Advanced EHF MILSATCOM (SPACE)	05						272,872	U
88	0605432F	Polar MILSATCOM (SPACE)	05						124,805	U
89	0605433F	Wideband Global SATCOM (SPACE)	05						13,948	U
90	0605931F	B-2 Defensive Management System	05		281,056			281,056	303,500	U
91	0101125F	Nuclear Weapons Modernization	05	91,269	80,200			80,200	67,874	U
92	0207100F	Light Attack Armed Reconnaissance (LAAR) Squadrons	05	11,021						U

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93	0207604F	Readiness Training Ranges, Operations and Maintenance	05		310			310		U
94	0207701F	Full Combat Mission Training	05	28,917	14,861			14,861	4,663	U
95	0305230F	MC-12	05		19,949			19,949		U
96	0401138F	C-27J Airlift Squadrons	05	24,491						U
97	0401318F	CV-22	05	12,836	28,027			28,027	46,705	U
98	0401845F	Airborne Senior Leader C3 (SLC3S)	05		1,960			1,960		U
		System Development & Demonstration		3,706,414	4,966,724			4,966,724	5,078,715	
99	0604256F	Threat Simulator Development	06	26,473	22,812			22,812	17,690	U
100	0604759F	Major T&E Investment	06	60,388	42,236			42,236	34,841	U
101	0605101F	RAND Project Air Force	06	32,057	25,579			25,579	32,956	U
102	0605502F	Small Business Innovation Research	06	346,235						U
103	0605712F	Initial Operational Test & Evaluation	06	17,754	16,197			16,197	13,610	U
104	0605807F	Test and Evaluation Support	06	737,697	722,071			722,071	742,658	U
105	0605860F	Rocket Systems Launch Program (SPACE)	06	146,536	16,200			16,200	14,203	U
106	0605864F	Space Test Program (STP)	06	44,308	10,051			10,051	13,000	U
107	0605976F	Facilities Restoration and Modernization - Test and Evaluation Support	06	44,547	42,597			42,597	44,160	U
108	0605978F	Facilities Sustainment - Test and Evaluation Support	06	27,953	27,301			27,301	27,643	U
109	0606323F	Multi-Service Systems Engineering Initiative	06	13,532	13,964			13,964	13,935	U

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110	0606392F	Space and Missile Center (SMC) Civilian Workforce	06	158,589	203,766			203,766	192,348	U
111	0702806F	Acquisition and Management Support	06	35,830	42,430			42,430	28,647	U
112	0804731F	General Skill Training	06	1,463	1,294			1,294	315	U
113	0909999F	Financing for Cancelled Account Adjustments	06	189						U
114	1001004F	International Activities	06	3,798	3,851			3,851	3,785	U
		Management Support		1,697,349	1,190,349			1,190,349	1,179,791	
115	0603423F	Global Positioning System III - Operational Control Segment	07	352,023	371,595			371,595	383,500	U
116	0604263F	Common Vertical Lift Support Platform	07	5,365						U
117	0604445F	Wide Area Surveillance	07						5,000	U
118	0605018F	AF Integrated Personnel and Pay System (AF-IPPS)	07	78,850	91,697			91,697	90,097	U
119	0605024F	Anti-Tamper Technology Executive Agency	07	35,245	17,037			17,037	32,086	U
121	0101113F	B-52 Squadrons	07	84,171	53,208			53,208	24,007	U
122	0101122F	Air-Launched Cruise Missile (ALCM)	07	782	431			431	450	U
123	0101126F	B-1B Squadrons	07	32,087	16,265			16,265	19,589	U
124	0101127F	B-2 Squadrons	07	201,688	35,970			35,970	100,194	U
125	0101313F	Strat War Planning System - USSTRATCOM	07	22,089	30,889			30,889	37,448	U
126	0101314F	Night Fist - USSTRATCOM	07	2,000	10			10		U
128	0102326F	Region/Sector Operation Control Center Modernization Program	07	6,283	5,609			5,609	1,700	U
129	0102823F	Strategic Aerospace Intelligence System Activities	07	14						U

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Department of the Air Force
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Total Obligational Authority
(Dollars in Thousands)

28 Mar 2013

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

Line No	Program Element Number	Item	Act	FY 2012 (Base & OCO)	FY 2013 Base Request with CR Adj*	FY 2013 OCO Request with CR Adj*	Emergency Disaster Relief Act of 2013	FY 2013 Total Request with CR Adj*	FY 2014 Base	Sec
130	0203761F	Warfighter Rapid Acquisition Process (WRAP) Rapid Transition Fund	07	10,280	15,098			15,098	3,844	U
131	0205219F	MQ-9 UAV	07	107,576	147,971			147,971	128,328	U
132	0207040F	Multi-Platform Electronic Warfare Equipment	07	32,431	49,848			49,848		U
133	0207131F	A-10 Squadrons	07	11,006	13,538			13,538	9,614	U
134	0207133F	F-16 Squadrons	07	128,503	190,257			190,257	177,298	U
135	0207134F	F-15E Squadrons	07	184,665	192,677			192,677	244,289	U
136	0207136F	Manned Destructive Suppression	07	8,515	13,683			13,683	13,138	U
137	0207138F	F-22A Squadrons	07	531,767	371,667			371,667	328,542	U
138	0207142F	F-35 Squadrons	07	9,682	8,117			8,117	33,000	U
139	0207161F	Tactical AIM Missiles	07	7,885	8,234			8,234	15,460	U
140	0207163F	Advanced Medium Range Air-to-Air Missile (AMRAAM)	07	75,282	87,041			87,041	84,172	U
141	0207170F	Joint Helmet Mounted Cueing System (JHMCS)	07	1,394	1,472			1,472		U
142	0207224F	Combat Rescue and Recovery	07	2,292	2,095			2,095	2,582	U
143	0207227F	Combat Rescue - Pararescue	07	914	1,119			1,119	542	U
144	0207247F	AF TENCAP	07	20,727	63,853			63,853	89,816	U
145	0207249F	Precision Attack Systems Procurement	07	3,034	1,063			1,063	1,075	U
146	0207253F	Compass Call	07	19,229	12,094			12,094	10,782	U
147	0207268F	Aircraft Engine Component Improvement Program	07	168,390	187,984			187,984	139,369	U
148	0207277F	ISR Innovations	07	16,199						U

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28 Mar 2013

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Line No	Program Element Number	Item	Act	FY 2012 (Base & OCO)	FY 2013 Base Request with CR Adj*	FY 2013 OCO Request with CR Adj*	Emergency Disaster Relief Act of 2013	FY 2013 Total Request with CR Adj*	FY 2014 Base	Sec
149	0207325F	Joint Air-to-Surface Standoff Missile (JASSM)	07	5,654	7,950			7,950	6,373	U
150	0207410F	Air & Space Operations Center (AOC)	07	116,858	76,315			76,315	22,820	U
151	0207412F	Control and Reporting Center (CRC)	07	3,288	8,653			8,653	7,029	U
152	0207417F	Airborne Warning and Control System (AWACS)	07	111,779	65,200			65,200	186,256	U
153	0207418F	Tactical Airborne Control Systems	07	7,931	5,767			5,767	743	U
154	0207423F	Advanced Communications Systems	07	20,715						U
156	0207431F	Combat Air Intelligence System Activities	07	5,428	5,756			5,756	4,471	U
157	0207438F	Theater Battle Management (TBM) C4I	07	15,009						U
158	0207444F	Tactical Air Control Party-Mod	07	8,939	16,226			16,226	10,250	U
159	0207448F	C2ISR Tactical Data Link	07	1,489	1,633			1,633	1,431	U
160	0207449F	Command and Control (C2) Constellation	07	20,075	18,086			18,086	7,329	U
161	0207452F	DCAPES	07		15,690			15,690	15,081	U
162	0207581F	Joint Surveillance/Target Attack Radar System (JSTARS)	07	71,991	24,241			24,241	13,248	U
163	0207590F	Seek Eagle	07	18,599	22,654			22,654	24,342	U
164	0207601F	USAF Modeling and Simulation	07	22,113	15,501			15,501	10,448	U
165	0207605F	Wargaming and Simulation Centers	07	5,617	5,699			5,699	5,512	U
166	0207697F	Distributed Training and Exercises	07	3,147	4,425			4,425	3,301	U
167	0208006F	Mission Planning Systems	07	61,207	69,377			69,377	62,605	U
168	0208021F	Information Warfare Support	07	2,105	7,159			7,159		U

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

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169	0208059F	Cyber Command Activities	07	680	66,888			66,888	68,099	U
170	0208087F	AF Offensive Cyberspace Operations	07						14,047	U
171	0208088F	AF Defensive Cyberspace Operations	07						5,853	U
179	0301400F	Space Superiority Intelligence	07	8,866	12,056			12,056	12,197	U
180	0302015F	E-4B National Airborne Operations Center (NAOC)	07	5,101	4,159			4,159	18,267	U
181	0303131F	Minimum Essential Emergency Communications Network (MEECN)	07	23,445	20,124			20,124	36,288	U
182	0303140F	Information Systems Security Program	07	88,257	69,133			69,133	90,231	U
183	0303141F	Global Combat Support System	07	435	6,512			6,512	725	U
184	0303150F	Global Command and Control System	07	2,433	4,316			4,316		U
185	0303601F	MILSATCOM Terminals	07	235,769	107,237			107,237	140,170	U
187	0304260F	Airborne SIGINT Enterprise	07	108,313	129,106			129,106	117,110	U
190	0305099F	Global Air Traffic Management (GATM)	07	4,604	4,461			4,461	4,430	U
191	0305103F	Cyber Security Initiative	07	1,920	2,055			2,055	2,048	U
192	0305105F	DoD Cyber Crime Center	07	274	285			285	288	U
193	0305110F	Satellite Control Network (SPACE)	07	17,788	33,773			33,773	35,698	U
194	0305111F	Weather Service	07	29,977	29,048			29,048	24,667	U
195	0305114F	Air Traffic Control, Approach, and Landing System (ATCALS)	07	20,644	43,187			43,187	35,674	U
196	0305116F	Aerial Targets	07	27,708	50,496			50,496	21,186	U
199	0305128F	Security and Investigative Activities	07	355	354			354	195	U

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Line No	Program Element Number	Item	Act	FY 2012 (Base & OCO)	FY 2013 Base Request with CR Adj*	FY 2013 OCO Request with CR Adj*	Emergency Disaster Relief Act of 2013	FY 2013 Total Request with CR Adj*	FY 2014 Base	Sec
200	0305145F	Arms Control Implementation	07		4,000			4,000	1,430	U
201	0305146F	Defense Joint Counterintelligence Activities	07	39	342			342	330	U
203	0305164F	NAVSTAR Global Positioning System (User Equipment) (SPACE)	07	125,935	29,621			29,621		U
204	0305165F	NAVSTAR Global Positioning System (Space and Control Segments)	07	16,820	14,335			14,335		U
206	0305173F	Space and Missile Test and Evaluation Center	07	1,542	3,680			3,680	3,696	U
207	0305174F	Space Innovation, Integration and Rapid Technology Development	07	2,862	2,430			2,430	2,469	U
208	0305179F	Integrated Broadcast Service (IBS)	07						8,289	U
209	0305182F	Spacelift Range System (SPACE)	07	9,245	8,760			8,760	13,345	U
210	0305193F	Cyber Intelligence	07	1,271						U
211	0305202F	Dragon U-2	07		23,644			23,644	18,700	U
212	0305205F	Endurance Unmanned Aerial Vehicles	07	108,021	21,000			21,000	3,000	U
213	0305206F	Airborne Reconnaissance Systems	07	115,471	96,735			96,735	37,828	U
214	0305207F	Manned Reconnaissance Systems	07	13,049	13,316			13,316	13,491	U
215	0305208F	Distributed Common Ground/Surface Systems	07	82,348	63,501			63,501	7,498	U
216	0305219F	MQ-1 Predator A UAV	07	51,642	9,122			9,122	3,326	U
217	0305220F	RQ-4 UAV	07	423,301	236,265			236,265	134,406	U
218	0305221F	Network-Centric Collaborative Targeting	07	7,192	7,367			7,367	7,413	U
219	0305236F	Common Data Link (CDL)	07		38,094			38,094	40,503	U

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220	0305238F	NATO AGS	07		210,109			210,109	264,134	U
221	0305240F	Support to DCGS Enterprise	07		24,500			24,500	23,016	U
222	0305265F	GPS III Space Segment	07	444,840	318,992			318,992	221,276	U
223	0305614F	JSPOC Mission System	07	75,749	54,645			54,645	58,523	U
224	0305881F	Rapid Cyber Acquisition	07		4,007			4,007	2,218	U
225	0305887F	Intelligence Support to Information Warfare	07	13,507	13,357			13,357		U
226	0305913F	NUDET Detection System (SPACE)	07	81,989	64,965			64,965	50,547	U
227	0305940F	Space Situation Awareness Operations	07	29,720	19,586			19,586	18,807	U
228	0307141F	Information Operations Technology Integration & Tool Development	07	23,184						U
229	0308699F	Shared Early Warning (SEW)	07	1,663	1,175			1,175	1,079	U
230	0401115F	C-130 Airlift Squadron	07	6,321	5,000			5,000	400	U
231	0401119F	C-5 Airlift Squadrons (IF)	07	12,941	35,115			35,115	61,492	U
232	0401130F	C-17 Aircraft (IF)	07	81,938	99,225			99,225	109,134	U
233	0401132F	C-130J Program	07	38,345	30,652			30,652	22,443	U
234	0401134F	Large Aircraft IR Countermeasures (LAIRCM)	07	8,838	7,758			7,758	4,116	U
235	0401139F	Light Mobility Aircraft (LiMA)	07		100			100		U
236	0401218F	KC-135s	07	6,161						U
237	0401219F	KC-10s	07	30,868	24,022			24,022		U
238	0401314F	Operational Support Airlift	07	41,346	7,471			7,471	44,553	U

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Line No	Program Element Number	Item	Act	FY 2012 (Base & OCO)	FY 2013 Base Request with CR Adj*	FY 2013 OCO Request with CR Adj*	Emergency Disaster Relief Act of 2013	FY 2013 Total Request with CR Adj*	FY 2014 Base	Sec
239	0408011F	Special Tactics / Combat Control	07	5,040	4,984			4,984	6,213	U
240	0702207F	Depot Maintenance (Non-IF)	07	1,531	1,588			1,588	1,605	U
241	0708012F	Logistics Support Activities	07	944	577			577		U
242	0708610F	Logistics Information Technology (LOGIT)	07	47,141	119,327			119,327	95,238	U
243	0708611F	Support Systems Development	07	50,990	15,873			15,873	10,925	U
244	0804743F	Other Flight Training	07	322	349			349	1,347	U
245	0808716F	Other Personnel Activities	07	110	117			117	65	U
246	0901202F	Joint Personnel Recovery Agency	07	2,407	2,018			2,018	1,083	U
247	0901218F	Civilian Compensation Program	07	1,581	1,561			1,561	1,577	U
248	0901220F	Personnel Administration	07	1,010	7,634			7,634	5,990	U
249	0901226F	Air Force Studies and Analysis Agency	07	900	1,175			1,175	786	U
250	0901279F	Facilities Operation - Administrative	07	11,745	3,491			3,491	654	U
251	0901538F	Financial Management Information Systems Development	07	76,207	100,160			100,160	135,735	U
252	0902998F	Management HQ - ADP Support (AF)	07	290						U
9999	9999999999	Classified Programs		12,045,846	11,172,183	53,150		11,225,333	11,874,528	U
		Operational Systems Development		17,341,093	15,867,972			15,921,122	16,297,542	
253	0901560F	Continuing Resolution Programs	20		1,214,214			1,214,214		U
		Undistributed			1,214,214			1,214,214		
Total Research, Development, Test & Eval, AF				26,630,843	26,642,260			26,695,410	25,702,946	

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26	03	0603788F	Battlespace Knowledge Development and Demonstration	Volume 1 - 309
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Budget Activity 05: System Development & Demonstration (SDD)
Appropriation 3600: Research, Development, Test & Evaluation, Air Force

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85	05	0605229F	CSAR HH-60 Recapitalization	Volume 2 - 763
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Pollution Prevention - Dem/Val	0603859F	40	04	Volume 2 - 195
Precision Attack Systems Procurement	0207249F	145	07	Volume 3a - 355
RAND Project Air Force	0605101F	101	06	Volume 2 - 915
RQ-4 UAV	0305220F	217	07	Volume 3b - 455
Rapid Cyber Acquisition	0305881F	224	07	Volume 3b - 581
Readiness Training Ranges, Operations and Maintenance	0207604F	93	05	Volume 2 - 843
Region/Sector Operation Control Center Modernization Program	0102326F	128	07	Volume 3a - 171
Requirements Analysis and Maturation	0604337F	47	04	Volume 2 - 243
Rocket Systems Launch Program (SPACE)	0605860F	105	06	Volume 2 - 939

Program Element Title	Program Element Number	Line Item	Budget Activity	Page
Satellite Control Network (SPACE)	0305110F	193	07	Volume 3b - 193
Security and Investigative Activities	0305128F	199	07	Volume 3b - 243
Seek Eagle	0207590F	163	07	Volume 3a - 565
Service Support to STRATCOM - Space Activities	0105921F	54	04	Volume 2 - 315
Shared Early Warning (SEW)	0308699F	229	07	Volume 3b - 627
Small Business Innovation Research	0605502F	102	06	Volume 2 - 921
Small Diameter Bomb (SDB) - EMD	0604329F	66	05	Volume 2 - 467
Space Based Infrared System (SBIRS) High EMD	0604441F	70	05	Volume 2 - 545
Space Control Technology	0603438F	32	04	Volume 2 - 77
Space Innovation, Integration and Rapid Technology Development	0305174F	207	07	Volume 3b - 293
Space Protection Program (SPP)	0603830F	36	04	Volume 2 - 127
Space Situation Awareness Operations	0305940F	227	07	Volume 3b - 607
Space Situation Awareness Systems	0604425F	68	05	Volume 2 - 497
Space Superiority Intelligence	0301400F	179	07	Volume 3b - 1
Space Technology	0602601F	9	02	Volume 1 - 121
Space Test Program (STP)	0605864F	106	06	Volume 2 - 943
Space and Missile Center (SMC) Civilian Workforce	0606392F	110	06	Volume 2 - 963
Space and Missile Test and Evaluation Center	0305173F	206	07	Volume 3b - 285
Spacelift Range System (SPACE)	0305182F	209	07	Volume 3b - 307

Program Element Title	Program Element Number	Line Item	Budget Activity	Page
Special Tactics / Combat Control	0408011F	239	07	Volume 3b - 735
Specialized Undergraduate Flight Training	0604233F	61	05	Volume 2 - 389
Strat War Planning System - USSTRATCOM	0101313F	125	07	Volume 3a - 137
Strategic Aerospace Intelligence System Activities	0102823F	129	07	Volume 3a - 179
Submunitions	0604604F	72	05	Volume 2 - 595
Support Systems Development	0708611F	243	07	Volume 3b - 807
Support to DCGS Enterprise	0305240F	221	07	Volume 3b - 531
Sustainment Science and Technology (S&T)	0603199F	15	03	Volume 1 - 197
Tactical AIM Missiles	0207161F	139	07	Volume 3a - 305
Tactical Air Control Party-Mod	0207444F	158	07	Volume 3a - 505
Tactical Airborne Control Systems	0207418F	153	07	Volume 3a - 467
Tactical Data Networks Enterprise	0604281F	64	05	Volume 2 - 439
Tech Transition Program	0604858F	53	04	Volume 2 - 309
Technology Transfer	0604317F	44	04	Volume 2 - 221
Test and Evaluation Support	0605807F	104	06	Volume 2 - 931
Theater Battle Management (TBM) C4I	0207438F	157	07	Volume 3a - 497
Threat Simulator Development	0604256F	99	06	Volume 2 - 897
Three Dimensional Long-Range Radar (3DELRR)	0207455F	55	04	Volume 2 - 323
USAF Modeling and Simulation	0207601F	164	07	Volume 3a - 575

Program Element Title	Program Element Number	Line Item	Budget Activity	Page
University Research Initiatives	0601103F	2	01	Volume 1 - 17
WIDEBAND GLOBAL SATCOM (SPACE)	0605433F	89	05	Volume 2 - 805
Warfighter Rapid Acquisition Process (WRAP) Rapid Transition Fund	0203761F	130	07	Volume 3a - 185
Wargaming and Simulation Centers	0207605F	165	07	Volume 3a - 603
Weather Service	0305111F	194	07	Volume 3b - 201
Weather System Follow-on	0604422F	48	04	Volume 2 - 259
Wide Area Surveillance	0604445F	117	07	Volume 3a - 21
Wideband Global SATCOM RDT&E (Space)	0603854F	39	04	Volume 2 - 187

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Fiscal Year (FY) 2014 Budget Estimates
RDT&E Descriptive Summaries
Budget Activities
April 2013

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 2014 President's Budget (PB).
      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 2014 RDT&E program with the exception of classified program elements. The format sand contents of this document are in accordance to the guidelines and requirements of the Congressional committees in so far as possible.
         b) The "Other Program Funding Summary portion of the R-2 includes, in addition to RDTE& 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.

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

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In the FY 2014 President's Budget Submission

RDT&E Exhibits in Budget Activity 7

are split into two books:

Vol-III Part 1

Vol-III Part 2

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

0101815F	ADVANCED STRATEGIC PROGRAM
0207424F	EVALUATION AND ANALYSIS PROGRAM
0208161F	SPECIAL EVALUATION SYSTEM
0208162F	ADVANCED TECHNOLOGY PROGRAM
0301310F	NATIONAL AIR INTELLIGENCE CENTER
0301314F	COBRA BALL
0301315F	MISSILE AND SPACE TECHICAL COLLECTION
0301324F	FOREST GREEN
0301386F	GDIP COLLECTION MANAGEMENT
0304111F	SPECIAL ACTIVITES
0304311F	SELECTED ACTIVITIES
0304348F	ADVANCED GEOSPATIAL INTELLIGENCE (AGI)
0305124F	SPECIAL APPLICATIONS PROGRAM
0305127F	FOREIGN COUNTERINTELLIGENCE ACTIVITES
0305159F	DEFENSE RECONNAISSANCE SUPPORT ACTIVITIES
0305172F	COMBINED ADVANCED APPLICATIONS
0605798F	ANALYSIS SUPPORT GROUP

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PROGRAM ELEMENT COMPARISON SUMMARY

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

		Remarks
BUDGET ACTIVITY #1: BASIC RESEARCH (Volume 1)		
None		
BUDGET ACTIVITY #2: APPLIED RESEARCH (Volume 1)		
None		
BUDGET ACTIVITY #3: ADVANCED TECHNOLOGY DEVELOPMENT (Volume 1)		
0603270F	ELECTRONIC COMBAT TECHNOLOGY	In FY 2014, Project 632432 activities are transferred to Project 63431G to better align efforts.
BUDGET ACTIVITY #4: ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPE (Volume 2)		
0105921F	SERVICE SUPPORT TO STRATCOM - SPACE ACTIVITIES	In FY 2014, Svc Supt to Stratcom does not include New Start efforts but does reinstate RDT&E funding to the Joint Navigation Warfare Center (JNWC). For FY12 and prior years, funding for JNWC resided in PE0101313F as RDT&E Funds. In the FY13 POM, JNWC requested ~70% of their $9.6M funding be recolored to reflect increased O&M role and 30% remain as RDT&E. Funds to remain as RDT&E were incorrectly zeroed out by AF Panel under assumption that COCOM didn't need RDT&E funding. This is an effort to restore RDT&E funding in FY14 to support RDT&E activities with the right appropriation.
0207455F	THREE DIMEN LONG RANGE RADAR (3DELRR)	In FY 2014, Project 6002, Three Dimensional Expeditionary Long Range Radar (3DELRR), efforts were transferred from PE 0604283F, Battle Management Command and Control (BMC2) Sensor Development, Project 6002, in order to provide this program its own Program Element. Totals include funding for PRCP Program Number (PNO) 393, 3DELRR. In FY 2014, this is a new start.

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

0603430F	ADVANCED (EHF MILSATCOM (SPACE)	In FY 2014, Project 644050, Advanced MILSATCOM, and Project 64A030, Evolved AEHF MILSATCOM, efforts transferred to PE 0605431F, Advanced EHF MILSATCOM (Space), Project 657103, Advanced MILSATCOM, and Project 657104, Evolved AEHF MILSATCOM, in order to transition to Budget Activity 5.
0603432F	POLAR MILSATCOM (SPACE)	In FY 2014, Project 644052, Polar Satellite Communications, efforts transferred to PE 0605432F, Polar MILSATCOM (Space), Project 657105, Polar Satellite Communications, in order to transition to Budget Activity 5.
0603850F	INTEGRATED BROADCAST SERVICE (DEM/VAL)	In FY 2014, Project 644778, Integrated Broadcast Service, efforts transferred to PE 0305179F, Integrated Broadcast Service, Project Number 674779, Integrated Broadcast Service, in order to realign funds in support of transition to sustainment.
0603854F	WIDEBAND MILSATCOM (SPACE)	In FY 2014, Project 644870, Command and Control System Consolidated (CCS-C), efforts transferred to PE 0605433F, Wideband Global SATCOM (Space), Project 657102, Command and Control System Consolidated (CCS-C), in order to transitions to Budget Activity 5.
0603860F	JOINT PRECISION APPROACH AND LANDING SYSTEMS - DEM/VAL	In FY 2014, JPALS is an Acquisition Category 1D program. System development includes an incremental approach employing a family of Land-Based (fixed and deployable) and Sea-based systems. On 16 March 2007, the Joint Requirements Oversight Council (JROC) approved the Capability Development Document (CDD) for the JPALS family of systems and Increment 1 for the Sea-Based System and designated the Navy as the JPALS lead Department of Defense (DoD) Service and lead Component for the Sea-Based System. On 19 January 2010, the JROC approved Increment 2 CDD for the Land-Based System and designated the Air Force as the lead Component for the Land-Based System. As reflected in the JPALS CDD, JPALS was intended to be the next generation precision approach and landing system which would provide a common interoperable system for both DoD and civil use. A cornerstone of the JPALS implementation strategy was parallel development and implementation with the FAA Local Area Augmentation System (LAAS) which was based on the same GPS Ground Based Augmentation System (GBAS) technology. However, since the CDD was approved, the pace of the FAA LAAS implementation and phase down of the legacy instrument landing system has slowed. This, combined with the several billion dollar cost for aircraft equipage and the need to fund higher Air Force priorities, resulted in the Air Force delaying JPALS implementation for the foreseeable future. The Army has also delayed JPALS implementation beyond the current future years defense plan. As JPALS is now early to need for the Air Force, Land-Based Increment 2 development responsibility is being transferred from the Air Force to the Navy. The Navy has a near term need in FY17 for a shore based system to support Joint Strike Fighter carrier landing training ashore. The Air Force will monitor the progress of

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

		JPALS implementation but, in the interim, continue the use of the legacy Instrument Landing System (ILS). ILS is supportable through the 2030 timeframe and, in its fixed and deployable configuration, will provide an effective and affordable landing system capability. The Air Force will also retain a limited number mobile precision approach radars to provide joint Service interoperability at deployed location as all Navy and Army aircraft are not ILS equipped.
0604283F	BMC2 SENSOR DEVELOPMENT	In FY 2014, Project 6002, Three Dimensional Expeditionary Long Range Radar (3DELRR), transferred to PE 0207455F, Three Dimensional Expeditionary Long Range Radar (3DELRR), Project 6002, in order to provide this pre-Major Defense Acquisition Program its own Program Element.
0604458F	AIR AND SPACE OPERATIONS CENTER (AOC) INCREMENT 10.2	In FY 2014, Project Number 644945, AOC Inc. 10.2, efforts were transferred from PE 0207410F, AOC WS, Project Number 675117 in order to improve transparency for this major program. AOC 10.2 is PRCP Program Number (PNO) N42. In FY 2014, this is a new start.
0604618F	JOINT DIRECT ATTACK MUNITION	In FY 2014, this is a New Start.

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

0401318F	CV-22	In FY 2014, Enhanced Self Deployment Capabilities has been expanded to include new start efforts for Area Navigation (Global Positioning System) [RNAV (GPS)]. In FY 2014, the Improved Inlet Solution project includes new start efforts.
0603260F	INTELLIGENCE ADVANCED DEVELOPMENT	In FY 2014, Project Number 652053, National Air Intelligence Center, efforts were transferred from PE 0604750F, Intelligence Equipment, Project Number 652053, National Air Intelligence Center, in order to increase management efficiency, reduce administrative actions, and ensure continued minimization of effort duplication. In FY 2014, this is a new start.

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

0604222F	NUCLEAR WEAPONS SUPPORT	In FY 2014, the engineering analysis project is documented in O&M PE 0104222. In FY 2014, radiological and nuclear (RN) efforts were transferred from project 654807 to the Engineering Analysis project in O&M PE 0104222. In FY 2014 the Nuclear Surety and Certification effort was transferred to the Engineering Analysis program code in O&M PE 0104222.
0604280F	JOINT TACTICAL RADIO SYSTEMS (JTRS)	In FY 2014, Project 655068, Joint Tactical Radio System (JTRS) efforts transferred to PE 0605030F, Joint Tactical Network Center, Project 655068, Joint Tactical Radio System in order to better identify Air Force efforts for this program.
0604281F	TACTICAL DATA NETWORKS ENTERPRISE	In FY 2014, Project Number 657003, Airborne Networking Enterprise, received funds for a classified effort. This is a New Start. This is a classified effort. Details provided upon request.
0604425F	SPACE SITUATIONAL AWARENESS SYSTEMS	In FY 2014, Project 65A026, C-Band Radar is a new start effort.
0604602F	ARMAMENT/ORDNANCE DEVELOPMENT	In FY 2014, Project 653134, BLU-109 and BLU-113 Upgrade, includes new start efforts.
0604617F	AGILE COMBAT SUPPORT	In FY 2014, Project 652895, Civil Engineering Readiness, includes a Basic Airfield Expeditionary Resources (BEAR) New Start.
0604706F	LIFE SUPPORT SYSTEMS	In FY 2014, Project 65412A, Life Support Systems, includes a New Start for Aircrew Laser Eye Protection Block III.
0604750F	INTELLIGENCE EQUIPMENT	In FY 2014, Project Number 652053, National Air Intel Center, efforts transferred to PE 0603260F (BA5), Intelligence Advanced Development, Project Number 652053, National Air Intel Center, in order to increase management efficiency, reduce administrative actions, and ensure continued minimization of effort duplication.
0604851F	ICBM - EMD	In FY 2014, Project Number 655037, Support Equipment, includes the new start efforts for the Instrumentation Wafer Replacement Program (IWRP) and the Signal Conditioner Monitor Group (SCMG) replacement.
0605431F	ADVANCED EHF MILSATCOM (SPACE)	In FY 2014, Project 657103, Advanced MILSATCOM, and Project 657104, Evolved AEHF MILSATCOM, efforts transferred from PE 0603430F, Advanced EHF MILSATCOM (Space), Project 644050, Advanced MILSATCOM, and Project 64A030, Evolved AEHF MILSATCOM, in order to transition to Budget Activity 5. In FY 2014, this is a new start.

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

0605432F	POLAR MILSATCOM (SPACE)	In FY 2014, this is a new Program Element, new start. In FY 2014, Project 657105, Polar Satellite Communications, efforts were transferred from PE 0603432F, Polar MILSATCOM (Space), Project 644052, Polar Satellite Communications, in order to transition to Budget Activity 5.
0605433F	WIDEBAND GLOBAL SATCOM RDT&E (SPACE)	In FY 2014, this is a new Program Element, new start. In FY 2014, Project 657102, Command and Control System - Consolidated (CCS-C), efforts were transferred from 0603854F, Wideband Global SATCOM (Space), Project 644870, CCS-C, in order to transition to Budget Activity 5.

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

None

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

0101126F	B-1B SQUADRONS	In FY 2014, this is a New Start to replace EMD LRUs for CITS, FIDL and VSDU on two RDT&E funded test jets.
0207410F	AIR AND SPACE OPERATIONS CENTER WEAPON SYSTEM (AOC WS)	In FY 2014, project number 675117, Integration Development, AOC Increment 10.2 efforts transferred to PE 0604458F, AOC Increment 10.2, project number 644945, AOC Increment 10.2, in order to improve transparency for this major program. AOC Inc. 10.2 is PRCP Program Number (PNO) N42. In FY 2014, the Personnel Recovery Command and Control (PRC2) efforts transferred from project number 675218, Applications Development, to project number 675221, Personnel Recovery Command and Control (PRC2), in order to improve transparency for this Joint use application.

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

0207449F	C2 CONSTELLATION	In FY 2014, Project 675140, Joint Expeditionary Force Experiments (JEFX), was terminated and $9.479M was reprogrammed to meet Air Force higher priority needs.
0208006F	MISSION PLANNING SYSTEMS	In FY 2014, All MPS Modernization efforts will be centralized in project 675380 starting in FY14, including efforts previously found in project 673858.
0208021F	INFORMATION WARFARE SUPPORT	In FY 2014, 670374, Tech & Spt efforts, 670374, were transferred to PE 0305221F, Network Centric Collaborative Targeting, 675197, NCCT Core Technology, to better support and align with the Suter Program System (SPS).
0208087F	AF OFFENSIVE CYBERSPACE OPERATIONS	In FY 2014, 670374, Tech & Spt, efforts will transfer from PE 0305887F, Electronic Combat Intel Support, to PE 0208087F, Offensive Cyber Operations, 670375, Network Warfare Systems and Support, in order to align offensive cyber programs and projects under one program element. In FY 2014, this is a new start.
0208088F	AF DEFENSIVE CYBERSPACE OPERATIONS	In FY 2014, Information Systems Security Program 667820 RDTE: Firestarter efforts transferred to PE 0208088F, AF Defensive Cyberspace Operations, 667820, Computer Security RDTE: Firestarter, in order to align defensive cyber programs and projects. In FY 2014, this is a new start.
0302015F	E-4B NATIONAL AIRBORNE OPERATIONS CENTER	In FY 2014, PE 0302015F, E-4B National Airborne Operations Center includes new start efforts.
0303131F	MINIMUM ESSENTIAL EMERGENCY COMMUNICATIONS NETWORK (MEECN)	In FY 2014, Funding for this exhibit 667820 contained in PE 0208088F.
0303601F	MILSATCOM TERMINALS	In FY 2014, FY12 Congressional Add funding of $42M for FAB-T Alternative is executed from project 672489 within this program element. FY13 funding for FAB-T continues in project 672487 within this program element. FY14 funding for FAB-T continues in project 672490 within this program element. This project was funded prior to FY14 in project 672487 and 672489 within this program.
0304260F	AIRBORNE SIGINT ENTERPRISE (JMIP)	In FY 2014, 675184, RQ-4, efforts were transferred to 675181, High Altitude SIGINT, to provide visibility into all activities for both manned and unmanned high altitude platforms. PMA costs for this project will be covered under Common Development, 675183.

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

0305145F	ARMS CONTROL IMPLEMENTATION	In FY 2014, 675063, Open Skies Sensors includes new start efforts. In FY14 funding totals include $1.430M. The Open Skies Sensor program is per the direction of the Presidential Policy Directive-15 (PPD-15).
0305179F	INTEGRATED BROADCAST SERVICE	In FY 2014, Project 674779, Integrated Broadcast Service, efforts were transferred from PE 0603850F, Integrated Broadcast Service (Dem/Val), Project Number 644778, Integrated Broadcast Service, in order to realign funds in support of transition to sustainment. In FY 2014, this is a new start.
0305205F	ENDURANCE UNMANNED AERIAL VEHICLES	In FY 2014, Reduction of $5M in FY 2014 due to higher Department priorities.
0305206F	AIRBORNE RECONNAISSANCE SYSTEMS	In FY 2014, reduction of $7.889M due to higher Department priorities.
0305208F	DISTRIBUTED COMMON GROUND SYSTEMS	In FY 2014, Project 676028, Dynamic Time Critical Warfighting Capability, is being terminated because the technology development has not met objective requirements and thus has not been fielded in an operational capacity.
0305221F	NETWORK CENTRIC COLLABORATIVE TARGETING	In FY 2014, and through the FYDP, RDT&E funding for Information Operations Battle Management/SUTER Program System software (IOBM/SPS) is embedded in the Network Centric Collaborative Targeting (NCCT) Core Technology project. The funding in the Network Centric Collaborative Targeting (NCCT) RDT&E appropriation associated with Information Operations Battle Management/SUTER Program System software (IOBM/SPS BPAC 675274) is as follows: $2.235M in FY 2014, $2.265M in FY 2015, $2.331M in FY 2016, $2.540M in FY 2017, and $2.586M in FY 2018. The remaining RDT&E funding is associated with Core Technology (BPAC 675197) is as follows: $7.458M in FY 2014, $7.602M in FY 2015, $7.814M in FY 2016, $8.112M in FY 2017, and $8.258M in FY 2018.
0305887F	ELECTRONIC COMBAT INTELLIGENCE SUPPORT	In FY 2014, 670374, Tech & Spt, efforts will transfer from PE 0305887F, Electronic Combat Intel Support, to PE 0208087F, Offensive Cyber Operations, 670375, Network Warfare Systems and Support, in order to align offensive cyber programs and projects under one program element.
0604445F	WIDE AREA SURVEILLANCE	In FY 2014, Project 675895, Wide Area Surveillance includes new start efforts.
0708610F	LOGISTICS INFORMATION TECHNOLOGY (LOGIT)	In FY 2014, Project 675207, Logistics IT System Modernization includes New Start efforts.

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

0708611F	SUPPORT SYSTEMS DEVELOPMENT	In FY 2014, project 673318, Product Data Systems Modernization (PDSM), efforts were transferred from PE 0708012F, Logistics Support Activities, project 673318, Product Data Systems Modernization (PDSM), to PE 0708611F, Support Systems Development (SSD), to better align with RDT&E activities supported by PE 0708611F, Support Systems Development (SSD).
0804743F	OTHER FLIGHT TRAINING	In FY 2014, Project 675304, Aviation Resource Management System (ARMS) is a new start effort.
0901538F	FIRST	In FY 2014, project 675177, Cost Estimating Modeling (CEM) includes new start efforts.

1. COMPONENT	FY 2013 PROJECT DATA	2. DATE
AIR FORCE	(computer generated)	

3. INSTALLATION, SITE AND LOCATION	4. PROJECT TITLE
HOLLOMAN AIR FORCE BASE HOLLOMAN SITE # 1 NEW MEXICO	CONSTRUCT LABORATORY ADDITION, B5020

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. RPSUID/PROJECT NUMBER	8. PROJECT COST ($000)
65976	390-311	2352/TUAL120094	EEIC 52900 1,900.0

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT	COST
PRIMARY FACILITIES				1,534.1
STRUCTURE	SM	1,155	1,012	(1,168.7)
MECHANICAL	LS			(150.0)
ELECTRICAL	LS			(80.0)
FIRE SUPPRESSION	LS			(100.0)
SDD & EPACT 05 (2%)	LS			(35.4)
SUPPORTING FACILITIES				100.0
NM GROSS RECEIPTS TAX (5.9%)	LS			(100.0)
SUBTOTAL				1,634.1
CONTINGENCY (10.0%)				163.4
SUPERVISION, INSPECTION, AND OVERHEAD (5.7%)				102.5
PROFIT AND OVERHEAD (.0%)				0.0
TOTAL FUNDED COST				1,900.0
UNFUNDED COST (.0%)				0.0
TOTAL REQUEST				1,900.0

10. Description of Proposed Work: Construct slab on grade with metal pre-fabricated walled addition to building 5020. Provide JAFAN classified storage areas, ceilings, secure doors, frames and hardware as well as interior finishing. Provide utilities including power, lighting, fire protection and suppression, heating, ventilation and air conditioning. The project will connect the two buildings, 5000 and 5020 into a single structure allowing for the consolidation of the RATSCAT functions into the RAMS compound.

11. Requirement: As Required.

PROJECT: Construct laboratory addition to building 5020.

REQUIREMENT: Consolidate the Radar Target Scatter (RATSCAT) compound functions into the RATSCAT Advanced Measurement System (RAMS) Facility. These functions will be moved into the Radar Control Center at RAMS.

CURRENT SITUATION: RATSCAT is located on White Sands Missile Range (WSMR), New Mexico in the middle of a naturally occurring gypsum "white sand" dry lakebed. RATSCAT is part of the National Radar Cross Section Test Facility (NRTF), whose mission is to provide static radar cross section measurements to the Department of Defense and industry. This facility is currently unsustainable due to the highly corrosive chemical composition of gypsum which destroys vehicles, equipment, and structures located on site over time. Maintenance costs, replacement parts, and acquisition of items necessary to continue operations at this location are too costly given the current fiscal climate. Maintenance actions required to keep the facility operational are in excess of $17M over the next few years. Consolidating the functionality of RATSCAT facility into its sister site, RAMS, has been determined by leadership to be the most cost effective and expedient option

1. COMPONENT	FY 2013 PROJECT DATA	2. DATE
AIR FORCE	(computer generated)	

3. INSTALLATION, SITE AND LOCATION	4. PROJECT TITLE
HOLLOMAN AIR FORCE BASE HOLLOMAN SITE # 1 NEW MEXICO	CONSTRUCT LABORATORY ADDITION, B5020

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. RPSUID/PROJECT NUMBER	8. PROJECT COST ($000)
65976	390-311	2352/TUAL120094	EEIC 52900 1,900.0

available. In addition to avoiding the $17M maintenance requirement, this move will also save the Air Force $500K in unscheduled actions and upkeep annually. Expansion and combination of buildings 5000 & 5020 into one Radar Control Center is a critical step in this process. This Control Center will provide office and laboratory space required for sustained operations of NRTF.

IMPACT IF NOT PROVIDED: Failure to provide the required facilities necessary to test emerging technologies will severely impact the Air Force mission to maintain its tactical superiority.

ADDITIONAL: This project will be accomplished using title 10 USC 2805 for Unspecified Minor Construction, Laboratory Revitalization. This allows for minor construction to take place to up to $2,000,000.

JOINT USE CERTIFICATION: Mission requirements, operational considerations and location are incompatible with use by other components.

I have reviewed this document and certify it is complete and accurate. I have validated the project's primary and supporting costs and work classification. It has been fully coordinated with the user and other appropriate agencies and approved by the Installation Commander. Recommend AFMC/A7 Approval.

20121119

A. DAVID BUDAK
Deputy Base Civil Engineer

JEFFREY M. TODD, Colonel, USAF, P.E.
Command Civil Engineer
Communications, Installations
and Mission Support

1. COMPONENT	FY 2011 CONSTRUCTION PROJECT DATA COMPUTER GENERATED		2. DATE
AF (AFMC)			JUNE 2011
3. INSTALLATION AND LOCATION		4. PROJECT TITLE	
WRIGHT-PATTERSON AFB OH (AFMC)		CNST HVAC FOR RESEARCH FACILITY F/20019	
5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
65976	318-612	ZHTV060039B	EEIC 529: $ 1,533

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST ($000)
PRIMARY FACILITIES				1,451.7
Construct HVAC for Research Facility	TN	84	12,998.80	(1,091.9)
Construct Mezzanine	SF	4212 SF	85.42	(359.8)
TOTAL COST				1,451.7
SUPERVISION, INSPECTION, AND OVERHEAD (5.6%)				81.3
TOTAL FUNDED COST				1,533.0
TOTAL FUNDED COST (ROUNDED)				1,533.0
UNFUNDED COST (A/E Fee)				70.0

10. DESCRIPTION OF PROPOSED WORK: Remove unit heaters and construct ducted heating, ventilation, and air conditionings system. Provide ducts, diffusers, dampers, chillers, air handlers, fans, coils, motors, controls, connections, and all labor and material to provide a ducted HVAC system in 20019. Construct a mezzanine to house research workspace.
Air Conditioning: 84 Tons

11. PROJECT: Construct HVAC for Research Facility F/20019

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

CURRENT SITUATION: The Air Force Scientific Advisory Board (SAB) has recommended the Air Force Research Laboratory (AFRL) develop the capacity for integrated simulation, modeling, and demonstration of proprietary energy, power, and thermal management components and systems on the ground, in support of AFRLs research and development process. AFRL, in conjunction with its industry and academic partners, conducts applied research into prototype technology but does not have a system of apparatus to evaluate the new technology on the ground via integrated modeling and simulation of critical systems and components under flight conditions. The systems integration laboratory proposed for Building 19 will provide this capability. Assembled under one roof will be hydraulic, electric, pneumatic, and computing capacity sufficient to simultaneously operate a wide range of aircraft subsystems, including high power electric actuators, robust electrical power systems, adaptive thermal management systems, as well as the computing capacity supporting static and dynamic modeling and simulation. Using private sector test facilities to evaluate components and subsystems is not a realistic option as these facilities are frequently not available to the Air Force. Private sector facilities are used and scheduled to support aircraft production and configured to support specific aircraft types, impairing their ability to support Air Force research. Private sector facilities cannot provide a neutral environment for technology evaluation since proprietary technology of one contractor would be evaluated by a competing contractor. The proposed systems integration lab will provide a neutral evaluation and integration capability, permitting the Air Force to independently assess manufacturers' proprietary technology as part of the research process. The proposed facility for the systems integration lab used to house a 1920s-era wind tunnel, and lacks a ducted HVAC system, only having unit heaters, and cannot support the proposed process research load, without proper heating, cooling and air conditioning. Scientists, engineers, and technicians working on research occurring in the facility require work space physically and acoustically separate from the research apparatus.

1. COMPONENT AIR FORCE	FY 2011 MILITARY CONSTRUCTION PROJECT DATA COMPUTER GENERATED	2. DATE
3. INSTALLATION AND LOCATION	WRIGHT-PATTERSON AFB OH	
CNST HVAC FOR RESEARCH FACILITY F/20019		5. PROJECT NUMBER ZHTV060039B

IMPACT IF NOT PROVIDED: Research programs into new technology will be delayed indefinitely, adversely impacting the development and fielding of improved weapons systems. Among the programs that would be adversely affected are the Integrated Vehicle Energy Technology (INVENT) program, which is dependent on a location to install contract deliverables for ground level research. INVENT program goals of increasing the range of military aircraft, enhancing low altitude combat support performance, and reducing weight and volume of aircraft by using renewable energy would not be met. Improved performance and efficiency of combat aircraft will not be achieved, resulting in subpar combat performance vis a vis future threats, and increases in operational costs due to lack of more efficient systems. Research projects "Integrated Megawatt Power and Thermal Management for Energy Optimized Aircraft "(EOA) and "Directed Energy Weapons"(DEW) are dependent on the high power drive stands, air stations and thermal management assets planned for facility 20019, and would be delayed indefinitely if the facility is not renovated. Specialized custom-built equipment is awaiting installation or is in development in support of the above research programs, and cannot be deployed if the system integrations facility is not established. Delays in schedule would increase contract costs significantly and ultimately cause the technology to be unavailable for insertion at the right time in the weapon systems development cycle.

ADDITIONAL: Companion Project: ZHTV060039A, Repair/Modernize for Research Facility. This project will be accomplished using the Lab Revitalization and Demonstration Program (LRDP) funds authorization for minor construction up to $2,000,000, supporting mission requirements in accordance with changes to 10 U.S.C. §2805 Section 2804 of the FY08 National Defense Authorization Act. This project was approved by the AFRL Commander for FY11 3600 funds.

JOINT USE CERTIFICATION: This facility can be used by other components on an as available basis; however, the scope of the project is based on Air Force requirements, supporting R&D conducted by AFRL/RZ, the focal point within the Air Force propulsion research. Although intended primarily for AFRL use, the proposed research facility will be a national asset, providing neutral modeling, simulation, and evaluation capabilities for non-Air Force DoD, US government, and private sector propulsion system research.

I have reviewed this and certify it is complete and accurate. I have validated the project's primary and supporting costs and work classification. It has been fully coordinated with the user and other appropriate agencies and approved by the installation commander.

DAVID A. PERKINS, P.E.
Director
Civil Engineer Directorate

4 Aug 11
Date

PAUL A. PARKER, SES
Command Civil Engineer
Communications, Installations,
and Mission Support

22 Dec 11
Date

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force												DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0603423F: *Global Positioning System III - Operational Control Segment*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	931.727	352.023	371.595	383.500	-	383.500	303.500	285.400	214.500	119.300	130.534	3,092.079
67A021: *OCX*	931.727	352.023	307.785	321.990	-	321.990	239.560	223.040	150.850	54.504	38.100	2,619.579
67A025: *GPS Enterprise Integrator*	0.000	0.000	63.810	61.510	-	61.510	63.940	62.360	63.650	64.796	92.434	472.500
MDAP/MAIS Code(s): 292,456												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Global Positioning System (GPS) is a space based positioning, navigation and timing distribution system, which operates through weather and electromagnetic environments (jamming, spoofing, etc.). GPS supports both civil and military users in air, space, sea and land operations. GPS is a satellite-based radio navigation system that serves military and civil users worldwide. GPS users process satellite signals to determine accurate position, velocity and time. GPS must comply with 10 United States Code (USC) sec 2281 which requires that the Secretary of Defense ensures the continued sustainment and operation of GPS for military and civilian purposes and 51 USC sec 50112, which requires that GPS complies with certain standards and facilitates international cooperation.

This Program Element (PE) funds the Research & Development for the GPS next generation operational control system (OCX) and the GPS Enterprise Integrator. This includes the advanced concept development, systems analysis, modernized control segment development, training simulators, integrated logistics support products, and developmental test resources, and systems engineering required to meet the government's obligations to the international, military and civil communities, and system requirements verification. OCX acquisition was established to 1) provide command and control of legacy and GPS III satellites, 2) incorporate situational awareness to support Navigation Warfare and signal monitoring, and 3) enable mission capability upgrades to support warfighter effects-based approach to operations. GPS Enterprise Integrator is responsible for architecture and system definition (the analysis and definition, management, maintenance, and evolution of the GPS Enterprise requirements and interface technical documents) as well as for the planning, execution, and fielding of the Enterprise.

OCX funds will support efforts such as engineering studies and analyses, architectural engineering studies, trade studies, technology needs forecasting, modernization initiatives, systems engineering, system development, test and evaluation efforts and mission operations in support of upgrades and product improvements for military and civil applications necessary to support efforts to protect U.S. military and allies' use of GPS. Additionally, funds will ensure efforts to meet current and future Joint Requirements Oversight Council approved required capabilities.

GPS supports both military and civil users in air, space, sea and land operations. The GPS Enterprise consists of Space, Ground Control, Nuclear Detonation Detection System (NDS) and User Equipment Segments. The government is responsible for the integration of the GPS Segments such that they provide worldwide GPS capability to support the warfighter and over a billion national security, civil, allied, and commercial GPS users. The GPS Enterprise Integrator project includes the efforts associated with the Government's prime contract tasks necessary to accomplish this critical integrating function with the entire GPS user community. The

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0603423F: *Global Positioning System III - Operational Control Segment*

Enterprise Integrator maintains the GPS current architecture and system definition, controls and validates interfaces, ensures compatibility of Generation II and III systems, and develops/manages plans for execution and fielding of the GPS Enterprise. Further, the Integrator provides modeling, simulation and technical analyses of impacts for Government-directed enterprise-level trades among the GPS segments leading to definition, management, maintenance, and evolution of the GPS Enterprise requirements and interface technical documents to build and ensure the integrity of the enterprise technical baseline, and perform system requirements verification.

In addition, the GPS Enterprise Integrator project funds the technical evolution, risk reduction, enterprise-level testing and delivery of all GPS Enterprise capabilities. Examples for Generation II include electronic protection and additional civil signals; for Generation III, additional anti-jamming protection. To accomplish this, the GPS Enterprise Integrator delivers Test and Verification capabilities, Requirements and Interface Management, and Systems Integration support across the Space, Control, and User Segments. In this capacity, the Enterprise Integrator is responsible for managing this cross-program work to provide these and other capabilities. GPS Enterprise Integrator's analyses guide government decisions to ensure efficient and effective synchronization and execution across all Generation II and III GPS programs. For Enterprise-wide integration to be successful, the Integrator: works with the GPS and NDS prime contractor teams to develop plans for early risk reduction System Integration Demonstrations to ensure system interfaces and functionality meet user and system requirements; ensures all equipment and documentation is ready when needed; integrates and analyzes enterprise schedules, conducts formal test and verification, including Requirement Verification Plans; and System Test Plans and Procedures. GPS Enterprise Integrator performs all these efforts across all GPS programs in all acquisition phases. The government owns the Enterprise system requirements and integration, and highly leverages the Enterprise Integrator team to eliminate the need to fund a development prime contractor to perform these functions. This enhances the government control, oversight and program accountability.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	362.823	371.595	393.742	-	393.742
Current President's Budget	352.023	371.595	383.500	-	383.500
Total Adjustments	-10.800	0.000	-10.242	-	-10.242
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-10.800	0.000			
• Other Adjustments	0.000	0.000	-10.242	-	-10.242

Change Summary Explanation

FY12: -$10.800M for SBIR

FY14: -$10.242M to align OCX funding to approved Service Cost Position (SCP)

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0603423F: *Global Positioning System III - Operational Control Segment*	PROJECT 67A021: *OCX*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
67A021: *OCX*	931.727	352.023	307.785	321.990	-	321.990	239.560	223.040	150.850	54.504	38.100	2,619.579
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Global Positioning System (GPS) is a space based positioning, navigation and timing distribution system, which operates through weather and electromagnetic environments (jamming, spoofing, etc.). This project funds the research and development for the GPS next generation operational control system (OCX). This includes, but is not limited to, advanced concept development, systems engineering and analysis, modernized control segment development, training simulators, integrated logistics support products, and developmental test resources.

The OCX acquisition was established to accomplish the following three objectives: 1) provide command and control of legacy and GPS III satellites, 2) incorporate situational awareness to support Navigation warfare and signal monitoring, and 3) enable mission capability upgrades to support warfighter effects-based approach to operations. OCX funds will support efforts such as engineering studies and analyses, architectural engineering studies, trade studies, technology needs forecasting, systems engineering, system development, test and evaluation efforts and mission operations in support of upgrades and product improvements for military and civil applications necessary to support efforts to protect U.S. military and allies' use of GPS. Additionally, funds will ensure efforts to meet current and future Joint Requirements Oversight Council approved required capabilities. Funds will support technology development and systems development efforts.

OCX Block 0 is the GPS satellite command and control system intended to conduct Launch and Early Orbit (LEO) operations and the checkout of all GPS III satellites. OCX Block 0 is a subset of OCX Block 1.

OCX Block 1 fields the operational capability to control all legacy satellites and signals (L1C/A, L1P(Y), L2P(Y)) as well as the GPS III satellites and the L2C and L5 signals. It also fully meets information assurance/cyber defense requirements.

OCX Block 2 fields the operational capability to control L1M and L2M (M-Code), and L1C signals.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: OCX Development	283.994	259.921	273.535

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0603423F: *Global Positioning System III - Operational Control Segment*	PROJECT 67A021: *OCX*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Development of the GPS next generation operational control system to launch and operate GPS II and GPS III constellation and provide a robust Information Assurance system. ***FY 2012 Accomplishments:*** Developed approximately 50% of the OCX Block 1 software code to include the core infrastructure, initial GPS-III command and control, initial PNT mission code, and critical interfaces. Completed environmental and performance testing of OCX Monitoring Station Receiver Equipment Engineering Design Unit (EDU). Initiated development of information assurance controls required for OCX Block 0 and OCX Block 1. ***FY 2013 Plans:*** Develop and test the information assurance controls required for OCX Block 0 and OCX Block 1. Develop GPS-III launch and checkout capability. Continue systems engineering and development of command and control for GPS II satellites, legacy signals, and modernized signals. ***FY 2014 Plans:*** Certify and accept OCX Block 0 for launch and checkout operations of GPS-III satellites. Develop command and control for GPS II satellites, legacy signals, and the modernized aviation safety of life signal (L5). Continue development of remaining civil and military modernized signals (L1C and M-code).			
Title: Technical Support ***Description:*** Development of the Standardized Space Trainer (SST) to provide GPS III operator training. Automation study to examine the feasibility of implementing control segment automation to increase command and control efficiencies. Facilities upgrades for Control Stations and associated equipment and servers. ***FY 2012 Accomplishments:*** Developed Request for Proposal (RFP) and initiated contracting process to place SST on contract. Study effort initiated to evaluate potential opportunities to reduce operational crew sizes, including through additional automation. Facility upgrades and hardware installations underway to prepare for OCX testing and transition to include the Master Control Station (MCS) at Schriever AFB and the Alternate Master Control Station (AMCS) at Vandenberg AFB. ***FY 2013 Plans:*** Place SST on contract and initiate development and testing efforts to support GPS-III operator training for OCX Block 1. Complete minimized operational crew size study, including automation. Continue work on the facility upgrades and hardware installation to prepare for OCX testing and transition to include the Master Control Station and Alternate Master Control Station. ***FY 2014 Plans:***	19.732	15.539	15.872

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0603423F: *Global Positioning System III - Operational Control Segment*	PROJECT 67A021: *OCX*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continue efforts on the SST and develop demonstration capabilities. Continue work on the facility upgrades to include the Master Control Station and Alternate Master Control Station. Upgrade the operations and server facilities.			
Title: Management Services ***Description:*** Program Management Administration, technical and directorate support to the OCX program. ***FY 2012 Accomplishments:*** Provided scheduling, budget analysis, cost estimating, technical and Directorate support for the OCX program. ***FY 2013 Plans:*** Continue to provide scheduling, budget analysis, cost estimating, technical and Directorate support for the OCX program. ***FY 2014 Plans:*** Continue to provide scheduling, budget analysis, cost estimating, technical and Directorate support for the OCX program.	48.297	32.325	32.583
Accomplishments/Planned Programs Subtotals	352.023	307.785	321.990

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• RDTE: BA07: PE 0305265F: *GPS III Space Segment*	442.697	317.197	218.588		218.588	213.772	160.307	75.311	76.666	307.210	1,811.748
• MPAF: BA05: Line Item # GPSIII: *GPS III TOA*	494.055	492.910	476.650		476.650	527.843	641.558	886.095	902.164	4,737.885	9,159.160
• DOT: *DOT (FAA) Civil Funding*	28.200	27.800	9.500		9.500	2.800	0.400	0.400	0.000	0.000	69.100

Remarks

DOT (FAA) funding in FY 2014 - 2017 is TBD.

D. Acquisition Strategy

The Air Force is pursuing a "Block" approach to the next generation GPS control segment (OCX) to rapidly respond to warfighter capability requirements. The Block acquisition strategy approach follows the "Back to Basics" space program acquisition philosophy which focuses on mission success and on-time delivery. Additionally, the strategy calls for capability (i.e. better signal maintainability (Digital Waveform Generation (DWG)), Unified S-Band (USB), Search and Rescue (SAR) GPS, and near-real time C2) on-ramps for the follow on contract for GPS III SVs 09 and beyond which will require updates to the OCX ground segment. This will ensure enterprise synchronization across space and ground segments.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0603423F: *Global Positioning System III - Operational Control Segment*	PROJECT 67A021: *OCX*

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0603423F: *Global Positioning System III - Operational Control Segment*	PROJECT 67A021: *OCX*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Phase B OCX Block 1 & 2 Development	C/CPAF	Raytheon:Aurora, CO	473.837	283.994	Nov 2011	259.921	Jan 2013	273.535	Dec 2013	-		273.535	552.645	1,843.932	
SE&I	C/CPAF	SAIC:Huntington Beach, CA	19.128	10.121	Nov 2011	6.600	Mar 2013	6.831	Dec 2013	-		6.831	18.722	61.402	
Modernization/SE & Technical Support	Various	Various:Various,	39.408	9.611	Nov 2011	3.939	Apr 2013	4.041	Jan 2014	-		4.041	0.000	56.999	
Standard Space Trainer	C/CPAF	Sonalyst, Inc:Waterford, CT	0.000	0.000		5.000	Mar 2013	5.000	Jan 2014	-		5.000	22.500	32.500	
OCS transition to OCX	C/CPAF	Boeing:Seal Beach, CA	2.889	0.000		0.000		0.000		-		0.000	0.000	2.889	
Completed Activities	Various	Various:,	286.104	0.000		0.000		0.000		-		0.000	0.000	286.104	
		Subtotal	821.366	303.726		275.460		289.407		0.000		289.407	593.867	2,283.826	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC (Aerospace - PMA)	RO	Aerospace:El Segundo, CA	43.777	37.224	Jan 2012	16.104	Jan 2013	15.924	Jan 2014	-		15.924	64.373	177.402	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0603423F: *Global Positioning System III - Operational Control Segment*	PROJECT 67A021: *OCX*

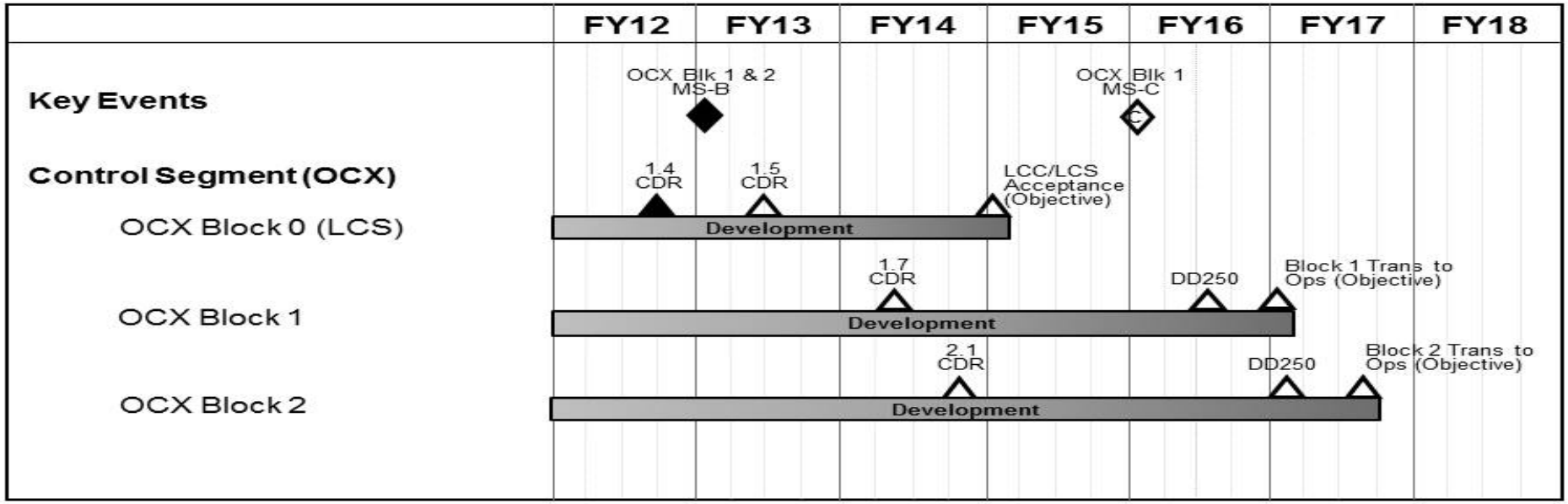
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC (MITRE - PMA)	C/CPFF	MITRE:Bedford, MA	0.000	0.000		5.817	Apr 2013	6.050	Jan 2014	-		6.050	20.224	32.091	
FFRDC (SEI - PMA)	C/CPFF	SEI:Pittsburgh, PA	0.000	0.000		1.030	Mar 2013	1.071	Feb 2014	-		1.071	1.500	3.601	
Program Management Administration (PMA)	Various	Various:,	66.584	11.073	Jan 2012	9.374	Apr 2013	9.538	Feb 2014	-		9.538	26.090	122.659	
		Subtotal	110.361	48.297		32.325		32.583		0.000		32.583	112.187	335.753	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	931.727	352.023		307.785		321.990		0.000		321.990	706.054	2,619.579	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0603423F: *Global Positioning System III - Operational Control Segment*	PROJECT 67A021: *OCX*



CDR – Critical Design Review
LCC – Launch & Checkout Capability
LCS – Launch & Checkout System

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0603423F: *Global Positioning System III - Operational Control Segment*	**PROJECT** 67A021: *OCX*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
OCX Blocks 1 & 2 MS B	1	2013	1	2013
Software Iteration 1.4 Incremental Critical Design Review (CDR)	4	2012	4	2012
Software Iteration 1.5 Incremental CDR	3	2013	3	2013
Software Iteration 1.7 Incremental CDR	2	2014	2	2014
Software Iteration 2.1 Incremental CDR	4	2014	4	2014

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0603423F: *Global Positioning System III - Operational Control Segment*	PROJECT 67A025: *GPS Enterprise Integrator*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
67A025: *GPS Enterprise Integrator*	0.000	0.000	63.810	61.510	-	61.510	63.940	62.360	63.650	64.796	92.434	472.500
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Global Positioning System (GPS) is a space based positioning, navigation and timing distribution system, which operates through weather and electromagnetic environments (jamming, spoofing, etc.). GPS supports both civil and military users in air, space, sea and land operations. GPS provides a worldwide capability that supports over a million warfighters and over a billion national security, civil, allied, and commercial GPS users. The GPS Enterprise consists of four segments: Space, Ground Control, Nuclear Detonation Detection System (NDS) and User Equipment Segments. Each segment has prime contracts to provide specific segment products (eg. spacecraft, master control system, receivers & antennas). The government, not a development contractor, is responsible for the integration of the GPS Segments and relies upon GPS Enterprise Integrator contracts to supply specific expertise and sufficient resources to successfully allocate the segment requirements, integrate the segment products, and verify that system requirements are met.

The GPS Enterprise Integration project includes the efforts of the FFRDC and SE&I contract tasks necessary to accomplish this critical integrating function. The Enterprise Integration maintains the GPS current architecture and system definition, controls and validates interfaces, ensures compatibility of previous, current, and future GPS segment products (Generation II and III systems), and develops/manages plans for execution and fielding of the GPS Enterprise. Further, the Integrator provides modeling, simulation and technical analyses of impacts for Government-directed enterprise level trades among the GPS segments leading to definition, management, maintenance, and evolution of the GPS Enterprise requirements and interface technical documents to build and ensure the integrity of the enterprise technical baseline.

In addition, the GPS Enterprise Integration project funds the technical evolution, risk reduction, enterprise-level testing and delivery of all GPS Enterprise capabilities. Examples for Generation II include electronic protection and additional civil signals; for Generation III, additional anti-jamming protection. To accomplish this, the GPS Enterprise Integrator delivers Test and Verification capabilities, Requirements and Interface Management, and Systems Integration support across the Space, Control and User Segments. In this capacity, the Enterprise Integrator is responsible for managing this cross-program work to provide these and other capabilities. GPS Enterprise Integrator's analyses guide government decisions to ensure efficient and effective synchronization and execution across all Generation II and III GPS programs. For Enterprise-wide integration to be successful, the Integrator: works with the GPS and NDS prime contractor teams to develop plans for early risk reduction System Integration Demonstrations to ensure system interfaces and functionality meet user and system requirements; ensures all equipment and documentation is ready when needed; integrates and analyzes enterprise schedules, conducts formal test and verification, including Requirement Verification Plans; and System Test Plans and Procedures. GPS Enterprise Integrator performs all these efforts across all GPS programs in all acquisition phases. The government owns

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0603423F: *Global Positioning System III - Operational Control Segment*	PROJECT 67A025: *GPS Enterprise Integrator*

the Enterprise system requirements and integration, and highly leverages the Enterprise Integrator team to eliminate the need to fund a development prime contractor to perform these functions. This enhances the government control, oversight and program accountability.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to support operational systems.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: GPS Enterprise Integrator	0.000	63.810	61.510
Description: The integration and configuration control of all elements of the GPS system (space/ground/user equipment) with one another in support of both military and civil users ***FY 2013 Plans:*** Accomplish system definition and system integration across the GPS Enterprise, including Generation II and III (space, control, and user segments). Conduct OCX-GPS III risk reduction demos for interface and functionality validation which prove hardware and software interface compatibility. Results evolve specifications and interface control documents (ICDs) in support of GPS III Space Modernization Initiatives (SMI) and Military GPS User Equipment (MGUE). Enable GPS III SV09+ production decision approval through validation of system performance via the GPS Non-Satellite Testbed (GNST). ***FY 2014 Plans:*** Accomplish system definition and system integration across the GPS Enterprise, including Generation II and III (space, control, and user segments). Reduce enterprise risk through early integration testing of interfaces, including the actual first delivery of the OCX ground software and hardware and GPS III space vehicle. Results prove specifications and interfaces in support of GPS III Space Modernization Initiatives (SMI) and Military GPS User Equipment (MGUE) Critical Design Review (CDR).			
Accomplishments/Planned Programs Subtotals	0.000	63.810	61.510

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• RDTE: BA04: PE 0305164F: *NAVSTAR Global Positioning System (User Equipment) (Space)*	0.000	96.840	137.233		137.233	158.614	153.769	157.390	98.840	30.360	833.046

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0603423F: *Global Positioning System III - Operational Control Segment*	PROJECT 67A025: *GPS Enterprise Integrator*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• RDTE: BA07: PE 0305164F: *NAVSTAR Global Positioning System (User Equipment) (Space)*	125.935	29.621	0.000		0.000	0.000	0.000	0.000	0.000	0.000	155.556
• RDTE: BA07: PE 0305165F: *NAVSTAR Global Positioning System (Space and Control Segments)*	16.820	14.335	0.000		0.000	0.000	0.000	0.000	0.000	0.000	31.155
• RDTE: BA07: PE 0305265F: *GPS III Space Segment*	442.697	317.197	218.588		218.588	213.772	160.307	75.311	76.666	307.210	1,811.748
• MPAF: BA05: Line Item # MGPS00: *Global Positioning System (Space)*	107.689	58.147	55.997		55.997	20.262	8.642	0.000	0.000	0.000	250.737
• MPAF: BA05: Line Item # GPSIII: *GPS III TOA*	494.055	492.910	476.650		476.650	527.843	641.558	886.095	902.164	4,737.885	9,159.160
• OPAF: BA03: Line Item # 836790: *Space Mods Space*	4.399	7.353	11.431		11.431	12.768	12.026	2.000	0.000	0.000	49.977

Remarks

D. Acquisition Strategy

In accordance with a "back to basics" acquisition approach and exercise of strong oversight of development contractors, the Air Force will exercise complete ownership of the architecture, system definition, and integration of the GPS space, ground, and user segments. This complex inter-segment integration is tradtionally performed by a prime contractor under a systems development contract. To elminiate the need to fund a development prime contractor to perform these functions, the government leverages systems engineering and integration expertise from both Federally Funded Research and Development Center (FFRDC) contractors and a Systems Engineering & Integration (SE&I) contractor. GPS Enterprise Integrator function of the SE&I contractor is currently funded within this Program Element (PE) for the Next Generation Operational Control System (OCX). SE&I services were procured in 2007 through a full and open competition. GPS Enterprise Integrator function is now being tracked as a separate Project (67A025) within this PE.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0603423F: *Global Positioning System III - Operational Control Segment*	PROJECT 67A025: *GPS Enterprise Integrator*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
GPS Enterprise Integrator	C/CPAF	SAIC:El Segundo, CA	0.000	0.000		43.412	Feb 2013	40.940	Dec 2013	-		40.940	246.620	330.972	
		Subtotal	0.000	0.000		43.412		40.940		0.000		40.940	246.620	330.972	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

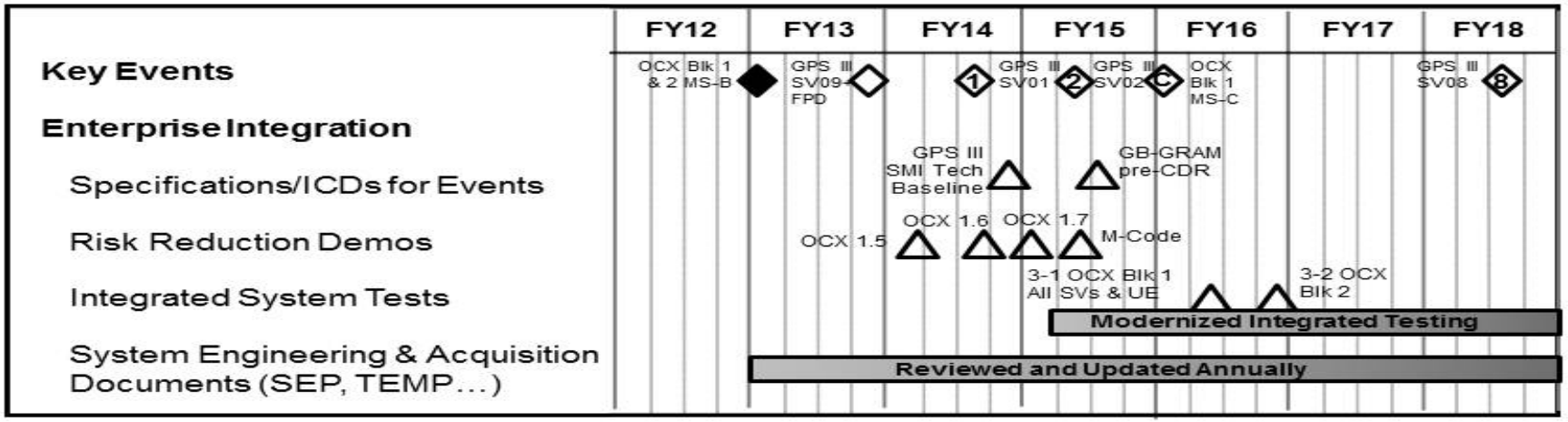
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC (MITRE) (PMA)	C/CPFF	MITRE:Bedford, MA	0.000	0.000		9.141	Mar 2013	9.506	Jan 2014	-		9.506	41.983	60.630	
FFRDC (Aerospace) (PMA)	RO	Aerospace:El Segundo, CA	0.000	0.000		11.257	Apr 2013	11.064	Dec 2013	-		11.064	58.577	80.898	
		Subtotal	0.000	0.000		20.398		20.570		0.000		20.570	100.560	141.528	

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		63.810		61.510		0.000		61.510	347.180	472.500	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0603423F: *Global Positioning System III - Operational Control Segment*	PROJECT 67A025: *GPS Enterprise Integrator*



CDR – Critical Design Review
TEMP – Test & Evaluation Master Plan
ISP – Information Support Plan
SMI – Space Modernization Initiative
GB-GRAM – Ground Based GPS Receiver Application Module
ICD – Interface Control Document
SEP – System Engineering Plan
FPD – Follow-on Production Decision
MGUE – Modernized GPS User Equipment
OI – Operating Instructions
SV – Space Vehicles
UE – User Equipment

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0603423F: *Global Positioning System III - Operational Control Segment*	PROJECT 67A025: *GPS Enterprise Integrator*

Schedule Details

	Start		End	
Events	Quarter	Year	Quarter	Year
Risk Reduction Demonstration for OCX 1.5 and GPS III functionality	1	2014	1	2014
Specifications and ICDs for GPS III Space Modernization Initiative Technical Baseline	2	2014	2	2014
Risk Reduction Demonstration for OCX 1.6 and GPS III functionality	3	2014	3	2014
Risk Reduction Demonstration for OCX 1.7 and GPS III functionality	1	2015	1	2015
Specifications and ICDs for Ground-Based GPS Receiver Application Module (GB-GRAM) Pre-Critical Design Review (CDR)	3	2015	3	2015

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0604263F: *Common Vertical Lift Support Platform*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	5.365	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
675277: *CVLSP*	-	5.365	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		
MDAP/MAIS Code(s): 434												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY 2013, PE 0604263F, Project 675277, Common Vertical Lift Support Platform (CVLSP) was terminated.

A. Mission Description and Budget Item Justification

Common Vertical Lift Support Platform (CVLSP) was terminated in FY13 and no funding was requested in FY14. Due to system requirements, the subsequent budget exhibits only contain information reflecting funding in FY12.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	5.365	0.000	0.000	-	0.000
Current President's Budget	5.365	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: CVLSP	5.365	0.000	0.000
Description: Excess			
FY 2012 Accomplishments:			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0604263F: *Common Vertical Lift Support Platform*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
N/A			
Accomplishments/Planned Programs Subtotals	5.365	0.000	0.000

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF:BA04:Line Item #HCX000: *Common Vertical Lift Support Platform*	52.800	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

E. Acquisition Strategy

N/A

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0604263F: *Common Vertical Lift Support Platform*	PROJECT 675277: *CVLSP*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CVLSP Subsystems (Training) Development	Various	Various:Dayton, OH	-	1.900	Jan 2012	0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	1.900		0.000		0.000		0.000		0.000			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Acquisition Program Planning	Various	Various:Dayton, OH	-	0.000		0.000		0.000		-		0.000	0.000	0.000	
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Support	Various	Various:Dayton, OH	-	3.065	Apr 2012	0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	3.065		0.000		0.000		0.000		0.000			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support	Various	Various:Dayton, OH	-	0.400	Jan 2013	0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.400		0.000		0.000		0.000		0.000			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	5.365		0.000		0.000		0.000		0.000			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0604263F: *Common Vertical Lift Support Platform*	PROJECT 675277: *CVLSP*	

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0604445F: *Wide Area Surveillance*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.000	0.000	5.000	-	5.000	41.700	20.500	6.000	5.000	Continuing	Continuing
675895: *Wide Area Surveillance*	-	0.000	0.000	5.000	-	5.000	41.700	20.500	6.000	5.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY 2014, Project 675895, Wide Area Surveillance includes new start efforts.

A. Mission Description and Budget Item Justification

Beginning in FY14, PE 0604445F funds the development and fielding of prototype units of the Stateside Affordable Radar System (STARS) which will improve the existing air surveillance capabilities for homeland defense. Initial efforts will focus upon improving the quality of air surveillance in the airspace surrounding the National Capitol Region (NCR) as well as integration into existing NORAD/NORTHCOM command and control systems and the NCR Integrated Air Defense System (NCR-IADS). Additional details about the capabilities of STARS are classified.

FY14 activities include, but not limited to, establishment of an Air Force program office, integration of the Air Force development team into the Army development team to facilitate transfer of STARS to the Air Force. In addition, FY14 activities will include development of acquisition documentation to establish STARS as a program of record.

This program is in Budget Activity 7, Operational System Development.
However, this reflects an incorrect database. This program should be in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0604445F: *Wide Area Surveillance*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	5.000	-	5.000
Total Adjustments	0.000	0.000	5.000	-	5.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	5.000	-	5.000

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Management Services	0.000	0.000	5.000
Description: Establishment of Air Force program office and integration of Air Force development team with Army development team. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** Establishment of Air Force program office and integration of Air Force development team with Army development team.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	5.000

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• RDTE: BA04: PE 0604445J: *Wide Area Surveillance*	0.000	0.000	30.000		30.000	0.000	0.000	0.000	0.000	0.000	30.000

Remarks

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0604445F: *Wide Area Surveillance*

E. Acquisition Strategy

N/A

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0604445F: *Wide Area Surveillance*	PROJECT 675895: *Wide Area Surveillance*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration	Various	Various:Various,	-	0.000		0.000		5.000	Oct 2013	-		5.000	Continuing	Continuing	TBD
		Subtotal	0.000	0.000		0.000		5.000		0.000		5.000			

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		0.000		5.000		0.000		5.000			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0604445F: *Wide Area Surveillance*	PROJECT 675895: *Wide Area Surveillance*

STARS Program Schedule

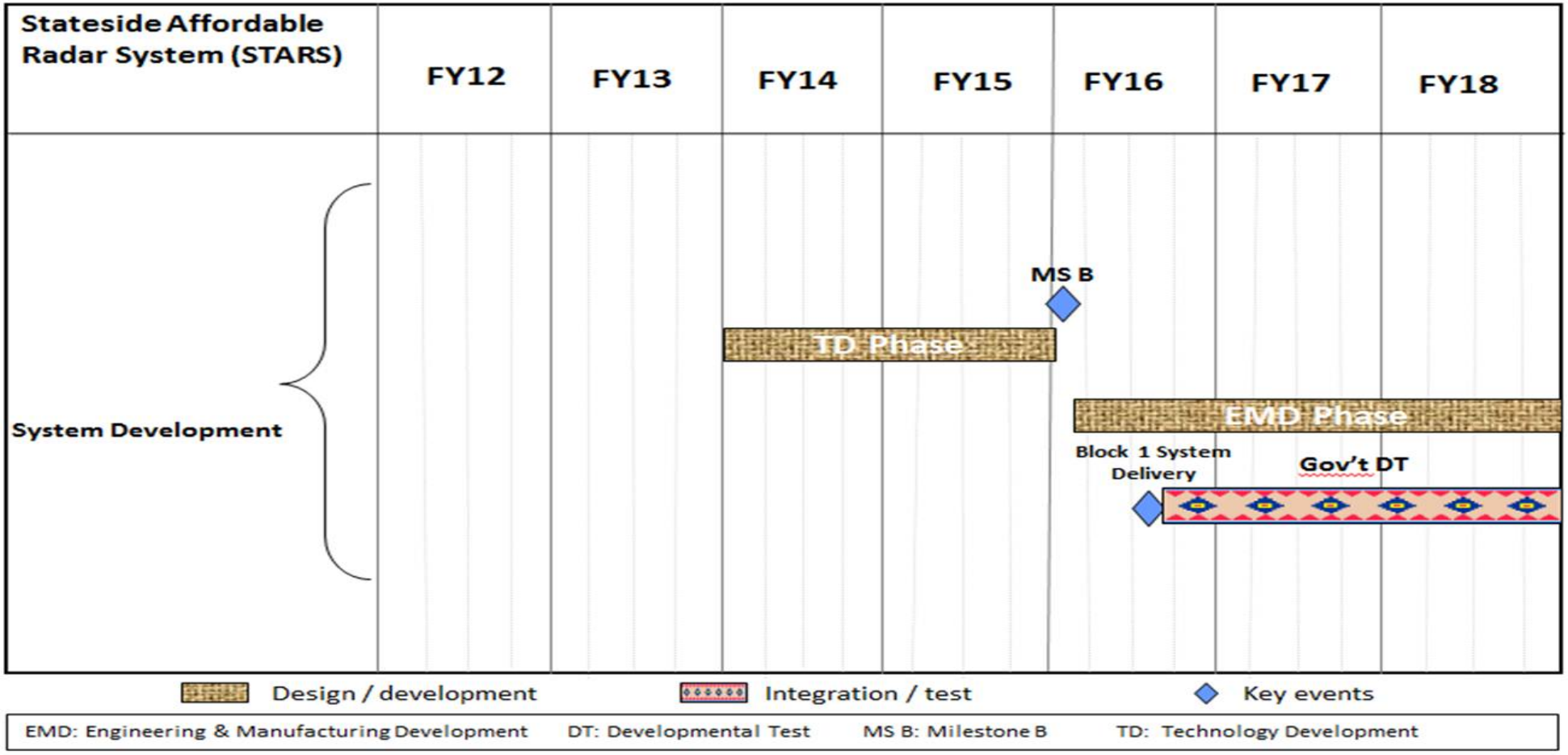


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0604445F: *Wide Area Surveillance*	**PROJECT** 675895: *Wide Area Surveillance*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Technology Development Phase	1	2014	1	2016
Milestone B	1	2016	1	2016
Engineering & Manufacturing Development Phase	1	2016	4	2018
Block 1 System Delivery	3	2016	3	2016
Government Developmental Test	3	2016	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0605018F: *AF Integrated Personnel and Pay System (AF-IPPS)*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	78.850	91.697	90.097	-	90.097	128.149	94.872	59.264	60.331	Continuing	Continuing
676003: *HRM Structural Development*	-	78.850	91.697	90.097	-	90.097	128.149	94.872	59.264	60.331	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

MDAP/MAIS Code(s): N86

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

AF-IPPS will be a web enabled, Commercial-Off-The-Shelf (COTS)-based solution aligning with the Secretary of the Air Force (SECAF) "3 to 1" (Regular Air Force [RegAF], Air National Guard [ANG], and Air Force Reserve [AFRes]) initiative dated October 15, 2010 that will integrate many existing personnel and pay processes into one self-service system. The system represents the AF commitment to modernizing business practices and providing enhanced support for today's service members and their families. AF-IPPS will align with Department of Defense (DoD) data standards for personnel, pay, and accounting, including the Common Human Resource Information Standards (CHRIS), which will ensure compliance with the Business Enterprise Architecture (BEA). AF-IPPS will provide Enterprise Information Web (EIW) services. The AF-IPPS program will be bound by using the BEA "Hire-to-Retire" (H2R) construct.

The purpose of AF-IPPS is to provide the AF with a sustainable, cost-effective, auditable and regulatory compliant method of effectively capturing and maintaining personnel information so that Service members are paid accurately and on-time without requiring repetitive action or onerous paperwork, while allowing commanders/ managers to easily access pertinent information.

The goal of AF-IPPS is to fully integrate personnel and pay management for the AF's Total Force (RegAF, ANG, and AFRes). The future state will be characterized by streamlined, Total Force business processes; efficient and accurate management of pay entitlements; auditable financial statements with regard to military pay; improved access to accurate and timely personnel data for authorized users; and a modernized IT systems environment that is cost-effective and can adapt to future needs.

AF-IPPS's customers include approximately 507,000 AF Service members across all components (330,000 RegAF, 107,000 ANG, and 70,000 AFRes) as well as thousands of military leaders of different ranks, specialties, and career fields who are responsible for the conduct of AF operations that rely on these services to ensure Service members with the appropriate skill sets are deployed where needed at home and on the battlefield. Congress, the rest of the DoD, and other federal agencies all rely on accurate AF Human Resources (HR) data to make key decisions that affect how the US military is organized, funded, deployed, and maintained.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0605018F: *AF Integrated Personnel and Pay System (AF-IPPS)*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	91.640	91.697	128.111	-	128.111
Current President's Budget	78.850	91.697	90.097	-	90.097
Total Adjustments	-12.790	0.000	-38.014	-	-38.014
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	-0.073	0.000			
• SBIR/STTR Transfer	-2.791	0.000			
• Other Adjustments	-9.926	0.000	-38.014	-	-38.014

Change Summary Explanation

FY12 funding decrease to support higher DoD priorities.
FY14 funding decrease to support higher DoD priorities.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Product Development	69.515	86.533	76.182

Description: Acquire and develop the activities that support the acquisition of a personnel/pay capability for USAF personnel across all components (i.e., RegAF, ANG, and AFRes).

FY 2012 Accomplishments:
Stood up the AF-IPPS initial development and test environment within Defense Information Systems Agency (DISA). Began Data Management Environment (DME) efforts of extracting, cleansing, consolidating, and preparing data. Purchased and renewed COTS Software (S/W) to support data management and development activities. Completed Independent Verification & Validation (IV&V) on program management and system engineering activities. Decommissioned Defense Integrated Military Human Resources System (DIMHRS) Transition Lab Environment (TLE). Supported AF information technology efforts [e.g., implementation & operational baselines, application services, etc.] to ensure AF-IPPS is fully integrated into the AF & DoD enterprise networks, databases, and information systems.

FY 2013 Plans:
Released Contract 1 Request For Proposal (RFP). Award Contract 1 for Blueprinting/Conference Room Piloting (CRP) for all AF-IPPS capability releases and an option for Release 1 (Leave) including requirements analysis, design, integration, functional/ systems test, deployment, and training. Build out the development environment of the initial AF-IPPS development / test

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0605018F: *AF Integrated Personnel and Pay System (AF-IPPS)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
environment and extend existing DISA services. Continue DME efforts of extracting, cleansing, consolidating, and preparing data. Purchase and renew COTS S/W to support data management, development, and deployment activities. Continue supporting AF information technology efforts (e.g., implementation & operational baselines, application services, etc.) to ensure AF-IPPS is fully integrated into the AF & DoD enterprise networks, databases, and information systems. Lead integration for Contract 1; manage interaction between all contractor and Government activities. ***FY 2014 Plans:*** Continue the following efforts: (1) Contract 1 including Blueprinting and Release 1 (Leave) , (2) DME, (3) the AF information technology efforts (e.g., implementation & operational baselines, application services, etc.) to ensure AF-IPPS is fully integrated into the AF & DoD enterprise networks, databases, and information systems. Establish Contract 1 post award IV&V. Build production, Continuity of Operations (COOP), and additional development environments to the AF-IPPS development and test environment and extend existing DISA services. Purchase and renew COTS S/W to support data management and development activities. Lead integration for Contract 1; manage interaction between all contractor and Government activities.			
Title: Test and Evaluation ***Description:*** Government integrated test and evaluation activities. ***FY 2012 Accomplishments:*** Supported the Integrated Test Team (ITT), completed the Test and Evaluation Management Plan (TEMP), and began initial development of test strategy for Release 1. ***FY 2013 Plans:*** Finalize test strategy and develop test plans for Release 1. ***FY 2014 Plans:*** Conduct test and evaluation for Release 1 and prepare test plans for subsequent releases.	0.206	0.176	0.594
Title: Management Services (PMA) ***Description:*** Conduct technical and program management activities. ***FY 2012 Accomplishments:*** Developed and received Secretary of the Air Force approval on the AF-IPPS Acquisition strategy. Drafted MS B documentation. Program Management Office (PMO) also supported TLE operations and the decommissioning effort, acquisition planning and reporting, and RFP development. Performed contracted Advisory and Assistance Services (A&AS), MITRE, travel, and other program management expenses. ***FY 2013 Plans:***	9.129	4.988	13.321

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0605018F: *AF Integrated Personnel and Pay System (AF-IPPS)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continue acquisition planning and reporting, conduct Contract 1 source selection and award, and execute Contract 1 activities. Refine documentation in preparation for Milestone B. Continue RFP development for implementation of: Release 2 (Cadets), Release 3 (Officers), Release 4 (Enlisted), and Release 5 (S/W Upgrade). Includes contracted A&AS, MITRE, travel, and other program management expenses. ***FY 2014 Plans:*** Continue acquisition planning, reporting, and Contract 1 activities. Continue RFP development for implementation of: Release 2 (Cadets), Release 3 (Officers), Release 4 (Enlisted), and Release 5 (S/W Upgrade). Initiate Contract 2 source selection activities. Achieve Milestone B. Includes contracted A&AS, MITRE, travel, and other program management expenses.			
Accomplishments/Planned Programs Subtotals	78.850	91.697	90.097

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA03: Line Item # 834010: *General Information Technology*	0.000	24.760	0.000		0.000	13.339	0.000	0.000	0.000	Continuing	Continuing

Remarks

E. Acquisition Strategy

AF-IPPS's acquisition strategy comprises a multiple release/multiple contract strategy. The Government will conduct a Full and Open Competition (trade-off) to award contracts to deliver the integrated personnel and pay system for the military Total Force (i.e., RegAF, ANG, and AFRes).

The initial AF-IPPS contract includes the effort to blueprint for all releases with an option to develop, integrate, test, train, deploy, and sustain Release 1 (Leave). Development, integration, testing, training, deployment, and sustainment of subsequent releases will be competed. The primary contract type will be Fixed Price Incentive Firm (FPIF). Cost Plus Incentive Fee (CPIF) and Firm Fixed Price (FFP) will be used for the smaller portions of the contract, as appropriate.

Air Force Program Executive Officer for Business and Enterprise Systems (AFPEO BES) is the PEO for AF-IPPS. Air Force Life Cycle Management Center (AFLCMC) is the Contracting Authority for the AF-IPPS Program and provides Contracts, Legal, and Comptroller support. The Office of the Secretary of Defense Deputy Change Management Officer [OSD(DCMO)] is the program's Milestone Decision Authority (MDA).

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0605018F: *AF Integrated Personnel and Pay System (AF-IPPS)*	PROJECT 676003: *HRM Structural Development*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AF-IPPS Development, Test, & Prod Environments	Various	DISA, Various SW Vendors:TBD,	-	2.539	Oct 2011	5.127	Dec 2012	13.237	Oct 2013	-		13.237	Continuing	Continuing	TBD
Contract 1	C/Various	TBD:TBD,	-	56.081	Aug 2013	62.091	Aug 2013	46.665	Dec 2013	-		46.665	Continuing	Continuing	TBD
DMS Other	Various	Various IT Vendors:TBD,	-	5.624	Feb 2012	16.992	Mar 2013	12.881	Dec 2013	-		12.881	Continuing	Continuing	TBD
PeopleSoft Licenses	MIPR	Oracle:Reston, VA	-	4.574	Dec 2011	2.323	Dec 2012	2.388	Dec 2013	-		2.388	Continuing	Continuing	TBD
Independent Verification & Validation (IV&V)	C/Various	RYAN, Summaria Systems, Inc.:Montgomery, AL	-	0.697	Mar 2012	0.000		1.011	Aug 2014	-		1.011	Continuing	Continuing	TBD
		Subtotal	0.000	69.515		86.533		76.182		0.000		76.182			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Gov't Integrated Test & Evaluation Activities	C/Various	PASS:Orlando, FL	-	0.206	Nov 2011	0.176	Jan 2013	0.594	Oct 2013	-		0.594	Continuing	Continuing	TBD
		Subtotal	0.000	0.206		0.176		0.594		0.000		0.594			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0605018F: *AF Integrated Personnel and Pay System (AF-IPPS)*	PROJECT 676003: *HRM Structural Development*

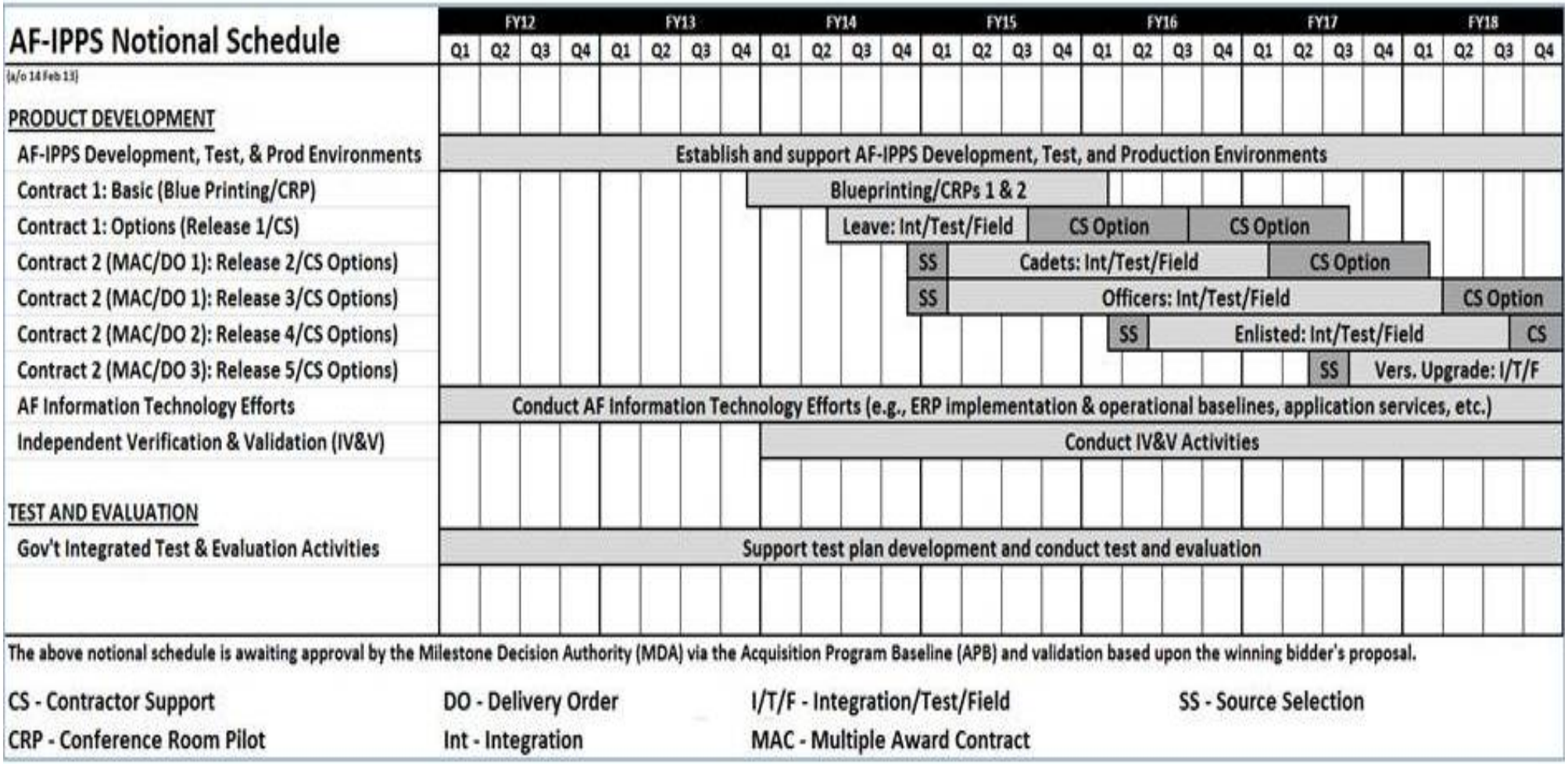
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering and Technology Acquisition Support Services (ETASS)	C/CPFF	Jacobs Technology:Bedford, MA	-	3.758	Dec 2011	0.721	May 2013	3.299	May 2014	-		3.299	Continuing	Continuing	TBD
MITRE Engineering Support	SS/CPFF	MITRE:Lexington, MA	-	1.924	Nov 2011	0.777	Dec 2012	1.313	Oct 2013	-		1.313	Continuing	Continuing	TBD
Other PMA	Various	Various:TBD,	-	0.394	Oct 2011	1.267	Dec 2012	4.383	Oct 2013	-		4.383	Continuing	Continuing	TBD
Professional Acquisition Support Services (PASS)	C/T&M	Oasis Systems, Inc.:Lexington, MA	-	2.514	Feb 2012	1.958	Feb 2013	3.841	Oct 2013	-		3.841	Continuing	Continuing	TBD
Specialized Cost Services (SCS)	C/CPFF	Tecolote:Bedford, MA	-	0.539	Oct 2011	0.265	Feb 2013	0.485	Oct 2013	-		0.485	Continuing	Continuing	TBD
		Subtotal	0.000	9.129		4.988		13.321		0.000		13.321			

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	78.850		91.697		90.097		0.000		90.097			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0605018F: *AF Integrated Personnel and Pay System (AF-IPPS)*	**PROJECT** 676003: *HRM Structural Development*



The above notional schedule is awaiting approval by the Milestone Decision Authority (MDA) via the Acquisition Program Baseline (APB) and validation based upon the winning bidder's proposal.

CS - Contractor Support
CRP - Conference Room Pilot
DO - Delivery Order
Int - Integration
I/T/F - Integration/Test/Field
MAC - Multiple Award Contract
SS - Source Selection

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0605018F: *AF Integrated Personnel and Pay System (AF-IPPS)*	**PROJECT** 676003: *HRM Structural Development*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
AF-IPPS Development, Test, & Production Environments	1	2012	4	2018
Contract 1: Basic (Blue Printing/CRP)	4	2013	1	2016
Contract 1: Options (Release 1/CS)	2	2014	3	2017
Contract 2 (MAC/DO 1): Release 2/CS Options)	4	2014	1	2018
Contract 2 (MAC/DO 1): Release 3/CS Options)	4	2014	4	2018
Contract 2 (MAC/DO 2): Release 4/CS Options)	1	2016	4	2018
Contract 2 (MAC/DO 3): Release 5/CS Options)	2	2017	4	2018
AF Information Technology Efforts	1	2012	4	2018
Independent Verification and Validation (IV&V)	1	2014	4	2018
Government Integrated Test and Evaluation	1	2012	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0605024F: *Anti-Tamper Technology Executive Agency*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	35.245	17.037	32.086	-	32.086	39.830	34.170	32.301	32.847	Continuing	Continuing
675066: *Anti-Tamper Technology Executive Agent*	-	35.245	17.037	32.086	-	32.086	39.830	34.170	32.301	32.847	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Air Force is the DoD Anti-Tamper Executive Agent (ATEA). The ATEA is responsible for developing and implementing Anti-Tamper (AT) policy, coordinating and providing financial support for AT technology development and evaluations, hardware/software vulnerability assessments, laboratory infrastructure, establishing and maintaining a data bank/library of Anti-Tamper technologies, providing proper security mechanisms, and conducting effective validation and verification of AT implementations. The purpose of AT is to protect critical program information in U.S. weapon systems that may be sold to foreign governments or that could possibly fall into enemy hands. AT protections will permit the U.S. to preserve its technological advantage of critical weapons systems while supporting the warfighter?s mission requirements. Furthermore, AT will add longevity to DoD critical technologies by deterring efforts to reverse engineer or develop weapon countermeasures against a system or system component.

The DoD ATEA will coordinate technology development and enhancement efforts among the DoD Services/Agencies, National Laboratories, and industry. The DoD ATEA acquisition strategy is to fund development of new AT technology, as well as enhancing existing AT technology efforts to increase the technology readiness level (TRL). The AT technology development and enhancement efforts will occur in multiple areas, including the following: Advanced sensor hardware, secure processing, crypto-analysis, tamper penalties, and power solutions. Emerging research in the areas of materials, cryptography and electronic circuits has the potential to bring new AT capabilities that have reduced power needs and smaller form factor. The goal of the research is to mature promising technologies to the point that they can be transitioned to a program office or industry for implementation in our weapons systems. Priorities will be given to those technologies that most benefit the DoD AT community.

All DoD acquisition programs, Foreign Military Sales, and Direct Commercial Sales with critical program information (CPI) and/or resident-critical program information (R-CPI) require a validated AT Plan. The AT program includes resources required for the subject matter experts (SMEs) to review AT Plans and conduct AT validation, and perform AT assessments of both commercial off the shelf and government of the shelf products. To maintain its advantage, the AT program continues to improve its AT hardware/software assessment capabilities. These capabilities include the acquisition of specialized equipment, maintenance and/or renovations to support the integration of this equipment, and modifications to new and/or existing laboratory facilities to meet equipment and security requirements.

This program is in Budget Activity 07, Operational System Development, because it includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0605024F: *Anti-Tamper Technology Executive Agency*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	35.245	17.037	29.726	-	29.726
Current President's Budget	35.245	17.037	32.086	-	32.086
Total Adjustments	0.000	0.000	2.360	-	2.360
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	2.360	-	2.360

Change Summary Explanation

FY14 funding increased to match increased Anti-Tamper Technology requirements.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Anti-Tamper Technology	35.245	17.037	32.086
Description: Advanced Anti-Tamper Technology Executive Agent activities including: AFRL/RYW Management, ATEA outsourcing, Anti-Tamper Verification and Validation, Assessments and technology development ***FY 2012 Accomplishments:*** Continue advanced Anti-Tamper Technology Executive Agent activities including: AFRL/RYW Management, ATEA outsourcing, Anti-Tamper Verification and Validation, Assessments and Technology Development. ***FY 2013 Plans:*** Continue advanced Anti-Tamper Technology Executive Agent activities including: AFRL/RYW Management, ATEA outsourcing, Anti-Tamper Verification and Validation, Assessments and Technology Development. ***FY 2014 Plans:*** Advanced Anti-Tamper Technology Executive Agent activities including: AFLCMC/XZA Management, ATEA outsourcing, Anti-Tamper Verification and Validation, Assessments and Technology Development.			
Accomplishments/Planned Programs Subtotals	35.245	17.037	32.086

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0605024F: *Anti-Tamper Technology Executive Agency*

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• NONE: *N/A*	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

E. Acquisition Strategy

The DoD ATEA technology development 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.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0605024F: *Anti-Tamper Technology Executive Agency*	PROJECT 675066: *Anti-Tamper Technology Executive Agent*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office	Various	Not specified.:,	-	2.946		4.610		3.165		-		3.165	Continuing	Continuing	TBD
		Subtotal	0.000	2.946		4.610		3.165		0.000		3.165			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
R&D	Various	Not specified.:,	-	32.299		12.427		28.921		-		28.921	Continuing	Continuing	TBD
		Subtotal	0.000	32.299		12.427		28.921		0.000		28.921			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	35.245		17.037		32.086		0.000		32.086			

Remarks

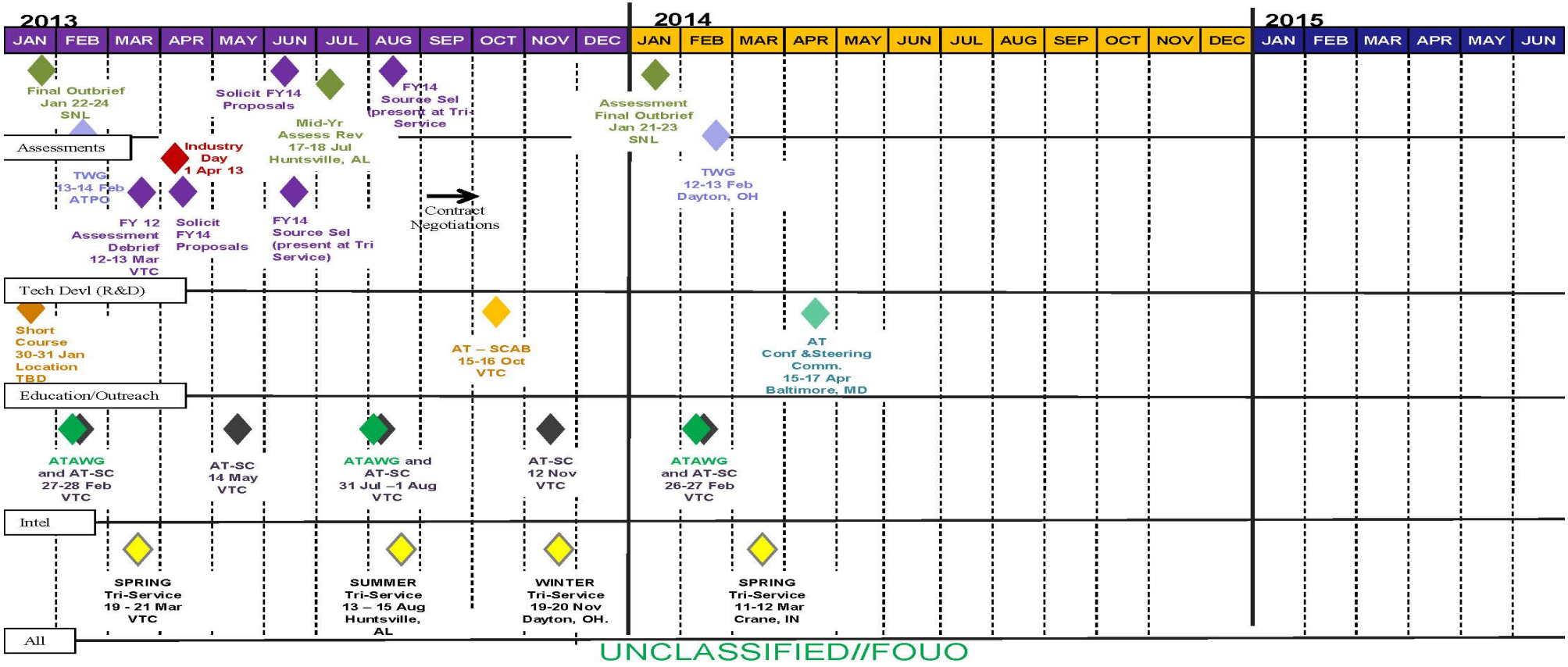
Additional funding breakout is classified per the Anti-Tamper Security Classification Guide. Please contact the ATEA if addtional information is required.

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0605024F: *Anti-Tamper Technology Executive Agency*	PROJECT 675066: *Anti-Tamper Technology Executive Agent*

CAO: 28 Feb 13

UNCLASSIFIED//FOUO

CY13-15 AT Battle Rhythm Chart



UNCLASSIFIED//FOUO

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0605024F: *Anti-Tamper Technology Executive Agency*	PROJECT 675066: *Anti-Tamper Technology Executive Agent*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
ATEA Program Office	1	2012	4	2015
AT RDT&E	1	2012	4	2015

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	84.171	53.208	24.007	-	24.007	20.187	3.901	7.251	4.025	Continuing	Continuing
675039: *B-52 Modernization*	-	84.171	0.065	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
675048: *1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)*	-	0.000	16.490	11.373	-	11.373	8.264	3.901	0.000	0.000	Continuing	Continuing
675049: *MODE S/5 IFF*	-	0.000	1.202	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
675050: *CONECT*	-	0.000	34.700	12.634	-	12.634	11.923	0.000	7.251	4.025	Continuing	Continuing
675051: *ANTI-SKID*	-	0.000	0.751	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

FOR FY05-FY12 THE B-52 SQUADRONS PROGRAM ELEMENT CONTAINED A SINGLE BPAC, 675039, B-52 MODERNIZATION. BEGINNING IN FY 13 AND OUT, SEPARATE BPACs HAVE BEEN ESTABLISHED AS FOLLOWS:
675039 B-52 MODERNIZATION
675048 1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)
675049 MODE S/5 IFF
675050 CONECT
675051 B-52 ANTI-SKID

Prior to FY13, budget included funding for the EHF and SR2 programs. These programs were terminated in the FY13 PB.

A. Mission Description and Budget Item Justification

B-52 MODERNIZATION PROGRAMS
Prior to FY13, all B-52 modernization programs were funded in a single BPAC, 675039 B-52 Modernization. B-52 modernization is a comprehensive program to ensure B-52 viability to perform current and future wartime missions to include datalinks, navigation, sensors, weapons, and electronic warfare (EW) and training capabilities. B-52 modernization (initiated in FY 2005) integrates and adds both tactical and global datalink communications for real time command and control, targeting, and intelligence. It upgrades antiquated air traffic management (ATM) systems with those supported by three key functions using satellite technology: Communications, Navigation and Surveillance (CNS). Modernization 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 improved weapons carriage and fully integrates advanced targeting pods with the offensive avionics system. B-52 modernization upgrades or replaces legacy defensive EW systems to include the radar warning receiver,

jammers, chaff and flare dispensers and situational awareness displays as well as integration of offensive EW such as the Miniature Air-Launched Decoy (MALD) and MALD-Jammer (MALD-J).

CONECT
The B-52 Combat Network Communications Technology (CONECT) acquisition program supports nuclear and conventional operations by upgrading the B-52 fleet with tactical datalink and voice communications capabilities along with improved threat and situational awareness to support participation in network centric operations. The CONECT upgrade includes new multi-functional color displays (MFCDs) and a digital interphone system, which will survive and function through the nuclear environment to enhance crew interaction and situational awareness. To enable net centric operations, the CONECT upgrade integrates the following systems: on-board client/server architecture supporting distributed processing with independent control functions, UHF Beyond Line-Of-Sight (BLOS) Joint Range Extension (JRE) capability via ARC-210 Warrior radio to exchange J-Series messaging within theater, Intelligence Broadcast Receiver (IBR), limited Internet Protocol (IP)-based UHF BLOS link supporting e-mail and file transfers, and Improved Data Modem (IDM)-based digital Variable Message Format (VMF) datalink to significantly enhance close air support (CAS) missions. This integrated suite will provide the B-52 fleet with a machine-to-machine data transfer capability supporting aircraft re-tasking and re-targeting of Conventional Air Launched Cruise Missile (CALCM), Joint Air-to-Surface Standoff Missile/JASSM-Extended Range (JASSM/JASSM-ER), and other J-series weapons across the range of B-52 military operations and missions.

In the FY13PB, the CONECT program was restructured to only replace the current Multi-Function Displays (MFDs) located at each of the crew stations, make the temporary Evolutionary Data Link (EDL) modification permanent, and demod of the CONECT test aircraft as required. However, the original CONECT development effort, as laid out in FY12, will be completed as planned and the technical design/baseline is being maintained in support of the FY14 POM decision to reinstate the program.

For FY14, the FY13 decision to restructure the CONECT program was reversed. The Air Force FY14 PB submission funds the completion of the full CONECT capability development, updates due to Diminishing Manufacturing Sources and Materiel Sources (DMSMS) issues, changes to incorporate updates to GFP, recurring changes to B-52 Software baseline, CONECT capability inclusion into the required B-52 training systems, and production/installation/initial support for a total 30 CONECT capable (2 kits were funded in EMD) aircraft. The test aircraft will not be de-modified from its CONECT configuration.

TRAINERS AND UPGRADES FOR CONECT
In order to maintain currency with the latest aircraft configuration, the CONECT program will update existing trainers or use computer-based training to add CONECT functionality to meet user-training requirements and establish a system integration laboratory (SIL) for updates of the Weapon System Trainers (WST).

MIL-STD 1760 IWBU
The MIL-STD 1760 Internal Weapons Bay Upgrade (IWBU) program modifies hardware and software for seventy-six (76) B-52H aircraft. It also modifies hardware for the Common Strategic Rotary Launchers (CSRL). The 1760 IWBU program is segmented into two increments. Increment 1 consists of two sub-increments: 1.1 and 1.2.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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Increment 1.1 provides capability for internal carriage of eight Joint Direct Attack Munitions (JDAM) smart weapons on a rotary launcher. Excess Nuclear CSRLs will be converted to Conventional Rotary Launchers (CRL).

CRL Hardware modification: Consists of Group A equipment racks and electrical wiring, Group B consists of one Integrated Weapons Interface Unit (IWIU) per CRL, this Line Replaceable Unit (LRU) was previously developed under the Advanced Weapons Integration (AWI) program and work previous accomplished for a 2005 demonstration or developed using 2006 and 2007 Congressional Add funding. CRLs will lose their nuclear capability until integration of the Mil-STD 1760 System II nuclear munitions and development and integration of a nuclear hardened IWIU. No new Nuclear CSRLs are required.

Aircraft Software modification: Consists of modifying existing aircraft, JDAM Software and ground based Joint Mission Planning System (JMPS).

Increment 1.2 provides capability for internal carriage of eight Joint Air to Surface Standoff Missiles-Extended Range (JASSM-ER) or eight Miniature Air Launched Decoys (MALD). Internal capabilities include authorized munition variants, for example, JDAM, GBU-31 (v)1, (v)3, GBU-38, JASSM, and MALD-Jammer (MALD-J).

Common Rotary Launcher(CRL) Hardware modification: Consists of modifying the Increment 1.1 configuration by adding four Group B LRUs, (three power supplies, one junction box) and Group A associated interface wiring.

Seventy-six (76) Aircraft Hardware modification: Consists of Group A wiring and circuit breakers to supply additional power to the CRL. Aircraft Software modification: Includes modifying existing JASSM-ER, MALD software.

Support Equipment: Thirty-eight (38) Multi-Use System Tester Armament Next Generation (MUSTANG) testers will be modified to support both increments.

Increment 2 will provide carriage expansion of the CRL through a software and hardware modification and will increase the number of weapon stations from 8 to 16 to support 500 lb class munitions. This will occur after increment one completes.

Mode S/5 IFF
Mode S/5 Identification Friend or Foe (IFF) is part of the Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) effort and will develop and integrate modern technolog into the B-52 to enable it to operate in the evolving air traffic environment. This effort is driven by International Civil Aviation Organization (ICAO) and Federal Aviation Administration (FAA) mandates to comply with performance standards to allow the B-52 to operate safely in controlled airspace. This program will also yield significant savings by allowing the use of more efficient flight routes and altitudes.

CNS/ATM
Capabilities identified under CNS/ATM activities will include Frequency Management (FM) immunity, digital communications (voice and data), improved navigation accuracy such as Required Navigation Performance (RNP) or Global Positioning System (GPS) enhancements, Reduced Vertical Separation Minimum (RVSM),

enhanced situational awareness such as Mode S/5 IFF, Communications Management Unit, HF Data Link, Auto Dependent Surveillance-Broadcast (ADS-B), and any follow-activities to associated components/systems resulting from modifications to CNS/ATM systems.

Anti-Skid Replacement
Anti-Skid system is used to maintain control of aircraft during landings and taxi operations. The B-52 Anti-Skid system prevents aircraft skidding by sensing the exact amount of brake pressure needed for safe braking under all runway conditions without tire damage. Previous B-52 Anti-Skid supportabilty analysis, completed in 2006 by General Atomics, indicated a supportability end date of 2011, based on parts obsolescence, a lack of test equipment and a lack of repair personnel. Parts obsolescence continues to be a major supportability factor. However, since the previous analysis, test equipment and new depot maintenance procedures to refurbish previously failed Anti-Skid Detectors have been put in place in order to provide spares until 2015 when the replacement will be availabale. The Anti-Skid Replacement program develops and installs a new system. This effort includes an upgrade of the maintenance trainers.

B-52 EHF
The B-52 Extremely High Frequency (EHF) program integrates and installs the B-52 fleet with the equipment needed to provide secure, survivable two-way EHF SATCOM link for Emergency Action Messages (EAMs) and report-backs to meet Joint Chiefs of Staff (JCS) nuclear protected Information Exchange Requirements (IERs). The B-52 EHF will install/integrate the Family of Advanced Beyond-Line-of-Sight (BLOS) Terminal (FAB-T) Airborne Wideband Terminal system developed and procured by Space and Missile Center (SMC) through PE 0303601F or other equivalent terminals/solutions, as necessary to meet user requirements. The B-52 EHF will also integrate a high data rate BLOS communication link supporting IP-based Global Information Grid (GIG) interoperability into the B-52 architecture. The B-52 EHF program is planned to be accomplished in two increments. Increment 1 preserves the existing B-52 capability to receive EAMs and report-backs via SATCOM to include an Environmental Control System (ECS) modification required to support the additional communication equipment. Increment 2 provides GIG and net-ready capability as well as full integration with other-B-52 systems.

The B-52 EHF program was terminated in the FY13 PB.

SR2
The B-52 Strategic Radar Replacement (SR2) program replaces the current AN/APQ-166 Strategic Radar fielded in the 1960s and then upgraded in the 1970s and 1980s. Although modified several times, it has never been totally replaced and several parts of the system remain from the original design, such as the antenna reflector, feed, and casting. Although sustainable through the current service life of the B-52, the legacy radar system MTBF continues to degrade and sustainment costs are expected to significantly increase after 2017. The SR2 program is a radar replacement program that may take advantage of the advanced capabilities of modern non-developmental radars, maximizing commonality with other platforms. The B-52 SR2 Program will integrate, test, and field a modern radar system, which supports all weather targeting and navigation to support the requirements of keeping the B-52 combat capable for its extended service life. Additionally, the remaining two legacy MFDs will be upgraded to take advantage of the replacement radar's full capability.

The B-52 SR2 program was terminated in the FY13 PB.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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Reconstitution of B-52 Nuclear Capability Study/Electromagnetic Pulse Test (EMP)
Renewed emphasis of the Air Force Nuclear Mission and the pivotal role the B-52 capabilities play into that role require a study be completed to ensure the platform maintains an enhanced level of readiness. The study wlll evaluate the nuclear hardening of the platform and ensure the survivability of existing Global Strike Weapons. Tasks include development of a plan required for full-scale EMP test of the B-52's nuclear mission essential systems.

ENGINEERING STUDIES & ANALYSIS AND TEST & EVALUATION
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, avionics and EW) and emerging requirement on current programs, upgrades to the B-52 SIL, AISF and WSTs, and weapon system operational/safety, supportability, reliability, and Total Ownership Cost (TOC) improvements.

ARMS CONTROL ACTIVITIES (Funding is in the ARMS Control PE, 35145F)
Arms Control Activities under the New START Treaty drives the need to modify a number of B-52s to a conventional only role by removing the Code Enable Switch and associated equipment. This effort requires a complete design to remove the equipment from the aircraft and install metal plates prohibiting reinstallation of removed equipment to comply with treaty protocols.

ADDITIONAL EFFORTS
B-52 modernization funds additional efforts that stem from the operation and maintenance of a 50-plus-year-old aircraft, such as parts obsolescence, DMS, and emerging requirements to add to or maintain the existing capabilities. Examples include, but are not limited to upgrades to outdated avionics computers, mission planning interfaces to JMPS, Air Force Mission Support System (AFMSS), and other mission planning systems (JMPS), upgrades to the EW suite, and studies and analysis. All B-52 development programs support planned requirements for unique identification in their production phases.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	93.808	53.208	41.173	-	41.173
Current President's Budget	84.171	53.208	24.007	-	24.007
Total Adjustments	-9.637	0.000	-17.166	-	-17.166
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	-6.809	0.000			
• SBIR/STTR Transfer	-2.828	0.000			
• Other Adjustments	0.000	0.000	-17.166	-	-17.166

Change Summary Explanation

FY12 adjustments: -6.809M in two BTR's ($5.0M ICBM Alternative Guidance Technologies (AGT); $1.809M Nuclear Surety), and $2.828M Small Busines Innovative Reasearch (SBIR).

FY14 adjustments: -17.166M due to the termination of the CONECT Restructure effort, which required additional development for the replacement monitors, and reinstatement of the Original CONECT effort which completed EMD in May 2012.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675039: *B-52 Modernization*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675039: *B-52 Modernization*	-	84.171	0.065	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

The EHF and SR2 programs were terminated in FY13 PB.

A. Mission Description and Budget Item Justification

Prior to FY13, all B-52 modernization programs were funded in a single BPAC, 675039 B-52 Modernization.

B-52 MODERNIZATION PROGRAMS

B-52 modernization is a comprehensive program to ensure B-52 viability to perform current and future wartime missions to include datalinks, navigation, sensors, weapons, and electronic warfare (EW) and training capabilities. B-52 modernization (initiated in FY 2005) integrates and adds both tactical and global datalink communications for real time command and control, targeting, and intelligence. It upgrades antiquated Air Traffic Management (ATM) systems with those supported by three key functions using satellite technology: Communications, Navigation and Surveillance (CNS). Modernization 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 improved weapons carriage and fully integrates advanced targeting pods with the offensive avionics system. B-52 modernization upgrades or replaces legacy defensive EW systems to include the radar warning receiver, jammers, chaff and flare dispensers and situational awareness displays as well as integration of offensive EW such as the Miniature Air-Launched Decoy (MALD) and MALD-Jammer (MALD-J). Lastly, B-52 Modernization replaces the current aging strategic radar capability with a state-of-the-art, non-developmental radar.

BA7- This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Arms Control Activities	0.000	0.065	0.000
Description: Arms Control Activation under the New START Treaty drives the need to modify approximately 28 B-52s to a conventional only role by removing the Code Enable Switch and associated equipment. This effort requires a complete design to remove the equipment from the aircraft and install metal plates prohibiting reinstallation of removed equipment to comply with treaty protocols.			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675039: *B-52 Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: N/A ***FY 2013 Plans:*** Studies/analysis to begin efforts to modify 28 aircraft to a conventional role. Design removal of equipment from aircraft and install equipment.			
Title: CONECT ***Description:*** Integrates rapid re-tasking capability of J-series weapons and conventional cruise missiles, dedicated BLOS UHF comm/datalink; computer network infrastructure, digital interphone. Multi-Function Color Displays (MFCD); and an Intelligence Broadcast Receiver (IBR). ***FY 2012 Accomplishments:*** Milestone C flight testing completed Nov 11. Milestone C and permission to into Low Rate Initial Production (LRIP) approved May 2012. Complete flight testing of the additional J-Series messages and IBR (Drop D). Analyze/fix ground/flight test issues as they are identified. Begin DMS redesign development and test effort. Begin IOT&E testing. Purchase hardware required for integration into the B-52 training systems and begin engineering design of CONECT capability into the training systems. ***FY 2013 Plans:*** Effort moved to BPAC 675050	60.884	0.000	0.000
Title: CONECT Management Services ***Description:*** Program Management Administration (PMA). Government travel, Centralized IT, SF and Support, A&AS Support ***FY 2012 Accomplishments:*** Government travel, Centralized IT, SF and Support, A&AS Support ***FY 2013 Plans:*** Effort moved to BPAC 675050	4.494	0.000	0.000
Title: EHF ***Description:*** Integrates the FAB-T Airborne Wideband Terminal (AWT) or other equivalent terminals, as required, to preserve existing B-52 capability to receive EAMs and transmit report-backs; supports USSTRATCOM requirement for secure, survivable communications. Modifies B-52 ECS to support EHF and accommodate for B-52 aircraft system modifications. Future increment provides integration into GIG to provide wideband BLOS datalink.	1.208	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675039: *B-52 Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Completion of efforts related to SRR of the EHF and ECS designs. Complete efforts associated with FAB-T analysis of B-52 unique requirements. ***FY 2013 Plans:*** Program terminated in FY13 PB.			
Title: Anti-skid ***Description:*** Replaces legacy B-52 Anti-skid system with modernized system improving safety and cockpit display. Anti-Skid Detector has been identified a critical obsolescence item, which begins to be unsupportable in FY15. ***FY 2012 Accomplishments:*** Continue with HITL Simulations; Flight Test Activities, TO source data, Airworthiness Certification documents. ***FY 2013 Plans:*** Effort moved to BPAC 675051.	3.599	0.000	0.000
Title: Anti-Skid Management Services ***Description:*** Program Management Administration (PMA) costs in support of the Anti-Skid program. ***FY 2012 Accomplishments:*** Travel in support of the Anti-Skid program. ***FY 2013 Plans:*** Program terminated in FY13 for higher Air Force priorities	0.013	0.000	0.000
Title: SR2 ***Description:*** Integrates modern non-developmental airborne radar replacing current, mission critical APQ-166 Strategic Radar, last upgraded in early-1980s. Legacy Strategic Radar is experiencing systemic sustainment and obsolescence issues. ***FY 2012 Accomplishments:*** Complete SR2 studies and initiate program activities required for termination of effort in FY 13. ***FY 2013 Plans:*** Program terminated in FY13 PB.	0.007	0.000	0.000
Title: Mode S/5 IFF	1.128	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Integrates modern IFF technology onto the B-52 by replacing the current system with APX-119; required by DoD, FAA and ICAO. ***FY 2012 Accomplishments:*** Upgrade System Integration Lab (SIL), Developmental and Operational Test Procedures, EMI/EMC (safety of flight) Test procedures as required, identify long-lead components, complete all fabrication drawings, develop Installation Drawing package, conduct SIL testing, support ground/flight testing and Air Traffic Control Radar System IFF Mark 12/Mark 12A, AIMS, ESC Systems platform certification, and report certification results. Update technical orders and weapon system trainer configuration to include Mode S/5 IFF. ***FY 2013 Plans:*** Effort moved to BPAC 675049			
Title: Mode S/5 IFF Management Services ***Description:*** Program Management Administration (PMA) costs in support of Mode S/5 IFF. ***FY 2012 Accomplishments:*** Travel in support of the Mode S/5 IFF program. ***FY 2013 Plans:*** Effort moved to BPAC 675049	0.038	0.000	0.000
Title: 1760 IWBU ***Description:*** 1760 Internal Weapons Bay Upgrade - provides internal J-series weapons capability through modification of CSRLs with IWIU and upgraded weapon management software. ***FY 2012 Accomplishments:*** Continue Increment 1.1: Continue Seek Eagle safe separation analysis; conduct ground and flight testing of CRL prototype and JDAM SMO; finalize drawings for aircraft, CRL, and test support equipment modification kits; and complete development of technical orders. Continue Increment 1.2: Modify JASSM and MALD SMOs (including respective -ER and -J variant capabilities); perform engineering and test support for SIL, ground and flight testing. Develop technical orders. Continue B-52 JMPS development, testing, and certification with JASSM and MALD, including respective variants. ***FY 2013 Plans:*** Effort moved to BPAC 675048	12.740	0.000	0.000
Title: 1760 IWBU Management Services	0.060	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Program Management Administration (PMA) costs in support of the 1760 IWBU program. ***FY 2012 Accomplishments:*** Travel in support of the 1760 IWBU program. ***FY 2013 Plans:*** Not Applicable			
Accomplishments/Planned Programs Subtotals	84.171	0.065	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• RDTE: BA07: PE 0305145F: *Arms Control Implementation*	0.000	4.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	4.000
• APAF: BA05: Line Item # B05200: *B-52*	85.841	8.299	108.666		108.666	102.715	31.151	8.266	3.890	Continuing	Continuing
• APAF: BA_05: Line Item # B05200: *Training Support to Units*	7.574	1.482	1.836		1.836	2.375	2.431	2.472	2.517	Continuing	Continuing
• APAF: BA 05: Line Item # B05200: *Arms Control Implementation*	0.000	0.000	0.500		0.500	0.200	0.100	0.200	0.000	0.000	1.000
• APAF: BA06: Line Item # 000999: *Initial Spares*	0.000	0.000	3.202		3.202	5.118	0.473	0.000	0.000	0.000	8.793
• APAF: BA07: Line Item # 000071: *Aircraft Replacement Support Equip*	14.457	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	14.457
• APAF: BA07: Line Item # 000084: *Post Production Support*	0.000	0.000	7.000		7.000	5.300	7.100	8.800	0.000	0.000	28.200

Remarks

D. Acquisition Strategy

The B-52 CONECT EMD prime contract was a sole source to Boeing Defense, Space & Security (DSS), Wichita, KS. Boeing designed, developed, tested and procured the necessary equipment from their subcontractors; developed engineering drawings, logistic and technical data, and time compliance technical order (TCTO) for installation on the B-52. The EMD effort included installing and testing CONECT equipment on a B-52 aircraft. The B-52 EHF EMD prime contract was a sole

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675039: *B-52 Modernization*

source to Boeing DSS, Wichita, KS. Boeing preserved the B-52 capability to receive EAMS and report-backs, upgraded current SIL and the environmental control system. The Engineering Manufacturing Development (EMD) effort includes installing and testing the EHF equipment on a B-52 aircraft.

The 1760 Internal Weapons Bay program will acquire software development and hardware design via a sole-source contract to Boeing DSS, Wichita, KS. Deliverables include an updated J-series weapon SMOs (software), a prototype modified CSRL, logistics support, ground and flight test support, and engineering drawings. The program will competitively procure the CRL modification kits for full rate production.

The B-52 Anti-Skid program is a joint effort between OC-ALC and OO-ALC. The modification will be implemented via Program Depot Maintenance (PDM) and Contract Field Team (CFT).

The B-52 Strategic Radar Replacement (SR2) Program was a sustainment upgrade to the B-52H fleet by leveraging existing technologies, designs, and radar components (e.g., line replaceable units (LRUs) already in production and fielded on other military platforms. It used existing, mature, proven technologies and focused resources on identifying and reducing the risk associated with integrating a modern radar onto the B-52H platform. The SR2 program was created to replace the AN/APQ-166 radar and several components in the Offensive Avionics System (OAS) associated with managing the video chain. Closeout activities began in FY12 due to program termination beginning in FY13.

The Mode S/5 IFF Program's EMD contract is sole source to Boeing Defense, Space and Security (DSS), Wichita, KS. This modification will be implemented via Contract Field Team (CFT).

The Tactical Data Link (TDL) will be sole source to Boeing DSS, Wichita, KS for the integration of TDL based on the CONECT baseline.

The Reconstitution of B-52 Nuclear Capability Study will be sole source to Boeing DSS.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675039: *B-52 Modernization*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Arms Control Activities	SS/CPAF	Boeing:Wichita, KS	-	0.000		0.065	Sep 2013	0.000		-		0.000	Continuing	Continuing	
CONECT EMD	SS/CPIF	Boeing:Wichita, KS	-	31.958	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	
B-52 EHF EMD	SS/ Various	Boeing:Wichita, KS	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
ATP Functions	Allot	WPAFB:Dayton, OH	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
Mode S/5 IFF EMD	SS/CPFF	Boeing:Wichita, KS	-	0.049	Jan 2013	0.000		0.000		-		0.000	Continuing	Continuing	
1760 IWBU EMD	SS/CPIF	WPAFB:Dayton, OH	-	1.000	May 2013	0.000		0.000		-		0.000	Continuing	Continuing	
SR2	SS/CPFF	Boeing:Wichita, KS	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
Anti-Skid Group B Hardware Development	SS/FFP	ES3/OO-ALC UT:Clearfield UT, KS	-	1.211	Sep 2012	0.000		0.000		-		0.000	Continuing	Continuing	
1760 IWB Software Development	Various	Boeing:Wichita, KS	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
1760 IWB Production Development	Various	Boeing:Wichita, KS	-	4.040	Apr 2012	0.000		0.000		-		0.000	Continuing	Continuing	
1760 IWB Mission Planning Development	WR	557 SMXS:Tinker AFB, OK	-	3.000		0.000		0.000		-		0.000	Continuing	Continuing	
Other Air Force Priorities	Various	Air Force:,	-	10.171		0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	51.429		0.065		0.000		0.000		0.000			

Remarks

In FY12, transition to closeout actions for SR2 and EHF.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CONECT Simulator/ Trainer	Various	507 ACSS:OO-ALC, UT	-	11.250	Jan 2012	0.000		0.000		-		0.000	Continuing	Continuing	
CONECT CLIP Support	SS/FP	ESC/HNA:ESC, MA	-	0.858	Mar 2012	0.000		0.000		-		0.000	Continuing	Continuing	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
B-52 EHF Satellite Simulator - Lincoln Labs (FFRDC)	MIPR	ESC:Hanscom AFB, MA	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
ATP Software Trainer Upgrades	MIPR	OO-ALC:Ogden, UT	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
SR2	Various	Wright-Patterson AFB:, OH	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
ATP Test Support	SS/CPFF	Boeing:Wichita, KS	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
1760 IWBU PDU Support	Various	Wright-Patterson AFB:, OH	-	4.695		0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	16.803		0.000		0.000		0.000		0.000			

Remarks

In FY12, transition to closeout actions for SR2 and EHF.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CONECT 419 FLTS	PO	419 FLTS:Edwards AFB, CA	-	5.782	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	
B-52 EHF 419 FLTS	PO	419 FLTS:Edwards AFB, CA	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
CONECT JTIC	MIPR	JTIC:Fort Huachuca, AZ	-	0.394	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	
SR2	PO	Not specified.:Edwards AFB, CA	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
Anti-Skid Replacement	PO	419 FLTS:Edwards, AFB, CA	-	1.788	Aug 2012	0.000		0.000		-		0.000	Continuing	Continuing	
Anti-Skid Flight Test Strut Instrumentation	SS/FFP	ES3:Clearfield, UT	-	0.600	Sep 2012	0.000		0.000		-		0.000	Continuing	Continuing	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
1760 IWB Government Test	PO	419 FLTS:Edwards AFB, CA	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
Mode S/5	PO	Not specified.:Edwards AFB, CA	-	1.103	Oct 2012	0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	9.667		0.000		0.000		0.000		0.000			

Remarks

In FY12, transition to closeout actions for SR2 and EHF.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CONECT ASC/WWV	Various	ASC/WWV:Wright-Patterson AFB, OH	-	0.894	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	
B-52 EHF	Various	ASC/WWV:Wright-Patterson AFB, OH	-	1.208	Nov 2011	0.000		0.000		-		0.000	Continuing	Continuing	
SR2 ASC/WWV	Various	ASC/WWV:Wright-Patterson AFB, OH	-	0.007	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	
CONECT OCALC/GKDF	Various	OCALC/ GKDF:Tinker AFB, OK	-	0.080	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	
SR2 OCALC/GKDF	Various	Not specified.:Tinker AFB, OK	-	0.020	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	
1760 IWB Program Management Support	C/Various	TAASC:Tinker AFB, OK	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
1760 IWB PMA/TDY	Various	AFLCMC/ WWV:Tinker AFB, OK	-	0.065		0.000		0.000		-		0.000	Continuing	Continuing	
Mode S/5 IFF PMA/TDY	Various	AFLCMC/ WWV:Tinker AFB, OK	-	0.014		0.000		0.000		-		0.000	Continuing	Continuing	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Anti-Skid PMA/TDY	Various	AFLCMC/ WWV:Tinker AFB, OK	-	0.013		0.000		0.000		-		0.000	Continuing	Continuing	
CONECT Program Support, Studies and Analysis, and Misc Expenses	Various	Various:,	-	3.971	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	
B-52 EHF Program Support, Studies and Analysis	Various	Various:,	-	0.000	Mar 2012	0.000		0.000		-		0.000	Continuing	Continuing	
SR2 Program Support, Studies and Analysis	Various	Various:,	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	6.272		0.000		0.000		0.000		0.000			

Remarks

In FY12, transition to closeout actions for SR2 and EHF.

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	84.171		0.065		0.000		0.000		0.000			

Remarks

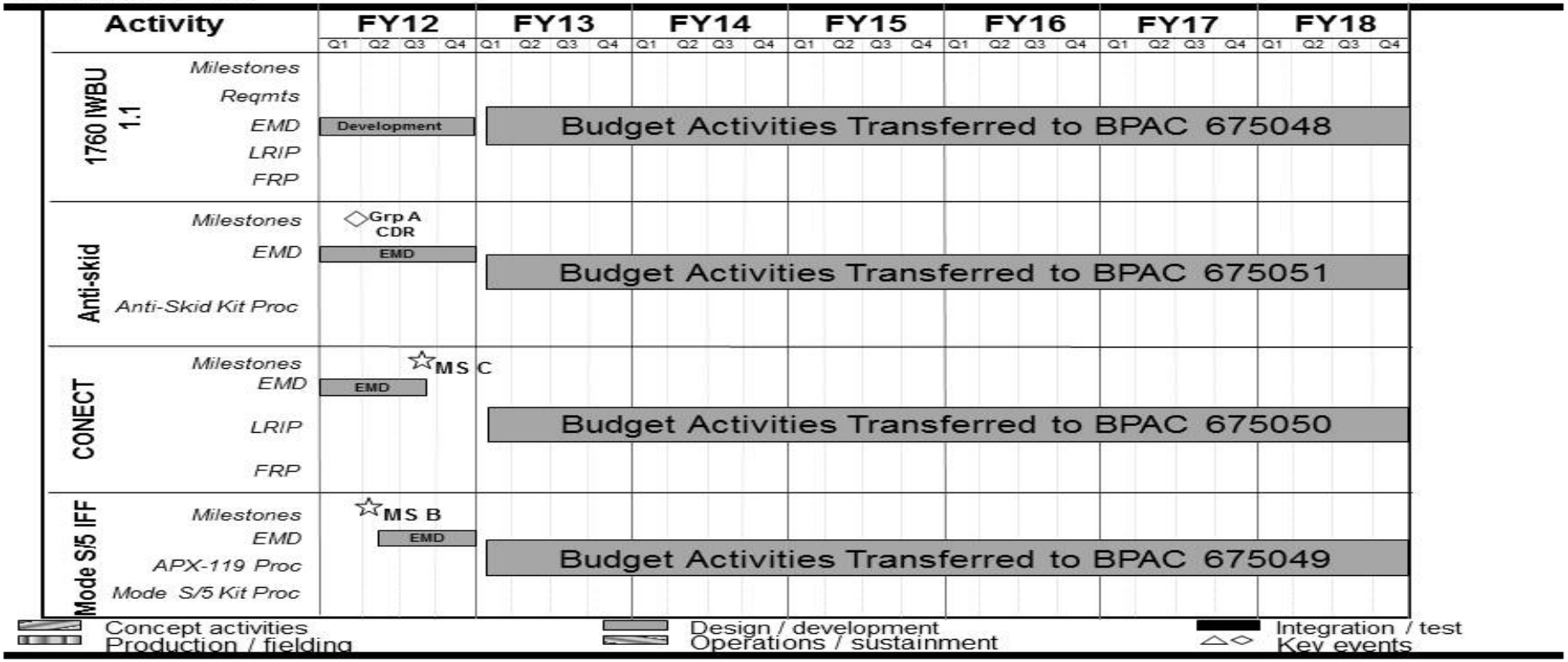
In FY12, transition to closeout actions for SR2 and EHF.

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675039: *B-52 Modernization*

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B-52 Modernization Schedule

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101113F: *B-52 SQUADRONS*	**PROJECT** 675039: *B-52 Modernization*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
CONECT Ground/Flight Test Drop D	1	2012	4	2012
CONECT LRIP Milestone C	3	2012	3	2012
Anti-Skid EMD	1	2012	4	2013
Mode S/5 IFF EMD	2	2012	3	2014
1760 IWB EMD	3	2013	4	2014

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
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COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675048: *1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)*	-	0.000	16.490	11.373	-	11.373	8.264	3.901	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

PRIOR YEAR COSTS FOR 1760 IWBU FY10-FY12 ARE CONTAINED IN BPAC 675039 B-52 MODERNIZATION. THIS DOCUMENT REFLECTS NEW BPAC 675048 STARTING IN FY13.

A. Mission Description and Budget Item Justification

MIL-STD 1760 Internal Weapons Bay Upgrade (IWBU) requires the integration of the 1760 weapons capability into the bomb bay on seventy-six (76) B-52H aircraft utilizing Common Strategic Rotary Launcher (CSRLs) converted into Conventional Rotary Launchers (CRLs). The 1760 IWBU program is segmented into two Increments; Increment 1 consists of two sub-increments 1.1 and 1.2.

Increment 1.1 consists of internal carriage of eight Joint Direct Attack Munitions (JDAM) and variants, to include Laser JDAM (L-JDAM), on a rotary launcher. Additionally, L-JDAM will be integrated on external hard points during this effort. The CRL Hardware modification consists of Group A equipment racks and electrical wiring and Group B consists of one Integrated Weapons Interface Unit (IWIU) per CRL. This Line Replaceable Unit (LRU) was previously developed under the Advanced Weapons Integration (AWI) program and work was previously accomplished for a 2005 demonstration or developed using 2006 and 2007 Congressional Add funding. CSRLs will lose their nuclear capability when modified into a CRL. No new Nuclear CSRLs will be required. The aircraft software modification consists of modifying existing aircraft, JDAM Stores Management Overlays (SMO), and ground based Joint Mission Planning System (JMPS).

CRL Hardware modification: Consists of Group A equipment racks and electrical wiring, Group B consists of one Integrated Weapons Interface Unit (IWIU) per CRL, this Line Replaceable Unit (LRU) was previously developed under the Advanced Weapons Integration (AWI) program and work previous accomplished for a 2005 demonstration or developed using 2006 and 2007 Congressional Add funding. CRLs will lose their nuclear capability until integration of the MIL-STD 1760 System II nuclear munitions and development and integration of a nuclear hardened IWIU. No new Nuclear CSRLs will be required.

Aircraft Software modification: Consists of modifying existing aircraft, JDAM Software and ground based Joint Mission Planning System (JMPS).
Increment 1.2 provides capability for internal carriage of eight Joint Air to Surface Standoff Missiles-Extended Range (JASSM-ER) or eight Miniature Air Launched Decoys (MALD). Internal capabilities include authorized munition variants, for example, JDAM, GBU-31 (v)1, (v)3, GBU-38, JASSM, and MALD-Jammer (MALD-J).

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
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CRL Hardware modification: Consists of modifying the Increment 1.1 configuration by adding four Group B LRUs, (up to three power supplies and one junction box) and Group A associated interface wiring.

Aircraft Hardware modification: Consists of Group A wiring and circuit breakers to supply additional power to the CRL. Aircraft Software modification: Includes modifying existing JASSM-ER, MALD software.

Support Equipment: Thirty-eight (38) Multi-Use System Tester Armament Next Generation (MUSTANG) testers will be modified to support both increments.

A future Increment (Increment 2) will provide carriage expansion of the CRL through a software and hardware modification and will increase the number of weapon stations from 8 to 16 and provide mixed load capability. This will occur after Increment 1 completes.

B-52 Advanced Weapons Integration (AWI) initiatives previously managed under MN-4260 are now managed under two separate modifications for clarity in effort, funding and schedule. The initiatives are now described in MN-4260 Advanced Weapons Integration (AWI) and MN-6884 MIL-STD-1760

Budget Item Justification: FY14 continues Increment 1.1 development, continues SEEK EAGLE safe separation analysis, and conducts ground and flight testing of CRL prototype and JDAM SMO. Continue B-52 Joint Mission Planning System (JMPS) and Trainer/GMCP software. Finalize drawings for CRL, and test support equipment modification kits to support Milestone C activity. Begin development of technical orders in preparation for kit-proof. Modify three prototype CRLs.

BA7- This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: 1760 IWBU	0.000	15.648	10.429
Description: 1760 Internal Weapons Bay Upgrade - provides internal J-series weapons capability through modification of CSRLs with IWIUs and upgraded weapon management software.			
FY 2012 Accomplishments: Effort accomplished in BPAC 675039			
FY 2013 Plans: Continue Increment 1.1: Continue SEEK EAGLE safe separation analysis, conduct preliminary design review, critical design review, technical readiness review, continue formal qualification testing of JDAM software stores management overlay and enter engineering, manufacturing and development phase. Continue B-52 Joint Mission			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Planning System (JMPS) development, testing, and certification. Begin design, coding, and testing ground maintenance computer program software. ***FY 2014 Plans:*** Continue Increment 1.1 development: Continue SEEK EAGLE safe separation analysis. Conduct ground and flight testing of CRL prototype and JDAM SMO. Continue B-52 Joint Mission Planning System (JMPS)) and Trainer/GMCP software. Finalize drawings for CRL, and test support equipment modification kits to support Milestone C activity. Begin development of technical orders in preparation for kit-proof. Modify three prototype CRLs.			
Title: 1760 IWBU Management Services ***Description:*** Program Management Administration (PMA) costs in support of the 1760 IWBU program. ***FY 2012 Accomplishments:*** Effort accomplished in BPAC 675039. ***FY 2013 Plans:*** A&AS and Travel in support of the 1760 IWBU program. ***FY 2014 Plans:*** A&AS and Travel in support of the 1760 IWBU program.	0.000	0.842	0.944
Accomplishments/Planned Programs Subtotals	0.000	16.490	11.373

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: Line Item # B05200: *B-52*	0.000	3.238	5.120		5.120	0.380	0.000	0.000	0.000	Continuing	Continuing
• RDTE: BA07: PE 0101113F: *B-52 Squadrons*	12.800	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

The 1760 Internal Weapons Bay Upgrade program will acquire software development and hardware design via a sole-source contract to Boeing DSS, Wichita, KS. Deliverables include an updated J-series weapon SMOs (software), three prototype modified CSRLs, logistics support, ground and flight test support, and engineering drawings. The program will competitively procure the CRL modification kits for full rate production.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
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E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675048: *1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
1760 IWBU Production Development	Various	Boeing:Wichita, KS	-	0.000		13.459	May 2013	6.041	Jan 2014	-		6.041	Continuing	Continuing	
1760 IWBU Mission Planning Development	WR	557 SMXS:Tinker AFB, OK	-	0.000		0.000		0.834	Jan 2014	-		0.834	Continuing	Continuing	
		Subtotal	0.000	0.000		13.459		6.875		0.000		6.875			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
1760 IWBU Government Test	PO	419 FLTS:Edwards AFB, CA	-	0.000		1.004	Jul 2013	2.968	Jan 2014	-		2.968	Continuing	Continuing	
1760 IWBU Trainer Software	Allot	AFLCMC:Wright Patterson AFB, OH	-	0.000		1.177	Jun 2013	0.090	Jan 2014	-		0.090	Continuing	Continuing	
1760 IWBU Ground Maintenance Computer Program	WR	Not specified.:,	-	0.000		0.008	Jun 2013	0.496	Jan 2014	-		0.496	Continuing	Continuing	
		Subtotal	0.000	0.000		2.189		3.554		0.000		3.554			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
1760 IWBU Program Management	Various	Not specified.:Tinker AFB, OK	-	0.000		0.842	Apr 2013	0.944	Nov 2013	-		0.944	Continuing	Continuing	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Administration A&AS, Travel															
Subtotal			0.000	0.000		0.842		0.944		0.000		0.944			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		16.490		11.373		0.000		11.373			

Remarks

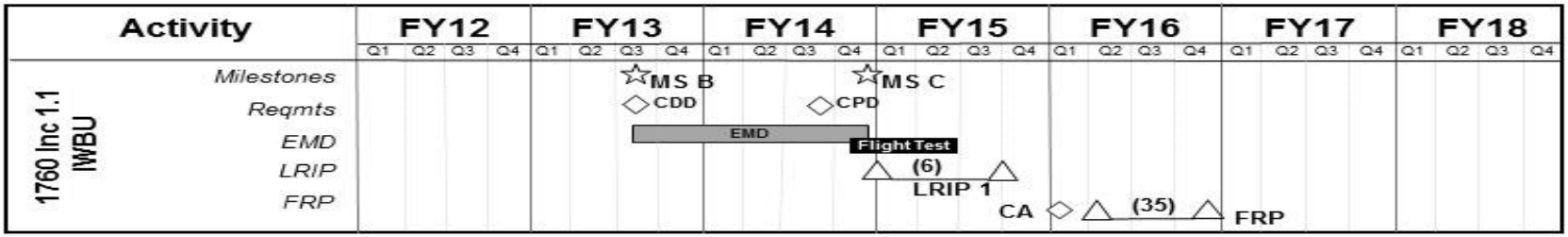
Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675048: *1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)*

UNCLASSIFIED

B-52 Squadrons

1760 IWBU Schedule

U.S. AIR FORCE



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

UNCLASSIFIED *Integrity - Service - Excellence* 1

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101113F: *B-52 SQUADRONS*	**PROJECT** 675048: *1760 INTERNAL WEAPONS BAY UPGRADE (IWBU)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
1760 IWBU Milestone B	3	2013	3	2013
1760 IWBU EMD	3	2013	4	2014
1760 IWBU Milestone C	4	2014	4	2014

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675049: *MODE S/5 IFF*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675049: *MODE S/5 IFF*	-	0.000	1.202	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

PRIOR YEAR COSTS FOR MODE S/5 IFF FY11-FY12 ARE CONTAINED IN BPAC 675039 B-52 MODERNIZATION. THIS DOCUMENT REFLECTS NEW BPAC 675049 STARTING IN FY13.

A. Mission Description and Budget Item Justification

Beginning in FY13 Project Number 675049, Mode S/5 IFF, transferred from Project Number 675039, B-52 Modernization.

Mode S/5 IFF
Mode S/5 Identification Friend or Foe (IFF) is part of the Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) effort and 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 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.

CNS/ATM
Capabilities identified under CNS/ATM activities will include Frequency Management (FM) immunity, digital communications (voice and data), improved navigation accuracy such as Required Navigation Performance (RNP) or Global Positioning System (GPS) enhancements, Reduced Vertical Separation Minimum (RVSM), enhanced situational awareness such as Mode S/Mode 5 IFF, Communications Management Unit, HF Data Link, Auto Dependent Surveillance- Broadcast (ADS-B), and any follow-on activities to associated components/systems resulting from modifications to CNS/ATM systems.

BA7- This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Mode S/5 IFF	0.000	1.152	0.000
Description: Integrates modern IFF technology onto the B-52 by replacing the current system with APX-119 required by DoD, FAA and the International Civil Aviation Organization (ICAO).			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675049: *MODE S/5 IFF*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Effort accomplished in BPAC 675039. ***FY 2013 Plans:*** Upgrade Systems Integration Lab (SIL), Developmental and Operational Test Procedures, EMI/EMC (saftey of flight) Test procedures as required, identify long-lead components, complete all fabrication drawings, develop Installation Drawing Package, conduct SIL testing, support ground/flight testing and Air Traffic Control Radar System IFF Mark 12/Mark 12A, AIMS, ESC Systems platform certification, and report certification results. Update technical orders and weapon system trainer configuration to include Mode S/5 IFF. Maintain interoperability with multiple configurations in fleet.			
Title: Mode S/5 IFF Management Services ***Description:*** Program Management Administration (PMA) costs in support of Mode S/5 IFF ***FY 2012 Accomplishments:*** Effort accomplished in BPAC 675039. ***FY 2013 Plans:*** Travel in support of the Mode S/5 IFF program.	0.000	0.050	0.000
Accomplishments/Planned Programs Subtotals	0.000	1.202	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: Line Item # B05200: *B-52*	0.000	0.000	9.590		9.590	12.203	2.509	0.000	0.000	Continuing	Continuing
• APAF: BA06: Line Item # 000999: *Initial Spares/Repair Parts*	0.000	0.000	0.592		0.592	0.905	0.075	0.000	0.000	Continuing	Continuing
• RDTE: BA07: PE 0101113F: *B-52 Squadrons*	1.166	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Mode S/5 IFF Program's EMD contract is sole source to Boeing Defense, Space and Security (DSS), Wichita, KS. This modification will be implemented via Contract Field Team (CFT).

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675049: *MODE S/5 IFF*

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675049: *MODE S/5 IFF*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Mode S/5 IFF Fleet Interoperability EMD	SS/CPFF	Boeing:Wichita, OK	-	0.000		0.757	Apr 2013	0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.000		0.757		0.000		0.000		0.000			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Mode S/5 IFF Simulator/ Trainers	MIPR	WPAFB:Dayton, OH	-	0.000		0.349	Jun 2013	0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.000		0.349		0.000		0.000		0.000			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Interpreter Test Support	MIPR	Patuxent River:, MD	-	0.000		0.046	Feb 2013	0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.000		0.046		0.000		0.000		0.000			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA	Various	Tinker AFB:, OK	-	0.000		0.050		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.000		0.050		0.000		0.000		0.000			

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		1.202		0.000		0.000		0.000			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675049: *MODE S/5 IFF*	

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract

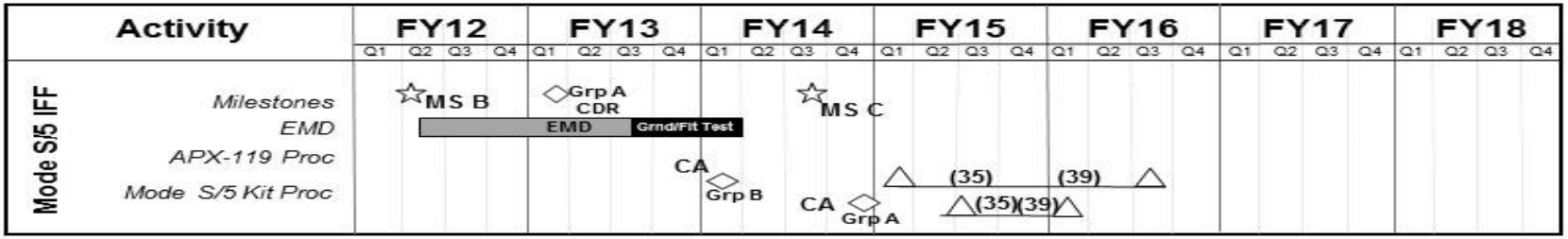
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675049: *MODE S/5 IFF*

U.S. AIR FORCE

UNCLASSIFIED

B-52 Squadrons
Mode S/5 Schedule



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

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101113F: *B-52 SQUADRONS*	**PROJECT** 675049: *MODE S/5 IFF*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Mode S/5 IFF Milestone B	2	2012	2	2012
Mode S/5 IFF EMD	2	2012	3	2014
Mode S/5 IFF Milestone C	3	2014	3	2014

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675050: *CONECT*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675050: *CONECT*	-	0.000	34.700	12.634	-	12.634	11.923	0.000	7.251	4.025	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

PRIOR YEAR COSTS FOR CONECT FY 05 - FY 12 ARE CONTAINED IN BPAC 675039 B-52 MODERNIZATION. THIS DOCUMENT REFLECTS NEW BPAC 675050 STARTING IN FY 13.

A. Mission Description and Budget Item Justification

CONECT

The B-52 Combat Network Communications Technology (CONECT) acquisition program supports nuclear and conventional operations by upgrading the B-52 fleet with tactical datalink and voice communications capabilities along with improved threat and situational awareness to support participation in network centric operations. The CONECT upgrade includes new multi-functional color displays (MFCDs) and a digital interphone system, which will survive and function through the nuclear environment to enhance crew interaction and situational awareness. To enable net centric operations, the CONECT upgrade integrates: on-board client/server architecture supporting distributed processing with independent control functions; UHF Beyond Line-Of-Sight (BLOS) Joint Range Extension (JRE) capability via ARC-210 Warrior radio to exchange J-Series messaging within theater; Intelligence Broadcast Receiver (IBR); limited Internet Protocol (IP)-based UHF BLOS link supporting e-mail and file transfers; and Improved Data Modem (IDM)-based digital Variable Message Format (VMF) datalink to significantly enhance close air support (CAS) missions. This integrated suite will provide the B-52 fleet with a machine-to-machine data transfer capability supporting aircraft re-tasking and re-targeting of Conventional Air Launched Cruise Missile (CALCM), Joint Air-to-Surface Standoff Missile/JASSM-Extended Range (JASSM/JASSM-ER), and other J-series weapons across the range of B-52 military operations and missions.

For FY14, the FY13 decision to restructure the CONECT program was reversed. The Air Force FY14 PB submission funds the completion of the full CONECT capability development, updates due to Diminishing Manufacturing Sources and Material Sources (DMSMS) issues, changes to incorporate updates to GFP, recurring changes to B-52 Software baseline, CONECT capability inclusion into the required B-52 training systems, and production/installation/initial support for a total 30 CONECT capable (2 kits were funded in EMD) aircraft. The test aircraft will not be de-modified from its original CONECT configuration.

TRAINERS AND UPGRADES FOR CONECT

In order to maintain currency with the latest aircraft configuration, the CONECT program will update existing trainers or use computer-based training to add CONECT functionality to meet user-training requirements and establish a system integration laboratory (SIL) for updates of the Weapon System Trainers (WST).

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675050: *CONECT*

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: CONECT ***Description:*** Covered under BPAC 675039 in FY12. New BPAC (675050) was established with FY13 President's Budget. Continue DMS redesign development and test effort. Continuation of engineering design of CONECT capability into the B-52 training systems. Begin incorporating changes required due to updates in GFE and crypto modernization requirements. Incorporate/integrate CONECT with recurring updates of the B-52 software baseline. ***FY 2012 Accomplishments:*** Effort accomplished in BPAC 675039. ***FY 2013 Plans:*** Initiate restructure of the B-52 CONECT program, to include replacement the current MFDs on non-CONECT aircraft, due to long standing obsolescence issues. FY14 PB reverses this program path. ***FY 2014 Plans:*** Continue DMS redesign development and test effort. Continuation of engineering design of CONECT capability into the B-52 training systems. Incorporate changes required due to updates in GFE and crypto modernization requirements. Incorporate/integrate CONECT with recurring updates of the B-52 software baseline.	0.000	32.822	11.579
Title: CONECT PMA ***Description:*** Government travel, Centralized IT, SF and support, A&AS support Covered under BPAC 675039 in FY12 ***FY 2012 Accomplishments:*** Covered under BPAC 675039 for FY12 ***FY 2013 Plans:*** Government travel, Centralized IT, SF and support, A&AS support ***FY 2014 Plans:*** Government travel, Centralized IT, SF and support, A&AS support	0.000	1.878	1.055
Accomplishments/Planned Programs Subtotals	0.000	34.700	12.634

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675050: *CONECT*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: Line Item # B05200: *B-52*	84.406	0.000	87.200		87.200	83.600	27.300	6.900	2.500	Continuing	Continuing
• APAF: BA06: Line Item # 000999: *Initial Spares\Repair Parts*	0.000	0.000	3.100		3.100	3.100	0.000	0.000	0.000	0.000	6.200
• APAF: BA07: Line Item # 000084: *Post Production Support*	0.000	0.000	7.000		7.000	5.300	7.100	8.800	0.000	Continuing	Continuing
• RDT&E: BA07: PE 0101113F: *B-52 Squadrons*	74.056	34.700	12.634		12.634	11.923	0.000	7.251	4.025	Continuing	Continuing

Remarks

D. Acquisition Strategy

The B-52 CONECT EMD prime contract was a sole source to Boeing Defense, Space & Security (DSS), Wichita, KS. Boeing designs, develops, tests and procures necessary equipment from their subcontractors; developed engineering drawings, logistic and technical data, and time compliance technical order (TCTO) for installation on the B-52.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675050: *CONECT*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Baseline CONECT EMD - Wright Patt	SS/ Various	Boeing:Wichita, KS	-	0.000		0.000		6.702	Oct 2014	-		6.702	Continuing	Continuing	
CONECT Restructure - Tinker	Various	Not specified.:,	-	0.000		34.700	Oct 2013	0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.000		34.700		6.702		0.000		6.702			

Remarks

FY13 President's Budget restructured the Baseline CONECT Program in lieu of making Evloutionary Data Link, a temporary mod, permanent. Also included updating the displays due to Diminishing Manufacturing Sources issues. The FY14 PB restored fundng for the Baseline CONECT Program at a reduced fleet size of 30 aircraft.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Trainer Update	Various	AFLCMC/ WNS:WPAFB, OH	-	0.000		0.000		3.976	Oct 2014	-		3.976	Continuing	Continuing	
		Subtotal	0.000	0.000		0.000		3.976		0.000		3.976			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Flight Test	PO	Edwards AFB:, CA	-	0.000		0.000		1.856	Oct 2014	-		1.856	Continuing	Continuing	
JITC	MIPR	Not specified.:,	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.000		0.000		1.856		0.000		1.856			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675050: *CONECT*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
A&AS, Travel, Centralized Support	Various	Various:,	-	0.000		0.000		0.100	Oct 2014	-		0.100	Continuing	Continuing	
		Subtotal	0.000	0.000		0.000		0.100		0.000		0.100			

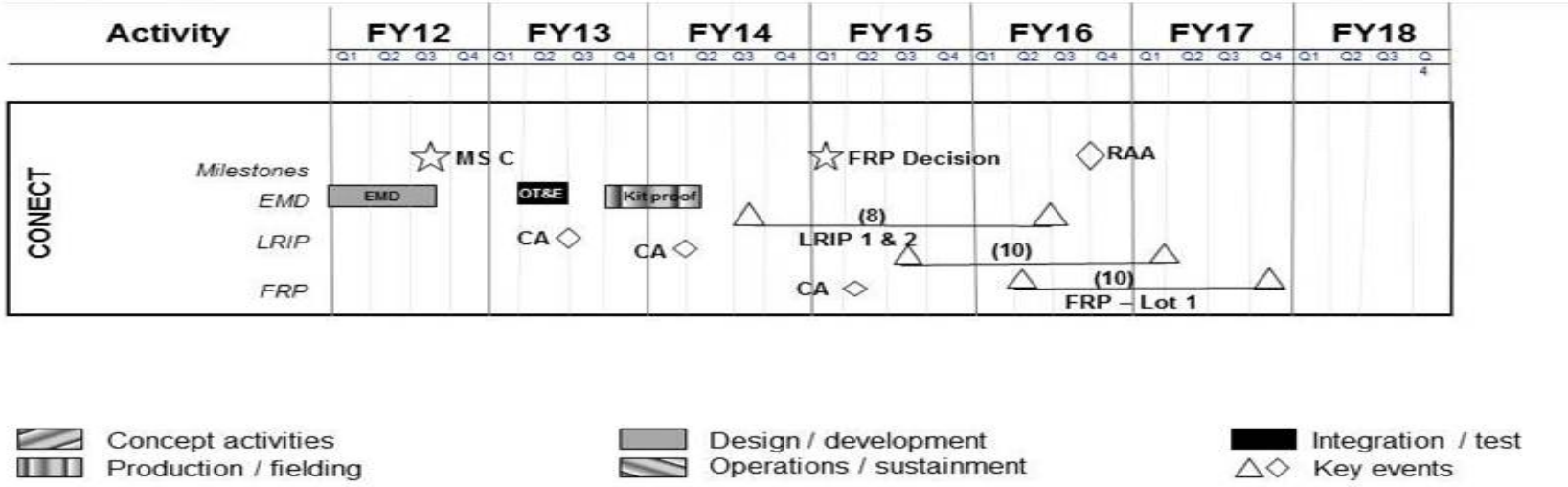
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		34.700		12.634		0.000		12.634			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675050: *CONECT*

U.S. AIR FORCE

B-52 CONECT Schedule



Integrity - Service - Excellence

1

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101113F: *B-52 SQUADRONS*	**PROJECT** 675050: *CONECT*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
CONECT Milestone C	3	2012	3	2012
CONECT LRIP 1 Award	2	2013	2	2013
CONECT LRIP 2 Award	2	2014	2	2014
CONECT Full Rate Award	2	2015	2	2015

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675051: *ANTI-SKID*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675051: *ANTI-SKID*	-	0.000	0.751	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

PRIOR YEAR COSTS FOR ANTI-SKID FY10-FY12 ARE CONTAINED IN BPAC 675039 B-52 MODERNIZATION. THIS DOCUMENT REFLECTS NEW BPAC 675051 STARTING IN FY13

A. Mission Description and Budget Item Justification

Beginning in FY13 Project Number 675051, B-52 Anti Skid Replacement, transferred from Project Number 675039, B-52 Modernization.

The B-52 Anti-skid system is used to maintain control of aircraft during landings and taxi operations. The B-52 Anti-skid system prevents aircraft skidding by sensing the exact amount of brake pressure needed for safe braking under all runway conditions without tire damage. Previous B-52 Anti-skid supportability analysis, completed in 2006 by General Atomics, indicated a supportability end date of 2011, based on parts obsolescence, a lack of test equipment and a lack of repair personnel. Parts obsolescence continues to be a major supportability factor. However, since the previous analysis, test equipment and new depot maintenance procedures to refurbish previously failed Anti-skid detectors have been put in place in order to provide spares until 2014/2015 when the replacement will be available. The Anti-skid Replacement program develops and installs a new system. This effort includes an upgrade of the maintenance trainers.

BA7- This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Anti-skid	0.000	0.731	0.000
Description: Replaces legacy B-52 Anti-skid system with modernized system improving safety and cockpit display. Anti-skid detector has been identified a critical obsolescence item, which begins to be unsupportable in FY15.			
FY 2012 Accomplishments: Effort accomplished in BPAC 675039.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675051: *ANTI-SKID*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continue/complete Flight Test Activities, Flight Test Reports, update Techhnical Order (TO) data.			
Title: Anti-Skid Management Services ***Description:*** Program Management Administration (PMA) costs in support of the Anti-Skid program. ***FY 2012 Accomplishments:*** Effort accomplished in BPAC 675039. ***FY 2013 Plans:*** Travel in support of the Anti-Skid program.	0.000	0.020	0.000
Accomplishments/Planned Programs Subtotals	0.000	0.751	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: Line Item # B05200: *B-52*	0.000	0.000	6.737		6.737	5.936	0.898	0.914	0.930	Continuing	Continuing
• APAF: BA06: Line Item # 000999: *Initial Spares/Repair Parts*	0.000	0.000	0.384		0.384	0.589	0.048	0.000	0.000	Continuing	Continuing
• RDTE: BA07: PE 0101113F: *B-52 Squadrons*	3.617	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

The B-52 Anti-skid program is a combined effort between OC-ALC and OO-ALC (both organizations now under the AF Life-Cycle Management Center). The modification will be implemented via Program Depot Maintenance (PDM) and Contract Field Team (CFT).

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675051: *ANTI-SKID*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Anti-skid Replacement	Various	Edwards, AFB:Palmdale, CA	-	0.000		0.731	Nov 2012	0.000		-		0.000	0.000	0.731	0.751
		Subtotal	0.000	0.000		0.731		0.000		0.000		0.000	0.000	0.731	0.751

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA	Various	Tinker AFB:, OK	-	0.000		0.020		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.000		0.020		0.000		0.000		0.000			

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		0.751		0.000		0.000		0.000			

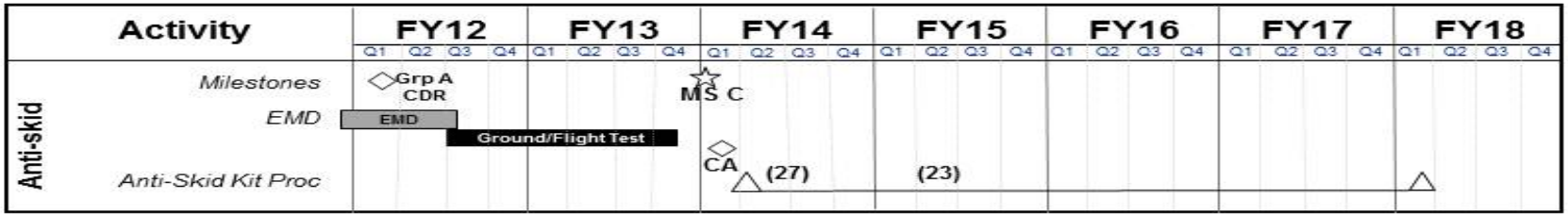
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101113F: *B-52 SQUADRONS*	PROJECT 675051: *ANTI-SKID*

UNCLASSIFIED

U.S. AIR FORCE

B-52 Squadrons
Anti-Skid Schedule



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

UNCLASSIFIED

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101113F: *B-52 SQUADRONS*	**PROJECT** 675051: *ANTI-SKID*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Anti-skid EMD & Test & Evaluation	1	2012	4	2013
Anti-skid MS C	1	2014	1	2014
Anti-skid FRP	1	2014	1	2016
Kit Proof	1	2015	1	2015
RAA	4	2015	4	2015

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0101122F: *Air-Launched Cruise Missile (ALCM)*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.782	0.431	0.450	-	0.450	0.455	0.459	0.467	0.475	Continuing	Continuing
674797: *Flight Testing & Navigation Enhancement*	-	0.782	0.431	0.450	-	0.450	0.455	0.459	0.467	0.475	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

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 W80 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.

The purpose of this program element is to ensure ALCM sustainability to 2030 in support of Air Force strategic nuclear deterrence and global strike mission requirements.

An ALCM Service Life Extension Program (SLEP) was developed to support ALCM Service Life to 2030. The results of SLEP studies identified system components and support equipment that will become non-supportable prior to 2030. Service life extension of this critical weapon is essential to meet United States Strategic Command (USSTRATCOM) deliberate planning commitments.

The Aging and Surveillance program for ALCM continuously assesses critical components such as those in the safe arm and fuze subsystem, navigation/guidance system, and electrical/power distribution system. The program identifies aging trends prior to failures in fielded components that would result in fleet-wide reliability and supportability problems. Development funds are required to update software, test procedures, and test equipment. FY12 funding supported development of new hardware and software to update the contractor's testing complex/capabilities in order to add the Guided Missile Flight Controller (GMFC) to the annual Aging & Surveillance testing program.

As part of the build phase of the sustaining engineering approach, the SPO is developing a plan for ALCM sustainment using a computer-aided decision making process. This concept is called ALCM Sustainment Enhancement Toolbox (ASET). The first phase of ASET is the ALCM Report Recommendation Tool (ARRT).

Beginning in FY13, development funds are required to develop ARRT to track and archive missile safety and flight test anamoly investigations, OEM failure analyses and feasibility studies. Also, FY13 funds are required to develop test procedures to implement a new CJCS-directed requirement for High-Altitude Electromagnetic Pulse (HEMP) testing for nuclear systems.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101122F: *Air-Launched Cruise Missile (ALCM)*

BA7- This program is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.803	0.431	0.450	-	0.450
Current President's Budget	0.782	0.431	0.450	-	0.450
Total Adjustments	-0.021	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.021	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

Change Summary Explanation

No significant Changes

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: ALCM Aging and Surveillance Program	0.782	0.392	0.405

Description: Continue aging and surveillance program for ALCM system components to identify age related failure trends and prevent reliability and supportability issues.

FY 2012 Accomplishments:

Continued execution of aging and surveillance program for ALCM system components to identify age related failure trends and prevent reliability and supportability issues. Developed hardware and software to update the contractor's testing complex/ capabilities in order to add the Guided Missile Flight Controller (GMFC) to the annual A&S testing program.

FY 2013 Plans:

Continue execution of aging and surveillance program for ALCM system components to identify age related failure trends and prevent reliability and supportability issues. Develop HEMP Test procedures. Development of ASET.

FY 2014 Plans:

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101122F: *Air-Launched Cruise Missile (ALCM)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continue execution of aging and surveillance program for ALCM system components to identify age related failure trends and prevent reliability and supportability issues. Continue development of ASET.			
Title: HEMP Test Plan Development ***Description:*** Develops test procedures to implement a new CJCS-directed requirement for High-Altitude Electromagnetic Pulse (HEMP) testing for nuclear systems. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** Develop test procedures to implement a new CJCS-directed requirement for High-Altitude Electromagnetic Pulse (HEMP) testing for nuclear systems.	0.000	0.039	0.000
Title: ALCM A&S PMA ***Description:*** Government travel in support of RDT&E portion of the ALCM A&S program. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** Government travel in support of the RDT&E portion of the ALCM A&S program.	0.000	0.000	0.045
Accomplishments/Planned Programs Subtotals	0.782	0.431	0.450

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• MPAF: BA03: MALCBG: PE 0101122F: *ALCM, Missile Modifications*	9.955	13.620	6.888		6.888	16.260	3.087	0.000	0.000	Continuing	Continuing
• MPAF: BA04: MALCBG: PE 0101122F: *ALCM, Replenishment Spares*	1.296	5.206	4.561		4.561	4.819	2.236	2.276	2.317	Continuing	Continuing

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101122F: *Air-Launched Cruise Missile (ALCM)*

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA03: MALCBG: PE 0101122F: *ALCM, Electronics & Telecomunications Equipment (BP83)*	1.582	1.635	1.659		1.659	1.687	1.716	1.747	1.778	Continuing	Continuing
• MPAF: BA03: MALCBG: PE 0701212F: *Automated Test Systems, MPAF, Missile Modifications*	4.991	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

E. Acquisition Strategy

FY12 funding contract being competed by ALCM SPO as FFP Small Business set aside.

The ALCM Aging and Surveillance Program is being executed by the prime contractor utilizing annual delivery orders on a Firm Fixed Price (FFP) contract.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101122F: *Air-Launched Cruise Missile (ALCM)*	PROJECT 674797: *Flight Testing & Navigation Enhancement*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ALCM Aging and Surveillance	C/FFP	TBD:,	-	0.782	Feb 2013	0.392	Feb 2013	0.258	Dec 2013	-		0.258	Continuing	Continuing	
ALCM Sustainment Enhancement Toolbox (ASET)	MIPR	OC-ALC:OKC, OK	-	0.000		0.000		0.147	Nov 2013	-		0.147	Continuing	Continuing	
		Subtotal	0.000	0.782		0.392		0.405		0.000		0.405			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
HEMP Test Plan Development	MIPR	White Sands Missile Range:, NM	-	0.000		0.039	Mar 2013	0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.000		0.039		0.000		0.000		0.000			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA - Contractor Support	MIPR	TBD:,	-	0.000		0.000		0.045	Mar 2014	-		0.045	Continuing	Continuing	TBD
PMA - Government Costs	Various	Various:Various,	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	0.000		0.000		0.045		0.000		0.045			

Remarks

ALCM Aging and Surveillance Program PMA is for A&AS, Supplies and Travel in project number 674797

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101122F: *Air-Launched Cruise Missile (ALCM)*	PROJECT 674797: *Flight Testing & Navigation Enhancement*	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.782		0.431		0.450		0.000		0.450			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101122F: *Air-Launched Cruise Missile (ALCM)*	**PROJECT** 674797: *Flight Testing & Navigation Enhancement*

BPAC 674797

- ALCM Aging and Surveillance Program

0101122F Schedule

FY13	FY14	FY15	FY16	FY17	FY18

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101122F: *Air-Launched Cruise Missile (ALCM)*	PROJECT 674797: *Flight Testing & Navigation Enhancement*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
ALCM Aging & Surveillance Program Development	1	2013	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0101126F: *B-1B Squadrons*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	32.087	16.265	19.589	-	19.589	11.384	0.086	0.000	0.000	0.000	79.411
675344: *B-1B Modernization*	-	32.087	16.265	19.589	-	19.589	11.384	0.086	0.000	0.000	0.000	79.411
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

FY14 New Start to replace EMD LRUs for CITS, FIDL and VSDU on two RDT&E funded test jets.

A. Mission Description and Budget Item Justification

The B-1B Lancer is a swing-wing, supersonic, long-range, conventional bomber. It carries the largest payload of both guided and unguided weapons in the Air Force inventory. The multi-mission B-1B is the backbone of America's long-range bomber force and can rapidly deliver massive quantities of precision and non-precision weapons against any adversary, anywhere in the world, at any time. The current service life extends beyond 2040.

This Research, Development, Test & Engineering (RDT&E) effort provides funding for B-1B modernization programs. These modernization programs alleviate aircraft obsolescence issues due to Diminishing Manufacturing Sources (DMS) while at the same time providing improved capabilities to the B-1B weapon system that require significant hardware and software development and testing. B-1B RDT&E efforts include development of the Self-Contained Standby Attitude Indicator (SCAI). If the primary flight instruments are lost due to electrical failure, the SCAI will remain powered by the backup battery and continue to provide the primary flight information needed to keep the aircraft in stable flight providing attitude, altitude, and airspeed/Mach. This development activity will replace three standby flight indicators (attitude indicator, altimeter, and airspeed indicator) with a more reliable/supportable off-the-shelf display that combines all necessary flight information into one device. SCAI must be functional and reliable in the event of primary flight display failure, and is a Mission-Essential Subsystem List (MESL) item required for flight. RDT&E funding will also provide upgrades to the B-1B training systems (both flight and maintenance simulators/trainers) that are included in the modernization programs to bring the training systems to the same configuration as the Central Integrated Test System (CITS), Fully Integrated Data Link (FIDL), and Vertical Situation Display Upgrade (VSDU) programs. The B-1B training system provides the war fighter fully integrated, cost effective, high fidelity training in the operation, weapons employment, and maintenance of the B-1B weapon system. Upgrades to the B-1B flight test aircraft are included in the modernization programs to keep the test flight systems current. RDT&E funded test jets are currently configured with Engineering Manufacturing and Development (EMD) Line Replaceable Units (LRUs) for CITS, FIDL and VSDU. Replacement of the EMD LRUs are required to bring two flight test aircraft to a fleet-representative configuration to ensure maximum supportability, maintainability and reliability for continued and future flight tests. In addition, program funds cover engineering/planning studies, related engineering efforts, and auxiliary requirement for development programs that have not yet fielded due to diminishing manufacturing sources. Cost includes program management administrative (PMA) costs and initiatives for anticipant weapon system enhancements, including efforts to improve weapon system operational capabilities, safety, supportability, maintainability, reliability, and total ownership cost. All B-1B development programs support planned requirements for unique identification in their production phases.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101126F: *B-1B Squadrons*

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

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	33.011	16.265	19.589	-	19.589
Current President's Budget	32.087	16.265	19.589	-	19.589
Total Adjustments	-0.924	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.924	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

Change Summary Explanation

No Significant Changes

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: B-1B Modernization	29.387	3.865	0.000
Description: Various efforts for continued B-1B Modernization ***FY 2012 Accomplishments:*** Vertical Situation Display Upgrade (VSDU) completed flight test and released qualified software. VSDU also completed a Functional Configuration Audit (FCA) and began modification of test aircraft 0068. Inertial Navigation Systems (INS) and Fully Integrated Data Link (FIDL) concluded. General development related support for the flight test efforts will continue. ***FY 2013 Plans:*** Vertical Situation Display Upgrade (VSDU) will complete modification to test aircraft 0068. VSDU EMD activities will conclude. ***FY 2014 Plans:*** N/A			
Title: B-1B Development of Simulators for CITS, FIDL and VSDU	2.700	10.400	11.089
Description: B-1B Development of Simulators for CITS, FIDL and VSDU			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101126F: *B-1B Squadrons*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Simulator and training upgrades began the software and hardware development and testing to support fielding of VSDU, Central Integrated Test System (CITS), and Fully Integrated Data Link (FIDL). ***FY 2013 Plans:*** Simulator and training upgrades will continue the software and hardware development and testing to support fielding of VSDU, Central Integrated Test System (CITS), and Fully Integrated Data Link (FIDL). ***FY 2014 Plans:*** Simulator and training upgrades will continue software and hardware development, integration and testing to support fielding of VSDU, Central Integrated Test Systems (CITS), and Fully Integrated Data Link (FIDL).			
Title: B-1B Attitude Indicator ***Description:*** Development of the Self Contained Standby Attitude Indicator. ***FY 2012 Accomplishments:*** Not Applicable ***FY 2013 Plans:*** Development of a replacement for the B-1 Self Contained Standby Attitude Indicator will begin. ***FY 2014 Plans:*** Self Contained Standby Attitude Indicator(SCAI) will accomplish prototype, installation,ground and flight testing. SCAI EMD activities will conclude.	0.000	2.000	5.000
Title: B-1 Flight Test Aircraft ***Description:*** FY14 New STart. Upgrades to the B-1B flight test aircraft. ***FY 2012 Accomplishments:*** Not Applicable ***FY 2013 Plans:*** Not Applicable ***FY 2014 Plans:*** Replace EMD LRUs for CITS, FIDL and VSDU on two RDT&E funded test jets.	0.000	0.000	3.500
Accomplishments/Planned Programs Subtotals	32.087	16.265	19.589

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101126F: *B-1B Squadrons*

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: B01B00: *Training Support to Units, Mods*	0.301	0.269	0.333		0.333	0.431	0.442	0.450	0.458	Continuing	Continuing
• APAF: BA05: B01B00: *Bomber Tactical Data Link, Mods*	0.000	0.000	0.000		0.000	0.225	0.140	0.129	0.000	Continuing	Continuing
• APAF: BA06: B01B00: *B-1B Squadrons, Spares*	2.121	17.988	17.291		17.291	23.902	17.504	13.405	13.646	Continuing	Continuing
• APAF: BA06: B01B00: PE0101126F: *Bomber Tactical Data Link, Spares*	0.000	0.000	0.696		0.696	1.048	1.004	0.000	0.000	Continuing	Continuing
• APAF: BA07: B00100, B-1: *B-1B Squadrons, Post Production Support*	4.743	0.965	3.683		3.683	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

(U) Program Element 0208006F, Air Force Mission Planning Systems (AFMPS), Joint Mission Planning System (JMPS)
(U) Program Element 0207446F, Bomber Tactical Data Link

E. Acquisition Strategy

Key elements of the overall B-1B Modernization acquisition strategy include: use of sole source contract with a prime/integrating contractor (Boeing); installed performance responsibility; use of Cost Plus Incentive Fee (CPIF) development contracts; and combining developmental upgrades with software sustainment blocks to minimize the number of software releases, aircraft downtime and differences in fielded configurations.

Self Contained Standby Attitude Indicator (SCAI) acquisition strategy will consist of two years EMD, three years Production and Installation. Contract will be a Firm Fixed Price (FFP).

The acquisition strategy for Simulator Upgrades for VSDU, Central Integrated Test Systems (CITS), and Fully Integrated Data Link (FIDL) is a Fixed Price Incentive Firm (FPIF) competitive award contract.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101126F: *B-1B Squadrons*	PROJECT 675344: *B-1B Modernization*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Vertical Situation Display Upgrade (VSDU)	SS/CPFF	Boeing:Long Beach, CA	-	19.947	Oct 2011	3.421	Jan 2013	0.000		-		0.000	Continuing	Continuing	
Inertial Navigation System (INS)	SS/CPIF	Boeing:Long Beach, CA	-	0.315	Jan 2012	0.000		0.000		-		0.000	Continuing	Continuing	
Fully Integrated Data Link (FIDL)	SS/CPIF	Boeing:Long Beach, CA	-	2.200	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	
Self Contained Attitude Indicator	C/FFP	General Electric:Grand Rapids, MI	-	0.000		1.950	Jun 2013	5.000	Mar 2014	-		5.000	Continuing	Continuing	
Simulator Upgrades for CITS, FIDL and VSDU	C/FPIF	AAI:Goose Creek, SC	-	2.700	Apr 2012	9.325	Apr 2013	10.393	Apr 2014	-		10.393	Continuing	Continuing	
Upgrades to B-1B Flight Test Aircraft	SS/FFP	Boeing:Long Beach, CA	-	0.000		0.000		3.500	Feb 2014	-		3.500	Continuing	Continuing	
DMS Redesign	SS/CPIF	Boeing:Long Beach, CA	-	0.000		0.000		0.200		-		0.200	Continuing	Continuing	
		Subtotal	0.000	25.162		14.696		19.093		0.000		19.093			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Studies & Analyses	Various	Various:Various,	-	0.000		0.089	Apr 2013	0.089	Apr 2014	-		0.089	Continuing	Continuing	
		Subtotal	0.000	0.000		0.089		0.089		0.000		0.089			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AFFTC	PO	Not specified.:,	-	2.818	Oct 2011	1.000	Apr 2013	0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	2.818		1.000		0.000		0.000		0.000			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101126F: *B-1B Squadrons*	PROJECT 675344: *B-1B Modernization*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
A&AS	Various	Various:Various,	-	1.265	Jan 2012	0.000		0.000		-		0.000	Continuing	Continuing	
PMA	Various	Various:Various,	-	2.842	Jan 2012	0.480	Jan 2013	0.407	Jan 2014	-		0.407	Continuing	Continuing	
		Subtotal	0.000	4.107		0.480		0.407		0.000		0.407			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	32.087		16.265		19.589		0.000		19.589			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101126F: *B-1B Squadrons*	PROJECT 675344: *B-1B Modernization*

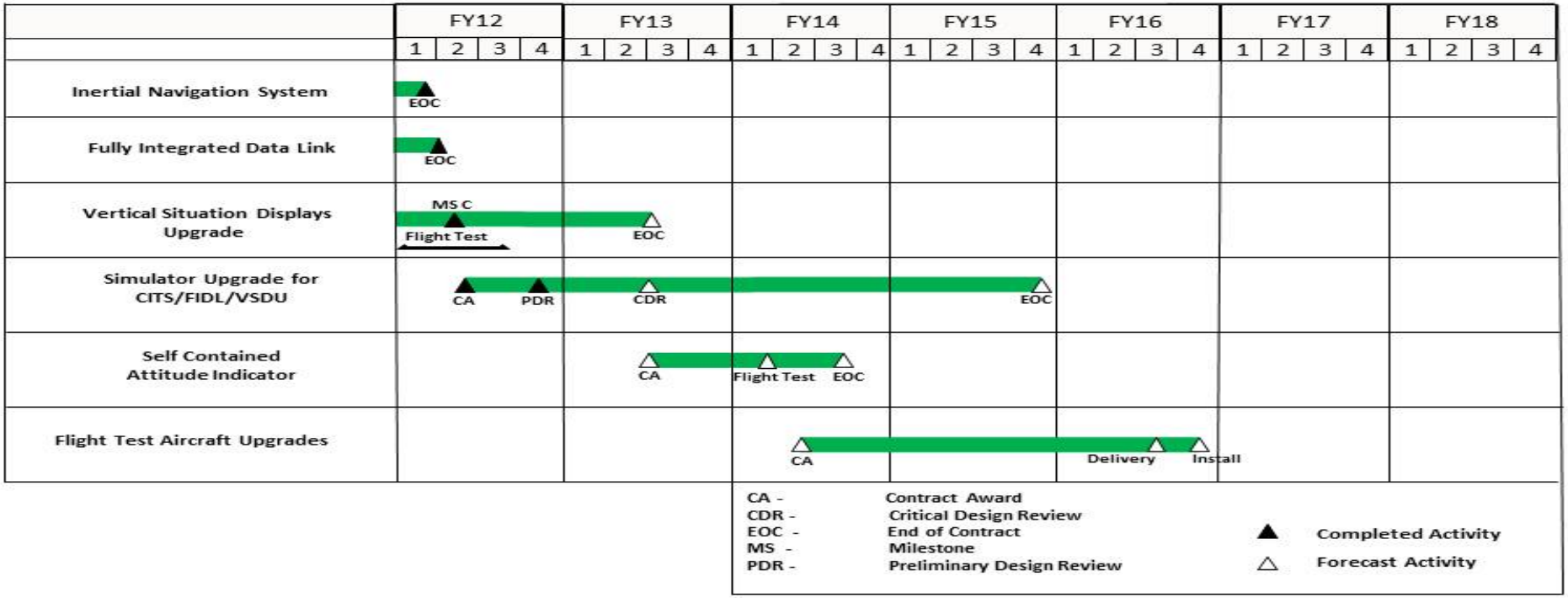


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101126F: *B-1B Squadrons*	**PROJECT** 675344: *B-1B Modernization*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
INS End of Contract	1	2012	1	2012
FIDL End of Contract	2	2012	2	2012
VSDU Flight Test	1	2012	3	2012
VSDU Milestone (MS) C	2	2012	2	2012
VSDU End of Contract	2	2013	3	2013
Simulator Upgrades FIDL/VSDU/CITS Contract Award	2	2012	2	2012
Simulator Upgrades FIDL/VSDU/CITS Preliminary Design Review	4	2012	4	2012
Simulator Upgrades FIDL/VSDU/CITS Critical Design Review	3	2013	3	2013
Simulator Upgrades FIDL/VSDU/CITS End of Contract	4	2015	4	2015
Self Contained Attitude Indicator (SCAI) Replacement CA	3	2013	3	2013
Self Contained Attitude Indicator (SCAI) Flight Test	1	2014	1	2014
Self Contained Attitude Indicator (SCAI) End of Contract	3	2014	3	2014
Flight Test Aircraft Upgrades Contract Award	2	2014	2	2014
Flight Test Aircraft Upgrades Deliveries	3	2016	3	2016
Flight Test Aircraft Upgrades Installs	4	2016	4	2016

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	373.500	201.688	35.970	100.194	-	100.194	128.597	59.742	26.681	32.344	Continuing	Continuing
675345: *B-2 Modernization*	0.000	21.751	21.759	85.858	-	85.858	112.681	45.932	12.636	18.046	Continuing	Continuing
676021: *BASELINE SUPPORT*	0.000	9.523	7.875	14.336	-	14.336	15.916	13.810	14.045	14.298	Continuing	Continuing
676022: *EHF SATCOM and Computer*	373.500	123.987	6.336	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	503.823
676023: *Defensive Management System*	0.000	46.427	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
MDAP/MAIS Code(s): 224,431												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Funding prior to FY14, and the estimate to complete after FY14 for B-2 ACAT 1 programs as follows:

The ACAT 1C B-2 Extremely High Frequency Satellite Communication (EHF SATCOM) and Computers Increment 1: Prior years funding: $373M; estimate to complete: Not applicable. Program begins procurement in FY12; there are no remaining RDT&E efforts after FY13.

A. Mission Description and Budget Item Justification

The B-2 Spirit is the world's most advanced long-range strike asset. The unique combination of range, precision, payload, and ability to operate in anti-access area denial environments allow the B-2 to identify, locate, target, and destroy the highest value enemy targets. The B-2 can, with necessary upgrades, accomplish its mission regardless of location, return to base safely, and permit freedom of movement for follow-on forces, including other long range strike platforms. An array of planned RDT&E projects are necessary to preserve a strategic advantage against 21st century threats as well as increase flexibility, lethality, and survivability of this national asset tasked across a broad spectrum of tactical and national strategic objectives. B-2 will achieve these objectives by adapting mature technologies/ systems in the fleet to rapidly deliver affordable and relevant combat capability, leveraging other Department of Defense investments and programs utilizing innovative acquisition strategies.

The B-2 has a projected service life through 2058. To ensure the fleet can accomplish its nuclear and conventional mission in highly defended and anti-access environments, periodic modernization efforts must be undertaken to upgrade combat capability as well as improve the viability, supportability, and survivability of the weapon system.

Recent and ongoing investments in avionics, structures, communications, and weapons upgrades keep the B-2 viable in the immediate future.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*

Specific development efforts are managed in four projects:

675345 B-2 Modernization
676021 Baseline Support
676022 EHF SATCOM and Computer
676023 Defensive Management System Modernization (FY12 only)

Current development efforts include:

Alternative communication solutions such as Common Very Low Frequency Receiver and Adaptable Communications Suite, Massive Ordnance Penetrator integration, Flexible Strike Phase 1 -- formerly known as Stores Management Operational Flight Program re-host -- which will re-host the stores management processor software, Low Observable Signature and Supportability Modifications, Aircraft Supportability Modifications, and Training System Upgrades;

Flight test aircraft upgrades and base of operations support, Advanced Low Detection Data Link studies, and Mission Planning System improvements as well as B-2 acquisition planning;

Extremely High Frequency Satellite Communications (SATCOM) and Computers Increments 1 and 2;

Defensive Management System Modernization (FY12 only - beginning in FY13, managed under Program Element 0605931F, project 653844).

In addition to on-going projects, the B-2 also performs studies for possible or projected projects such as integration of Joint Air-to-Surface Standoff missile-Extended Range, and other weapons integration, avionics, communication, aircraft and engine improvements. The long range vision for the aircraft anticipates that future improvements may also include such capabilities as Moving Target Kill or Non-Traditional Surveillance and Reconnaissance combat. Studies may explore: the development of a Universal Armament Interface, integrating multi-platform advanced data links with high bandwidth satellite communication links, Link-16 Center Instrument Display/In-Flight Replanner, integration of the Global Positioning System M-Code hardware and software necessary for modernization of Air Traffic Management communications/navigation/ surveillance systems, and enhancement of the Mode 5/S Identification Friend or Foe system with Automatic Dependence Surveillance-Broadcast capability mandated by US and European military and civil aviation agencies to improve situational awareness of controlled and contested airspaces. Improvements may be required on the B-2 data/voice/video recorders to comply with Air Force Safety Board mandates to provide specific flight and aircraft data, frequency of update, data precision, and recording duration that do not exist in the B-2 recorders today, which may drive studies. Finally, other studies will look at possible enhancements of current radar modes, high resolution improvements to the synthetic aperture radar, and improved information fusion required to gather, analyze, and communicate enemy movements and combat capabilities to friendly follow-on forces, the National Command Authority, and other operation centers via the Global Information Grid.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	280.319	35.970	116.144	-	116.144
Current President's Budget	201.688	35.970	100.194	-	100.194
Total Adjustments	-78.631	0.000	-15.950	-	-15.950
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	-71.000	0.000			
• SBIR/STTR Transfer	-7.631	0.000			
• Other Adjustments	0.000	0.000	-15.950	-	-15.950

Change Summary Explanation

FY2012 realigned -$71.000M to support Hard and Deeply Buried Target, and -$7.631M for SBIR.

FY2014 change: -$15.950 reduction rephases the B-2 Common Very Low Frequency (VLF) Receiver development effort.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 675345: *B-2 Modernization*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675345: *B-2 Modernization*	0.000	21.751	21.759	85.858	-	85.858	112.681	45.932	12.636	18.046	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The B-2 is currently undergoing modernization of avionics/communications systems, engines, armament systems, low observable components, core training system components, aircraft supportability improvements, support equipment development, as well as studying future Integrated Strike Warfare and Advanced Tactical Data Link integration requirements.

B-2 communications upgrades integrate new communications equipment or inprove the performance of already fielded systems. The Common Very Low Frequency (VLF) Receiver effort develops and integrates a receive-only VLF receiver and antenna subsystem to provide a secure, survivable strategic communication capability for the B-2. The CVR receiver will be adaptable for use by other Department of Defense platforms.

In addition to the funded CVR project, B-2 will also peform studies to explore other potential communications improvements which are not currently funded, such as: upgrades to the Adaptable Communications Suite non-integrated communications system; Link-16 Center Instrument Display/In-Flight Replanner; Mode 5/S ADS-B Identification Friend or Foe with Automatic Dependence Surveillance-Broadcast; and Integrated Strike Warfare Airborne Network distributed modeling and simulation network.

B-2 armament upgrades integrate new and/or advanced weapons on the B-2 to address a wider array of target sets, to include moving targets, and hardened, deeply buried targets. The Flexible Strike Phase 1 program -- formerly known as Stores Management Operational Flight Program re-host -- will recombine and rehost the current B-2 stores management software onto a new integrated processor, providing the processing and bandwidth to handle advanced digital weapons such as B61-12 or Long Range Stand Off (LRSO).

B-2 will also perform studies for potential future efforts, including: a Flexible Strike Phase 2 to enable multiple weapons carriage capabilities; and integration of additional weapons such as the extended range variant of the Joint Air to Surface Standoff Missile (JASSM-ER), laser JDAM or upgrades or replacements to weapons testing or weapons loading equipment.

Additional B-2 modernization efforts will be accomplished in four main areas:
(1) Low observable improvements;
(2) B-2 training systems;

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 675345: *B-2 Modernization*

(3) Aircraft supportability modifications; and
(4) Peculiar Support Equipment (PSE).

Details are provided below:

Low Observable Signature and Supportability Modification (LOSSM) projects decrease low observable (LO) maintenance, increase aircraft availability, and maintain and improve the combat-ready LO signature for the B-2 fleet ensuring survivable combat operations. LOSSM projects improve materials, structures, and diagnostic tools necessary to evaluate LO materials and systems in the B-2 fleet. LOSSM structure improvement projects include, but are not limited to, advanced high frequency materials placement, windshield bounce patch and tape improvements, composite plies, advanced signature reduction, and radome improvements. Material improvements include, but are not limited to, tailpipe and inlet coatings, pre-cured gap fillers, and other advanced LO materials development. Diagnostic tool efforts include, but are not limited to, improved radar frequency diagnostics, signature diagnostic system database upgrades, Tier One Material Inspection System improvements, Portable Laser Removal Tool development, Integrated Collections And Reporting System, Mobile Diagnostics Laboratory, Ground Air Radar System development, and other low observable special test equipment and information systems upgrades.

The B-2 Training System upgrades include updates to training device hardware and components, simulation software, courseware and academic materials, instructional system design architectures, engineering drawings, and system documentation that is not driven by a funded aircraft modification. Improvements include, but are not limited to, threat systems parametrics and order of battle information, radar display emulation improvements, improved aero fidelity of key pilot procedures, courseware improvements, and upgrades to display systems, subsystems, and simulation and computational processors. Other upgrades include, but are not limited to, conventional and nuclear guided weapons delivery training, expanded crypto keyfill capability in simulators, upgraded capability to train weapons as powered up upon completion of initial conditions, as well as upgrades to the electronic combat environment threat database tools to include threat laydown, threat parametrics, and Integrated Air Defense System. Upgrades also include the current Defensive Management System (DMS) simulation, improved DMS alternative/ emergency procedures courseware, and upgraded Mission Generation System, Suppressor tool, and simulation and computational processors as necessary. Enhancements are provided to the B-2 family of trainers to include the Weapon System Trainers, Mission Trainer, Cockpit Procedures Trainers, Computerized Maintenance Training System, Weapon System Training Aids, Weapons Load Trainer, Crew Escape System Maintenance Trainer, Flight Control System Trainer, instructor-operator station, and Training System Support Center.

The Aircraft Supportability Modifications (ASM) improve the reliability, maintainability, supportability, and availability of the B-2 fleet through its 2058 service life. Studies and planning will examine B-2 Common Processor, Proximity Sensor Logic Unit, and future improvements to the Generator Control Unit, Rudder Access Panel and Elevon Drain Hole upgrades, Cockpit Voice and Flight Data Recorder, Radomes, Audio Control Display Unit, Center Instrument Display improvements, Aft Deck Doublers, Center Instrument Display connection to the aircraft Digital Video Recorder, Multi-function Information Distribution System Power Transfer, Global Positioning System Splitter Cable, Airborne Integrated Terminal Crypto, and upgraded cryptological functionality of all B-2 communications systems as necessary. Engine improvements to be looked at include F118 engine Service Life Extension Program, Extended Mission Oil Tank, and the Next Generation Engine Core upgrade. Stage 1 and 3 engine fan blade improvements will reduce engine changes while increasing aircraft availability and reducing maintenance costs. Engine upgrades are necessary to maintain commonality with the F110 engine core and reduce maintenance and repair costs of divergent engine configurations.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 675345: *B-2 Modernization*

Peculiar Support Equipment (PSE) development activities include design, development, test, and procurement of new peculiar support equipment, to include but not limited to, special test equipment for newly emerging test and support requirements of legacy B-2 capabilities and/or functionality. Development of new peculiar support equipment will support test and sustainment activities at the B-2 Weapon System Support Center Ground Test Facility, Program Depot Maintenance facility, Test Range facilities, and Air Force Global Strike Command operating locations.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Common Very Low Frequency Receiver (CVR) ***Description:*** Provides secure, survivable, receive-only strategic communication for B-2. ***FY 2013 Plans:*** Begin Common VLF Receiver development effort, conduct Milestone B decision, and enter Engineering and Manfacturing Development (EMD) phase. ***FY 2014 Plans:*** Continue Engineering and Manufacturing Development efforts.	0.000	10.118	24.768
Title: Flexible Strike ***Description:*** Recombine the separate Stores Management Operationa Flight Program (SMOFP) software and rehost the software onto the more capable processors made available by the B-2 EHF Increment 1 program ***FY 2012 Accomplishments:*** Began SMOFP rehost development efforts ***FY 2013 Plans:*** continue risk reduction efforts previously initiated ***FY 2014 Plans:*** Conduct Milestone B	16.616	9.041	57.850
Title: B-2 Modernization Projects ***Description:*** B-2 Modernization includes, but is not limited to, Low Observable Signature and Supportability Modifications, Massive Ordnance Penetrator with accuracy improvements, Joint Air-to-Surface Standoff Missile-Extended Range integration, Training System core upgrades, armament tester improvements, Adaptable Communication Suite improvements, Link 16 Center	4.786	1.737	1.672

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 675345: *B-2 Modernization*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Instrument Display/Inflight Replanner, Integrated Strike Warfare/Advanced Tactical Data Link modeling and simulation, Mode S/5 Identification Friend or Foe with Automatic Dependence Surveillance- Broadcast capability improvements, Aircraft Supportability Modifications, Moving Target Kill and Non-Traditional Surveillance and Reconnaissance capability improvements, information fusion upgrades, Special Test Equipment development, and weapons integration efforts. ***FY 2012 Accomplishments:*** Continued development of on-going LOSSM improvements, ISW/ATDL, Training System core upgrades, ACS, MOP Enhancements, other weapon integration efforts, risk reduction efforts and studies for very low frequency communication, and other airframe, avionics improvements. Completed PSLU and ISW/ATDL. ***FY 2013 Plans:*** Continue development of on-going Low Observable Signature and Supportability Modifications, Training System core upgrades, Adaptable Communications Suite improvements, Massive Ordnance Penetrator integration, Aircraft Supportability Modifications, and other weapons integration improvements. ***FY 2014 Plans:*** Continue development of on-going Low Observable Signature and Supportability Modifications, Training System core upgrades, Adaptable Communications Suite improvements, Massive Ordnance Penetrator integration, Aircraft Supportability Modifications, and other weapons integration improvements.			
Title: B-2 Modernization PMA ***Description:*** B-2 Modernization PMA ***FY 2012 Accomplishments:*** B-2 Modernization PMA ***FY 2013 Plans:*** B-2 Modernization PMA ***FY 2014 Plans:*** B-2 Modernization PMA	0.349	0.863	1.568
Accomplishments/Planned Programs Subtotals	21.751	21.759	85.858

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 675345: *B-2 Modernization*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: B00200: *B-2 Modification Funding*	30.184	23.871	5.731		5.731	8.190	40.094	36.603	27.488	Continuing	Continuing
• APAF: BA05: B00200: *B-2 Training Support Modification, PE 0809731F*	0.000	4.038	5.006		5.006	6.477	6.630	7.776	7.916	Continuing	Continuing
• APAF: BA07: B00200: *B-2 Post Production Support, B-2A ICS: PE 0101127F*	0.000	0.000	0.000		0.000	0.000	0.000	0.010	0.133	Continuing	Continuing
• APAF: BA06: B00200: *B-2 Squadrons, A/C Initial Spares*	8.809	0.000	0.000		0.000	0.000	0.000	2.070	2.613	Continuing	Continuing
• APAF:BA07: B00200: *B-2 Depot Activation, PE0101127F*	0.000	0.000	0.000		0.000	0.000	3.505	0.000	0.000	Continuing	Continuing

Remarks

In FY12, funding for Baseline Support transferred from project 675345 to project 676021, still within PE 0101127F, B-2 Squadrons.

In FY12, funding for Extremely High Frequency (EHF) SATCOM and Computers transferred from project 675345 to project 676022, still within PE 0101127F, B-2 Squadrons.

In FY12, funding for DMS upgrade transferred from project 675345 to project 676023, still within PE 0101127F, B-2 Squadrons.

D. Acquisition Strategy

Key elements of the overall acquisition strategy include: use of sole source contract with a prime/integrating contractor (Northrop Grumman), employ the program office as the system integrator when practical, leverage mature technology and systems development investments by other Department of Defense organizations, encouraging prime contractor competition of subsystems and key components to reduce risk and cost, use of cost plus incentive fee (CPIF) development contracts, and combine developmental upgrades with software sustainment blocks to minimize the number of software releases, aircraft downtime, and differences in fielded configurations.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 675345: *B-2 Modernization*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Vehicle	Various	Various:Various,	0.000	21.323	Oct 2011	20.726	Oct 2012	78.985	Oct 2013	-		78.985	Continuing	Continuing	
Aircrew Training	Various	Various:Various,	0.000	0.000		0.000		2.160	Dec 2013	-		2.160	Continuing	Continuing	
Mission Planning	Various	Various:Various,	0.000	0.000		0.000		2.860	Jan 2014	-		2.860	Continuing	Continuing	
		Subtotal	0.000	21.323		20.726		84.005		0.000		84.005			

Remarks

Northrop-Grumman is the prime contractor and serves as integrator and hence main contractor for many (ie "Various"), but not all, B-2 modernization efforts.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Other Government Costs	Various	Various:Various,	0.000	0.079	Oct 2011	0.170	Oct 2012	0.175	Oct 2013	-		0.175	Continuing	Continuing	
		Subtotal	0.000	0.079		0.170		0.175		0.000		0.175			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Test	PO	AFFTC:,	0.000	0.000		0.000		0.110	Oct 2013	-		0.110	Continuing	Continuing	
		Subtotal	0.000	0.000		0.000		0.110		0.000		0.110			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA	Various	Various:,	0.000	0.349	Oct 2011	0.863	Oct 2012	1.568	Oct 2013	-		1.568	Continuing	Continuing	TBD
		Subtotal	0.000	0.349		0.863		1.568		0.000		1.568			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 675345: *B-2 Modernization*	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	21.751		21.759		85.858		0.000		85.858			

Remarks

Award dates listed are the first incremental funding opportunity associated with each cost category.

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 675345: *B-2 Modernization*

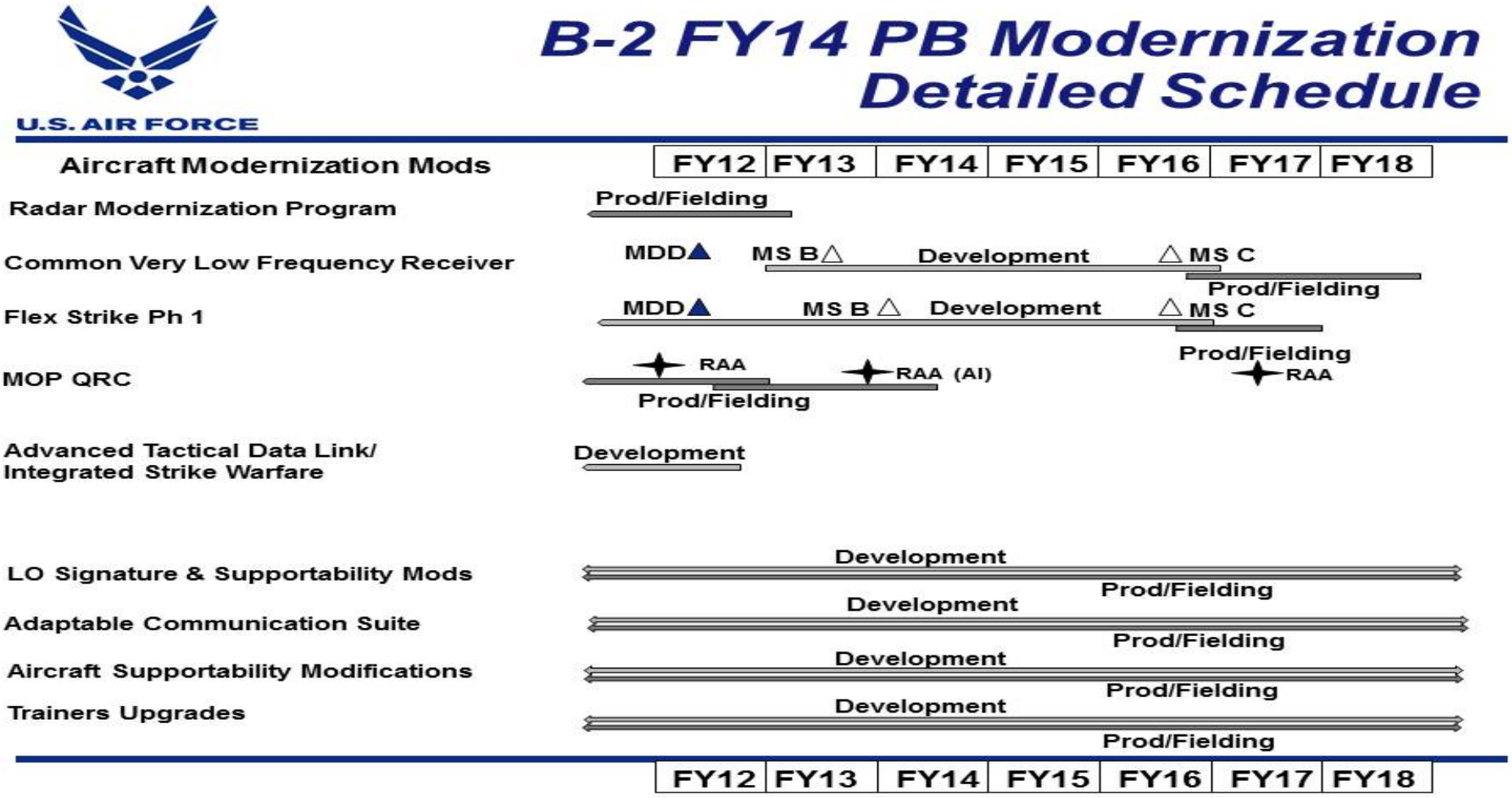


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101127F: *B-2 SQUADRONS*	**PROJECT** 675345: *B-2 Modernization*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Radar Modernization Program Full Rate Production Installs complete	2	2012	2	2012
Completion of MOP QRC Flight/Weapons Tests	1	2013	1	2013
MOP QRC UCA Award/Definitization	3	2012	1	2013
MOP QRC Flight Qualification	2	2013	3	2013
MOP QRC Installations	3	2013	2	2014
MOP QRC RAA	4	2013	4	2013
Flexible Strike Ph 1 MDD	3	2012	3	2012
Flexible Strike Ph 1 Contract Award	4	2012	4	2012
Flexible Strike Ph 1 Reqts Maturation Contract Award	2	2013	2	2013
Flexible Strike Ph 1 Preliminary Design Review	1	2014	1	2014
Flexible Strike Ph 1 Milestone B	1	2014	1	2014
Flexible Strike Ph 1 EMD Contract Award	2	2014	2	2014
Flexible Strike Ph 1 Critical Design Review	4	2014	4	2014
Flexible Strike Ph 1 Milestone C	2	2016	2	2016
Flexible Strike Ph 1 Production Contract	3	2016	2	2018
Flexible Strike Ph 1 Required Assets Available	2	2017	2	2017
Common Very Low Frequency MDD	2	2012	2	2012
Common Very Low Frequency Receiver Milestone B	3	2013	3	2013
Common Very Low Frequency Receiver EMD Contract Award	3	2013	3	2013
Common Very Low Frequency Receiver Preliminary Design Review	4	2014	4	2014
Common Very Low Frequency Critical Design Review	1	2015	1	2015
Common Very Low Frequency Milestone C	3	2016	3	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 675345: *B-2 Modernization*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Common Very Low Frequency Production Contract Award	4	2016	4	2016
Common Very Low Frequency Required Assets Available	1	2018	1	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676021: *BASELINE SUPPORT*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
676021: *BASELINE SUPPORT*	0.000	9.523	7.875	14.336	-	14.336	15.916	13.810	14.045	14.298	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Baseline Support maintains and upgrades the B-2 unique flight test aircraft as well as hardware/software and test equipment to support developmental systems integration and flight test, reducing the need for additional operational aircraft and accelerating deployment of advanced operational capabilities to the warfighter. Baseline Support also ensures the Mission Planning System keeps pace with aircraft modifications and improves the mission planning core system. Baseline Support provides for other B-2 unique government costs and includes assorted studies of aircraft performance and cost trades as well as acquisition planning activities, up to and including proposal preparation, for future capabilities.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Baseline Support Acquisition Planning	0.901	0.711	0.832
Description: Baseline Support provides for other B-2 unique government costs and includes acquisition planning activities for future capabilities, long range planning, studies, and program integration activities. ***FY 2012 Accomplishments:*** Continue Baseline Support activities including acquisition planning for future capabilities, Training System core support, long range planning, studies, and program integration activities. ***FY 2013 Plans:*** Continue Baseline Support activities including acquisition planning for future capabilities, long range planning, studies, and program integration activities. ***FY 2014 Plans:*** Continue Baseline Support activities including acquisition planning for future capabilities, long range planning, studies, and program integration activities.			
Title: Baseline Support Flight Test	6.361	5.507	10.463

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676021: *BASELINE SUPPORT*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Baseline Support Flight Test maintains and upgrades the B-2 unique flight test aircraft as well as hardware/software and test equipment, to support developmental systems integration and flight test, reducing the need for additional operational aircraft and accelerating deployment of advanced operational capabilities to the warfighter. ***FY 2012 Accomplishments:*** Continue B-2 Flight Test activities, maintaining the B-2 unique flight test aircraft as well as obtaining, modifying, and operating a flying test bed and developmental hardware/software and test equipment, to support developmental systems integration and flight test. ***FY 2013 Plans:*** Continue B-2 Flight Test activities, maintaining and upgrading the B-2 unique flight test aircraft as well as hardware/software and test equipment, to support developmental systems integration and flight test. ***FY 2014 Plans:*** Continue B-2 Flight Test activities, maintaining and upgrading the B-2 unique flight test aircraft as well as hardware/software and test equipment, to support developmental systems integration and flight test.			
Title: Baseline Support Mission Planning ***Description:*** Baseline Support Mission Planning System improvements ensure the mission planning system keeps pace with aircraft modifications and improves mission planning core systems. ***FY 2012 Accomplishments:*** Continue B-2 Mission Planning activities, keeping pace with aircraft modifications and improving mission planning core systems. ***FY 2013 Plans:*** Continue B-2 Mission Planning activities, keeping pace with aircraft modifications and improving mission planning core systems. ***FY 2014 Plans:*** Continue B-2 Mission Planning activities, keeping pace with aircraft modifications and improving mission planning core systems, to include beginning the transition from the current AFMSS mission planning to JMPS (Joint Mission Planning System).	1.895	1.436	2.695
Title: Baseline Support PMA ***Description:*** Baseline Support PMA ***FY 2012 Accomplishments:***	0.366	0.221	0.346

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676021: *BASELINE SUPPORT*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Baseline Support PMA ***FY 2013 Plans:*** Baseline Support PMA ***FY 2014 Plans:*** Baseline Support PMA			
Accomplishments/Planned Programs Subtotals	9.523	7.875	14.336

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Key elements of the overall acquisition strategy include: use of sole source contract with a prime/integrating contractor (Northrop Grumman); use of cost plus award fee/ incentive fee (CPAF/IF) development contracts; and the combination of developmental upgrades with software sustainment blocks to minimize the number of software releases, aircraft downtime, and differences in fielded configurations.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676021: *BASELINE SUPPORT*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Mission Planning	Various	Various:Various,	0.000	1.705	Jan 2012	1.231	Jan 2013	2.490	Jan 2014	-		2.490	Continuing	Continuing	TBD
		Subtotal	0.000	1.705		1.231		2.490		0.000		2.490			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Other Government Costs	Various	Various:Various,	0.000	5.778	Oct 2011	4.925	Oct 2012	7.990	Oct 2013	-		7.990	Continuing	Continuing	TBD
		Subtotal	0.000	5.778		4.925		7.990		0.000		7.990			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Test	PO	AFFTC:,	0.000	1.674	Oct 2011	1.498	Oct 2012	3.510	Oct 2013	-		3.510	Continuing	Continuing	TBD
		Subtotal	0.000	1.674		1.498		3.510		0.000		3.510			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA	Various	Various:,	0.000	0.366	Oct 2011	0.221	Oct 2012	0.346	Oct 2013	-		0.346	Continuing	Continuing	TBD
		Subtotal	0.000	0.366		0.221		0.346		0.000		0.346			

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	9.523		7.875		14.336		0.000		14.336			

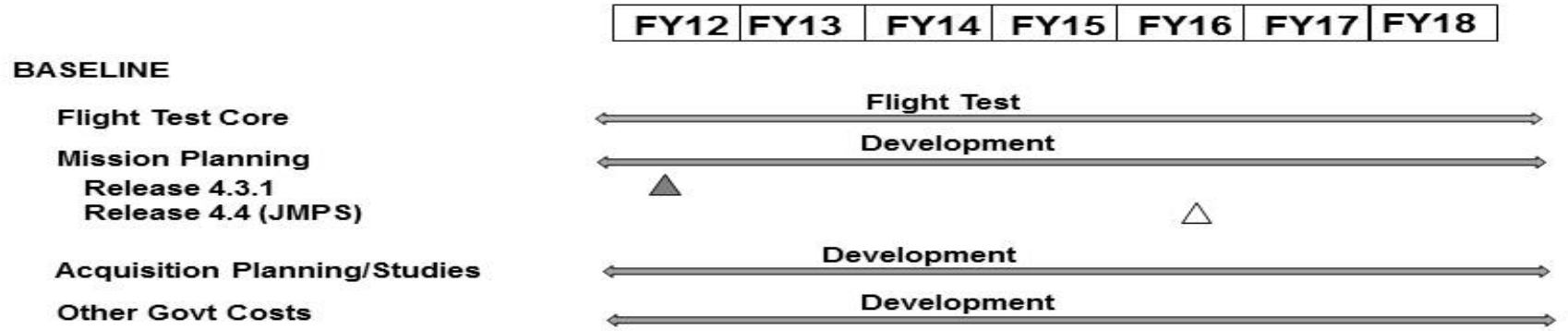
Remarks

Award dates listed are the first incremental funding opportunity associated with each cost category.

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676021: *BASELINE SUPPORT*

U.S. AIR FORCE

B-2 FY14 PB Baseline Detailed Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676021: *BASELINE SUPPORT*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Mission Planning Release 4.3.1	2	2012	2	2012
Mission Planning Release 4.4	3	2016	3	2016
FY12 Flight Test Core Support Contract Award	1	2012	1	2012
FY13 Flight Test Core Support Contract Award	1	2013	1	2013
FY14 Flight Test Core Support Contract Award	1	2014	1	2014
FY15 Flight Test Core Support Contract Award	1	2015	1	2015
FY16 Flight Test Core Support Contract Award	1	2016	1	2016
FY17 Flight Test Core Support Contract Award	1	2017	1	2017
FY18 Flight Test Core Support Contract Award	1	2018	1	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676022: *EHF SATCOM and Computer*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
676022: *EHF SATCOM and Computer*	373.500	123.987	6.336	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	503.823
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

EHF Increment 2 program funding was removed in the FY13 PB due to higher Air Force priorities.
FY12 funding reduced by $71M during FY12.

A. Mission Description and Budget Item Justification

The aging Ultra High Frequency (UHF) Military Satellite Communications system is being phased out and replaced by the Advanced Extremely High Frequency (AEHF) Satellite Communications (SATCOM) system. The B-2 Extremely High Frequency (EHF) SATCOM program supports the replacement of the present UHF Terminal Set with an EHF SATCOM system that will be compatible with the legacy MILSTAR I/II satellite constellation as well as the AEHF satellite constellation. The B-2 EHF SATCOM system is one element of a system-of-systems that includes the AEHF satellites, multiple platforms, and the Family of Advanced Beyond-line-of-site Terminals (FAB-T) or other equivalent terminals (if required). The B-2 EHF SATCOM upgrade is an incremental program.

EHF Increment 1 provides upgraded flight management control processors, increased data storage, rehosted Flight Management Operational Flight Program, and a high bandwidth data bus to prevent degradation of existing capabilities. Additionally, the Increment 1 Integrated Processing Unit and Disk Drive Unit architectures establish a high speed fiber optic structure network as well as maintain connectivity to legacy interfaces. EHF Increment 1 provides a processing growth path to future B-2 upgrades.

EHF Increment 2 ensures two-way, secure, survivable low probability of intercept/low probability of detection beyond-line-of-site communication in an anti-access area-denial environment. EHF Increment 2 integrates the FAB-T Government Furnished Equipment, or other equivalent terminals (if required), into the B-2 as well as develops and installs a low-observable antenna system consisting of arrays, antenna line replaceable units, and structural modifications for both power and cooling. EHF Increment 2 also implements B-2 unique terminal modifications, as required. This upgrade is critical to ensure the B-2 is compatible with the next generation communications satellite architecture, and provides uninterrupted, highly survivable, two-way communications for the command and control of the nation's strategic nuclear and conventional forces. Connectivity is mandatory to enable network centric enabled attack in an anti-access area denial environment.

EHF Increment 2 was defunded in the FY13 President's Budget. The Air Force will pursue the Common Very Low Frequency Receiver to satisfy the immediate user need date for B-2 survivable strategic communication. However, secure, survivable two-way strategic communication remains a requirement for the warfighter. To that end, EHF Increment 2 will continue maturing the array technolgy with residual FY12 funds.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676022: *EHF SATCOM and Computer*

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: B-2 EHF SATCOM and Computers Increment 1 ***Description:*** EHF Increment 1 provides upgraded flight management computer processors, increased data storage, rehosted Flight Management Operational Flight Program and a high bandwidth data bus. Additionally, the Increment 1 Integrated Processing Unit and Disk Drive Unit architectures establish a high speed fiber optic structure network as well as maintain connectivity to legacy interfaces. Increment 1 provides a processing growth path to future B-2 upgrades. ***FY 2012 Accomplishments:*** Continue EHF SATCOM and Computers Increment 1 SDD, complete Initial Operational Test & Evaluation (IOT&E), and begin Low Rate Initial Production. ***FY 2013 Plans:*** Complete EHF SATCOM and Computers Increment 1 System Development and Demonstration phase, complete IOT&E, and begin Full Rate Production.	44.147	6.149	0.000
Title: B-2 EHF SATCOM and Computers Increment 2 ***Description:*** EHF Increment 2 will integrate the Family of Advanced Beyond-line-of-sight Terminals as Government Furnished Equipment (or other equivalent terminals if required) into the B-2, as well as develop and install a low observable antenna system consisting of arrays, antenna line replaceable units, and structural modifications for power and cooling. This upgrade is critical to ensure the B-2 is compatible with the next generation communications satellite architecture and is essential in providing uninterrupted, two-way, highly survivable communications. ***FY 2012 Accomplishments:*** Complete EHF SATCOM and Computer Increment 2 Component Advanced Design and risk reduction activities to achieve a successful system Preliminary Design Review (PDR). ***FY 2013 Plans:*** EHF Increment 2 program is not funded in the FY 2013 budget. ***FY 2014 Plans:*** EHF Increment 2 is not funded in the FY 2014 budget.	74.465	0.000	0.000
Title: B-2 EHF SATCOM and Computers PMA	5.375	0.187	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676022: *EHF SATCOM and Computer*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: B-2 EHF SATCOM and Computers PMA ***FY 2012 Accomplishments:*** B-2 EHF SATCOM and Computers PMA ***FY 2013 Plans:*** B-2 EHF SATCOM and Computers PMA			
Accomplishments/Planned Programs Subtotals	123.987	6.336	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: B00200: *EHF Inc I Kits and Installs B-2A: PE 0101127F, B-2 Squadrons, Modifications*	50.320	53.816	7.469		7.469	8.268	0.000	0.000	0.000	Continuing	Continuing
• APAF: BA07: B00200: *EHF Inc 1 Interim Contract Support B-2A ICS: PE 0101127F, Post Prod Support*	0.000	0.481	0.489		0.489	0.000	0.000	0.000	0.000	Continuing	Continuing
• APAF: BA06: B00200: *EHF Inc 1 Initial Spares PE 0101127F, B-2 Squadrons A/C Initial Spares*	0.000	6.481	3.736		3.736	0.932	0.470	0.000	0.000	Continuing	Continuing
• APAF:BA07: B00200: *EHF Inc 1 Depot Activation PE 0101127F, B-2 Squadrons*	0.000	2.703	0.192		0.192	0.196	0.000	0.000	0.000	Continuing	Continuing

Remarks

In FY12, funding for Extremely High Frequency (EHF) SATCOM and Computers transferred from project 675345 PE 0101127F, B-2 Squadrons to project 676022 PE 0101127F, B-2 Squadrons.

EHF Increment 2 program funding was removed in the FY13 PB due to higher Air Force priorities.

D. Acquisition Strategy

Key elements of the overall acquisition strategy include: use of sole source contract with a prime/integrating contractor (Northrop Grumman), leverage mature technology and system development investments by other Department of Defense organizations, encourage prime contractor to conduct competitions at the

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676022: *EHF SATCOM and Computer*

subsystem/key component level to reduce risk and cost, use cost plus incentive fee (CPIF) development contracts, and combine developmental upgrades with software sustainment blocks to minimize the number of software releases, aircraft downtime, and differences in fielded configurations

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676022: *EHF SATCOM and Computer*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Vehicle - EHF Increment 1	SS/CPAF	Northrop Grumman:Palmdale, CA	373.500	41.185	Oct 2011	5.735	Oct 2012	0.000		-		0.000	0.000	420.420	TBD
Air Vehicle - EHF Increment 2	SS/ Various	Various:Various,	0.000	74.465	Mar 2012	0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	373.500	115.650		5.735		0.000		0.000		0.000			

Remarks

EHF Increment 1 is primarily delivery orders with Northrop-Grumman as the prime contractor and lead integrator.
EHF Increment 2 is antenna maturation efforts primarily by delivery orders with Northrop-Grumman.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Test	PO	AFFTC:,	0.000	2.962	Oct 2011	0.414	Oct 2012	0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	2.962		0.414		0.000		0.000		0.000			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA	Various	Various:,	0.000	5.375	Oct 2011	0.187	Oct 2012	0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	5.375		0.187		0.000		0.000		0.000			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676022: *EHF SATCOM and Computer*	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	373.500	123.987		6.336		0.000		0.000		0.000			

Remarks

Award dates listed are the first incremental funding opportunity associated with each cost category.

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676022: *EHF SATCOM and Computer*

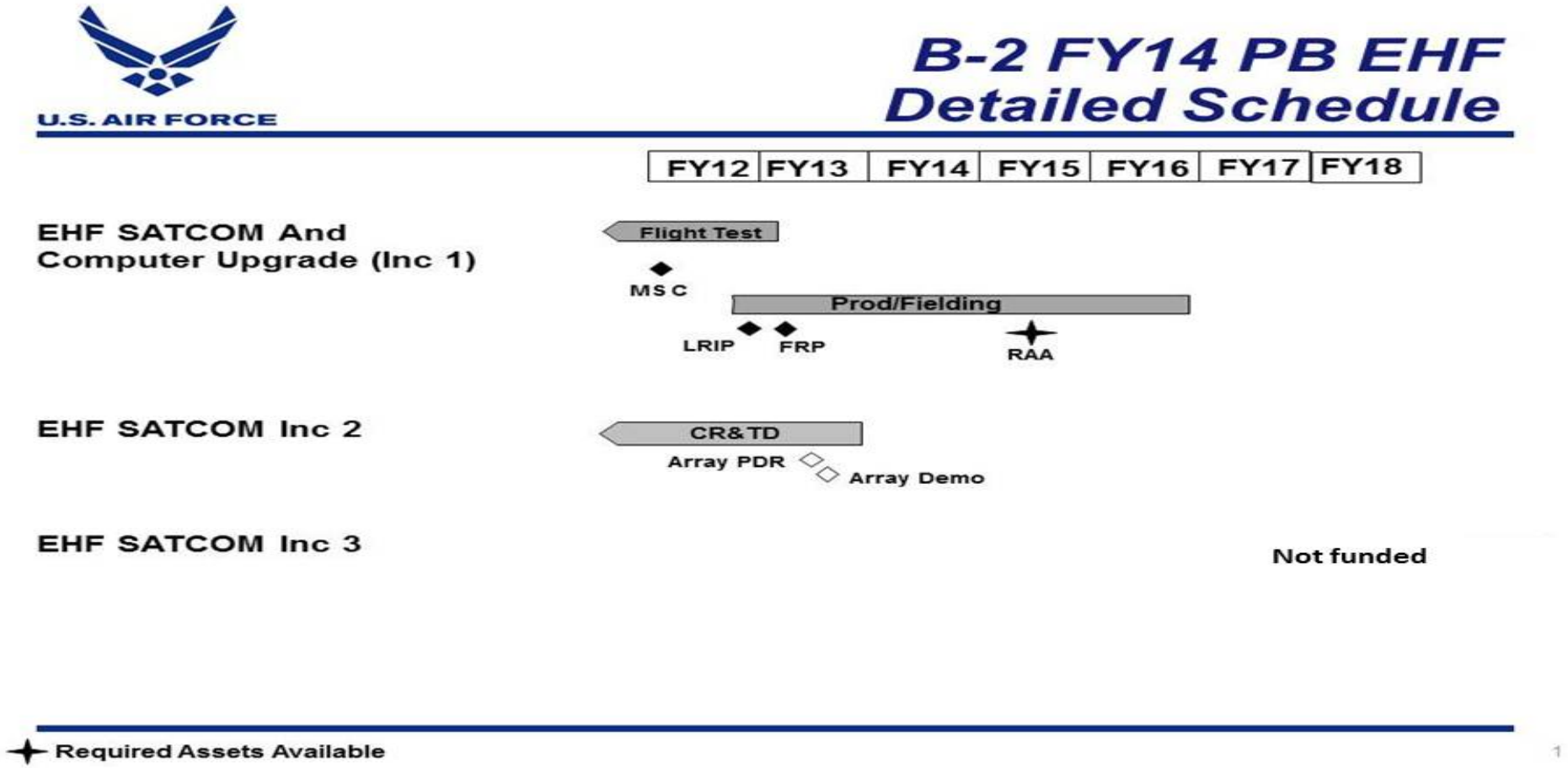


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676022: *EHF SATCOM and Computer*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
EHF Increment 1 Milestone C Decision	1	2012	1	2012
EHF Increment 1 LRIP Contract Award	4	2012	4	2012
EHF Increment 1 FRP Contract Award	1	2013	1	2013
EHF Increment 2 Array Preliminary Design Review	3	2013	3	2013
EHF Increment 2 Array Demonstration	3	2013	3	2013
EHF Increment 1 Required Assets Available	2	2015	2	2015

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676023: *Defensive Management System*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
676023: *Defensive Management System*	0.000	46.427	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY13, funding transfered to PE 0605931F, project 653844.

A. Mission Description and Budget Item Justification

DMS-M is the #1 priority modification program in the B-2 program office. The B-2 Defensive Management System Modernization (DMS-M) program maintains the B-2 direct attack capability while addressing emerging 21st century threats. DMS-M will upgrade the Electronic Support Measures, antennas, and display processing units. Modernization of this system will resolve the #1 obsolescence issue in the B-2 fleet.

The B-2 DMS-M will provide the Joint Force Commander and the B-2 fleet with advanced situational awareness, improved supportability, enhanced lethality, increased platform survivability, and networked battlespace awareness. The DMS-M upgrade will provide the following core capabilities for the B-2 and joint warfighting force:

1) Ability to provide indication, type, and position of airborne and ground-based radio frequency (RF) threats with the situational awareness needed to avoid, engage, or negate threats,

2) Improved RF threat information that can be reported to control agencies or inter-flight for improved situation/battlespace awareness,

3) Ability to adequately control, process, and display incoming threat information to the aircrew and provide updated battle-space awareness, and

4) Improved supportability and reduced operations and maintenance costs.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: B-2 Defensive Management System (DMS) Modernization Tech Development Ph 1	34.762	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676023: *Defensive Management System*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Refine DMS-M system concept. Begin avionics and Electronic Support Measures (ESM) hardware/software development. Conduct display processor and antenna competitions. Initiate rapid acquisition risk reduction efforts to accelerate program schedule. ***FY 2012 Accomplishments:*** Accelerated avionics software prototyping. Completed display processor competition and awarded contract. Completed ESM, display processor, and airframe System Functional Reviews. Completed antenna vendor evaluations, to include prototype testing at the National Radar Cross Section Test Facility. Initiated purchase of Combat Electromagnetic Environment Simulator (CEESIM) and long-lead developmental hardware to support TD Phase 2 and EMD. ***FY 2013 Plans:*** Transferred to PE 0605931F, project 653844. ***FY 2014 Plans:*** Transferred to PE 0605931F, project 653844 in FY2013			
Title: B-2 Defensive Management System (DMS) Modernization Ph 2 ***Description:*** Continue hardware and software development from Phase 1. Conduct Preliminary Design Review (PDR) and Milestone B review in FY14. Initiate required upgrades for Mission Planning System (MPS) software and Trainers (hardware & software). ***FY 2012 Accomplishments:*** Accelerated nuclear hardening assessment of key ESM and display hardware components. ***FY 2013 Plans:*** Transferred to PE 0605931F, project 653844. ***FY 2014 Plans:*** Transferred to PE 0605931F, project 653844.	11.665	0.000	0.000
Accomplishments/Planned Programs Subtotals	46.427	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676023: *Defensive Management System*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• RDT&E: BA07: PE 0101127F: *B-2 DMS-M Development,project 675345*	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• RDT&E: BA05: PE 0605931F: *B-2 DMS-M Development*	0.000	281.056	303.500		303.500	259.400	168.300	115.000	89.700	50.700	1,272.656
• APAF: BA05: B00200: *B-2 Modification Funding*	0.000	0.000	0.000		0.000	0.000	0.000	74.264	250.044	345.000	669.308
• APAF: BA06: B00200: *B-2 Initial Spares*	0.000	0.000	0.000		0.000	0.000	0.000	3.087	14.651	32.400	49.938

Remarks

D. Acquisition Strategy

Key elements of the overall acquisition strategy include: use of sole source contract with a prime/integrating contractor (Northrop Grumman) who will perform subsystem and component competitions where appropriate; use of cost plus award fee/ incentive fee (CPAF/IF) development contracts; and the combination of developmental upgrades with software sustainment blocks to minimize the number of software releases, aircraft downtime, and differences in fielded configurations.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676023: *Defensive Management System*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Vehicle	Various	Various:Various,	0.000	46.427	Oct 2011	0.000		0.000		-		0.000	0.000	46.427	TBD
		Subtotal	0.000	46.427		0.000		0.000		0.000		0.000	0.000	46.427	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
		Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Project Cost Totals	0.000	46.427		0.000		0.000		0.000		0.000	0.000	46.427	

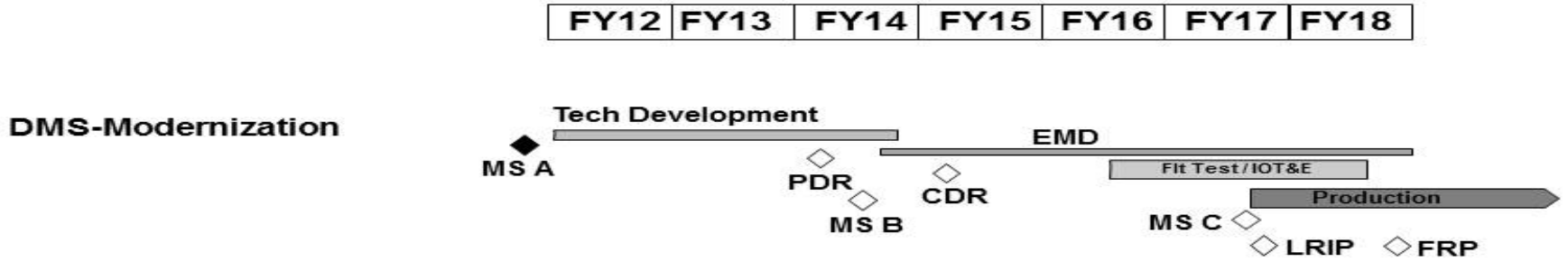
Remarks

Funding for this effort transfers to PE 0605931F, project 653844 in FY13.

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101127F: *B-2 SQUADRONS*	PROJECT 676023: *Defensive Management System*

U.S. AIR FORCE

B-2 FY14 PB DMS-M Detailed Schedule



1

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101127F: *B-2 SQUADRONS*	**PROJECT** 676023: *Defensive Management System*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
DMS-M Technology Development Ph 1 Contract Award	1	2012	1	2012
DMS-M Preliminary Design Review	1	2014	1	2014
DMS-M Technology Development Ph 2 Contract Award	1	2013	1	2013
DMS-M Milestone B Decision	3	2014	3	2014
DMS-M EMD Contract Award	3	2014	3	2014
DMS-M EMD Contract Period of Performance	3	2014	4	2018
DMS-M Critical Design Review	1	2015	1	2015
DMS-M Flight Test Program	3	2016	3	2018
DMS-M Milestone C	3	2017	3	2017
DMS-M Low Rate Initial Production Contract Award	4	2017	4	2017
DMS-M Full Rate Production Contract Award	4	2018	4	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	22.089	30.889	37.448	-	37.448	36.047	35.084	27.868	16.433	Continuing	Continuing
675059: *Strategic War Planning System (SWPS)*	-	10.007	21.155	26.400	-	26.400	28.100	29.000	24.300	12.800	Continuing	Continuing
675282: *Joint Navigation Warfare Center (JNWC)*	-	8.960	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
675368: *GSIN (Global Integrated Sensor Network)*	-	3.122	9.734	11.048	-	11.048	7.947	6.084	3.568	3.633	Continuing	Continuing
MDAP/MAIS Code(s): N43												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY 2013, 675282, Joint Navigation Warfare Center, efforts were transferred to PE 0105921F, Service Support to STRATCOM Space Activities in order to properly execute program.

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), developing information systems and techniques to counter and conduct Navigation Warfare (NAVWAR) and establishing a unified national architecture integrating disparate Missile Warning/Missile Defense (MW/MD) systems into a single Internet Protocol (IP)-based system known as the Global Sensor Integrated Network (GSIN) to provide redundant and unambiguous MW/MD data to national leadership. When the ISPAN modernization is complete the system will support the warfighter in both deliberate and adaptive planning environments 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), Information Operations (IO) 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. The JNWC is also commissioned to integrate NAVWAR into space operations and assists the warfighter with subject matter expertise to "operationalize" NAVWAR, encouraging the NAVWAR view that the Global Positioning System is a taskable weapons system in addition to being a worldwide PNT service. The JNWC establishes and maintains the Department's premier basis of NAVWAR expertise, and provides subject matter expertise and knowledge support to warfighters, Department decision makers, the Federal Interagency (the Department of Homeland Security and other civil agencies concerned with the Critical National Infrastructure), and the coalition through testing and evaluation; modeling, simulation and analysis; and exercise and training support.

The nation's strategic Command and Control (C2), sensors and mission planning programs cannot rapidly exchange information across multiple missions, creating ambiguity that delays time critical national C2 decision making processes. GSIN establishes a unified national architecture integrating disparate MW/MD systems into a single IP-based system providing redundant and unambiguous MW/MD data to national leadership. GSIN nets together all sensors, from tactical to strategic, including the Nation's most modern and capable assets - taking advantage of their larger numbers, improved algorithms, mobility and forward deployment to provide earlier cross-cueing and expanded decision space when every second counts. GSIN will permit an IP-based User Defined Operational Picture (UDOP) to augment voice conferencing and rapidly build a single, unambiguous missile event picture allowing real-time senior collaboration for nuclear C2 and improved senior leader situational awareness (SA) and decision-making.

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

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	22.791	30.889	11.920	-	11.920
Current President's Budget	22.089	30.889	37.448	-	37.448
Total Adjustments	-0.702	0.000	25.528	-	25.528
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.702	0.000			
• Other Adjustments	0.000	0.000	25.528	-	25.528

Change Summary Explanation

- FY2014, 675059, SWPS increased $26.4M to continue development of ISPAN Increment 4
- FY2014, 675368, GSIN reduced $0.9M for higher AF priorities

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675059: *Strategic War Planning System (SWPS)*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675059: *Strategic War Planning System (SWPS)*	-	10.007	21.155	26.400	-	26.400	28.100	29.000	24.300	12.800	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

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).

The ISPAN modernization program includes initiation of Course of Action (COA) Development as a service to the DoD enterprise, workflow and decision support development, Combatant Commander (COCOM) Collaboration, 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, as well as developmental 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. Activities also include studies and analysis to support both current program planning and execution and future program planning.

ISPAN Increment 2 develops the next increment of planning tools for ISPAN Collaborative Information Environment (CIE). It builds on capabilities delivered during Block 1 and develops advanced decision support capabilities for senior leader situational awareness through enhanced data analysis and visualization. ISPAN Increment 3 (when directed) will continue the development of expanded planning tools for CIE. ISPAN Increment 4 will modernize the Mission Planning and Analysis System (MPAS), the system that develops Joint Staff Level I through Level IV nuclear and conventional attack options for national and theater requirements. Increment 4 will fulfill MPAS requirements by reducing Crisis Action Planning and Time Sensitive Planning timelines, integrating nuclear and conventional kinetic weapon capabilities with non-kinetic effects, providing the capability to integrate planning and analysis capabilities of future Global Strike weapons, updating the MPAS system to provide the ability to train users in significantly less time, and leveraging new technologies to lower sustainment costs. Increment 4 will consist of three development spirals over a five year period, which includes testing and validation of the new capability.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675059: *Strategic War Planning System (SWPS)*

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: ISPAN Increment 2 Modernization	7.879	2.800	0.000
Description: Funds the next increment of planning tools for the ISPAN Collaborative Information Environment (CIE). Increment 2 continues by building on capabilities delivered in Block 1. Increment 2 will develop advanced decision support capabilities for senior leader situational awareness through enhanced data analysis and visualization, and expand development of services and operational nodes to support Global Information Grid (GIG) Enterprise services and distributed operation. ***FY 2012 Accomplishments:*** Continued Increment 2 development effort and enhancing planned capabilities. ***FY 2013 Plans:*** Completes Increment 2 development effort ***FY 2014 Plans:*** N/A			
Title: ISPAN Increment 3	0.000	7.655	0.000
Description: Funds pre-Milestone B risk reduction activities for the next increment of planning tools for the ISPAN CIE. Builds on the capabilities and technology in Block 1 and Increment 2, to achieve a more complete implementation of the joint operation planning process that includes collaborative campaign/contingency planning and integrated COA development to meet the desired crisis action and time sensitive planning timelines. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** Funds pre-Milestone B risk reduction activities for the next increment of planning tools for the ISPAN CIE. Builds on capabilities and technology in Block 1 and Increment 2, to achieve a more complete implementation of the joint operation planning process that includes collaborative campaign/contingency planning and integrated COA development to meet the desired crisis action and time sensitive planning timelines. ***FY 2014 Plans:*** N/A			
Title: ISPAN Increment 4 (MPAS Modernization)	0.000	8.163	23.827

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675059: *Strategic War Planning System (SWPS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: ISPAN Increment 4 MPAS Modernization reduces Crisis Action Planning and Time Sensitive Planning timelines, integrates nuclear and conventional kinetic weapon capabilities with non-kinetic effects, and provides the capability to integrate planning and analysis capabilities of future Global Strike weapons. ISPAN Inc 4 is an evolution of the Block 1 baseline system using proven technologies. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** Funds pre-Milestone B risk reduction activities including studies and analyses to identify the best approach to increase system robustness, enhance plan optimization and improve planning timelines. ***FY 2014 Plans:*** Will initiate requirements analysis, design, coding, and test for development of new Mission Planning and Analysis System (MPAS) capabilities. These capabilities include a new Plan Manager to orchestrate the crisis action planning processes. It also includes development of a new Attack Structure Manager capability (which will optimize on-the-shelf plans in reaction to changes in weapons, weapon availability, targets, and environment), a new Strike Option Generator capability (which will automatically generate strike plan options given a set of constraints and priorities), and a new Data Services Layer/Data Layer which will provide access to common services and data external to MPAS. Will also initiate activities for the reengineering of legacy components (e.g. Air Vehicle Planning System, Ballistic Missile Planning System, Aimpoint Construction System, and Plan Quality Review System).			
Title: Program Management Administration ***Description:*** Program Management Administration costs support management with engineering and technical for development and implementation of ISPAN increments. ***FY 2012 Accomplishments:*** Supported program management with program control, systems engineering, and technical operations for development and implementation of ISPAN Increment 2. ***FY 2013 Plans:*** Supports program management with program control, systems engineering, and technical operations for development and implementation of ISPAN Increment 2 and Increment 4. ***FY 2014 Plans:***	2.128	2.537	2.573

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675059: *Strategic War Planning System (SWPS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Will support program management operations to include program control, cost estimating, systems engineering, and technical operations for development and implementation of ISPAN Increment 4. Will provide required acquisition reporting products (i.e. cost estimates, engineering analysis, required documentation) at various key program timeline requirements.			
Accomplishments/Planned Programs Subtotals	10.007	21.155	26.400

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA07: Line Item # 833140: *Strategic War Planning System*	13.240	9.197	11.023		11.023	7.037	7.192	7.289	7.420	Continuing	Continuing

Remarks

D. Acquisition Strategy

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

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675059: *Strategic War Planning System (SWPS)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ISPAN Increment 2 Modernization	C/CPAF	Lockheed Martin Integrated Systems:Papillion, NE	-	7.565	Oct 2011	2.800	Dec 2012	0.000		-		0.000	Continuing	Continuing	164.783
ISPAN Increment 3	C/CPAF	TBD:TBD,	-	0.000		5.213	May 2013	0.000		-		0.000	Continuing	Continuing	TBD
ISPAN Increment 4 (MPAS Modernization)	TBD	TBD:TBD,	-	0.000		10.700	May 2013	23.513	Apr 2014	-		23.513	Continuing	Continuing	TBD
		Subtotal	0.000	7.565		18.713		23.513		0.000		23.513			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Responsible Test Organization	Various	Various:Various,	-	0.239	Oct 2011	0.239	Oct 2012	0.239	Oct 2013	-		0.239	Continuing	Continuing	TBD
Certification and Accreditation	MIPR	JTIC:Ft Hichuaha, AZ	-	0.075	Oct 2011	0.075	Oct 2012	0.075	Oct 2013	-		0.075	Continuing	Continuing	TBD
		Subtotal	0.000	0.314		0.314		0.314		0.000		0.314			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC Support	C/T&M	Mitre Corp:Offutt AFB, NE	-	0.795	Oct 2011	0.795	Oct 2012	0.795	Oct 2013	-		0.795	Continuing	Continuing	TBD

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675059: *Strategic War Planning System (SWPS)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration	C/Various	Various:Various,	-	1.333	Oct 2011	1.333	Oct 2012	1.778	Oct 2013	-		1.778	Continuing	Continuing	TBD
		Subtotal	0.000	2.128		2.128		2.573		0.000		2.573			

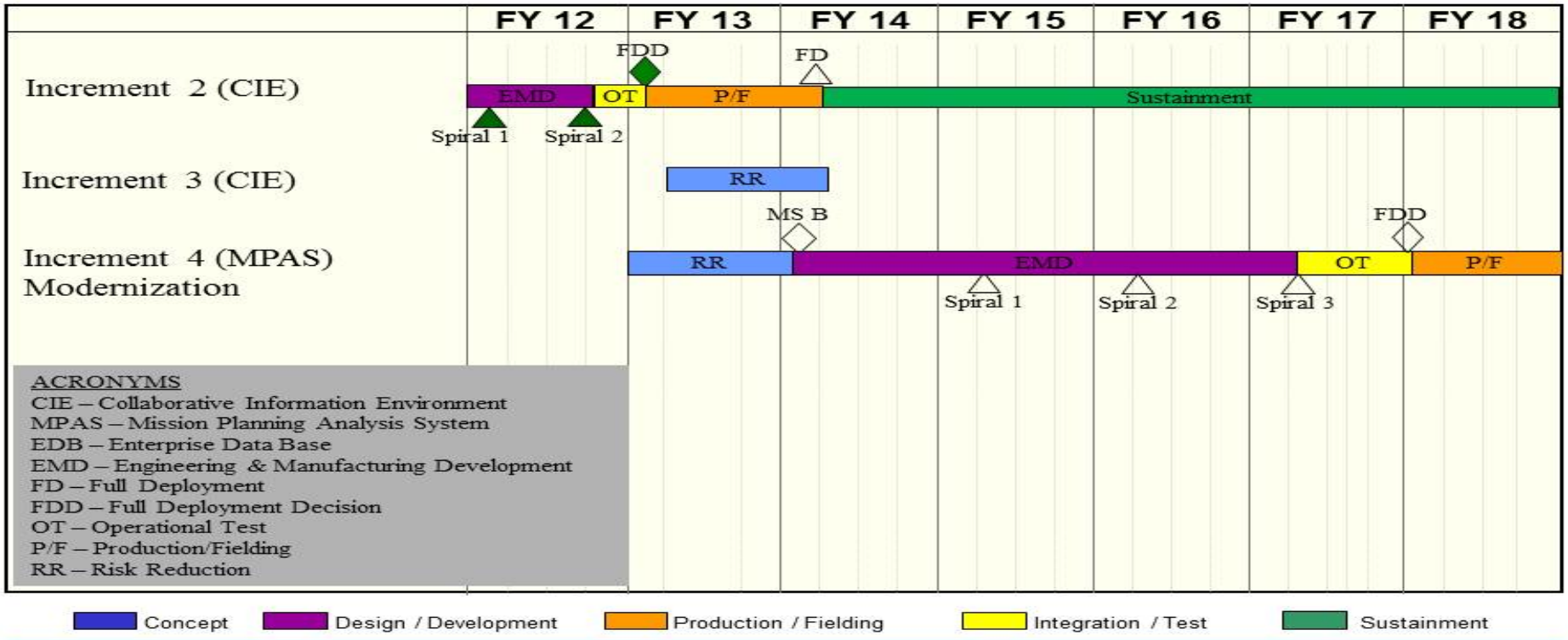
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	10.007		21.155		26.400		0.000		26.400			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675059: *Strategic War Planning System (SWPS)*

U.S. AIR FORCE

ISPAN Schedule



Integrity - Service - Excellence

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101313F: *Strat War Planning System - USSTRATCOM*	**PROJECT** 675059: *Strategic War Planning System (SWPS)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
ISPAN Increment 2 (CIE) Design/Development	1	2012	3	2012
ISPAN Increment 2 (CIE) Spiral 2 Delivery	3	2012	3	2012
ISPAN Increment 2 (CIE) OT	3	2012	1	2013
ISPAN Increment 2 (CIE) FDD	1	2013	1	2013
ISPAN Increment 2 (CIE) FD	1	2014	1	2014
ISPAN Increment 3 Risk Reduction	2	2013	2	2014
ISPAN Increment 4 (MPAS) Risk Reduction	1	2013	1	2014
ISPAN Increment 4 (MPAS) Milestone B	1	2014	1	2014
ISPAN Increment 4 (MPAS) Spiral 1 Delivery	2	2015	2	2015
ISPAN Increment 4 (MPAS) Spiral 2 Delivery	2	2016	2	2016
ISPAN Increment 4 (MPAS) Spiral 3 Delivery	2	2017	2	2017
ISPAN Increment 4 (MPAS) FDD	1	2018	1	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675282: *Joint Navigation Warfare Center (JNWC)*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675282: *Joint Navigation Warfare Center (JNWC)*	-	8.960	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY 2013, 675282, Joint Navigation Warfare Center, efforts transferred to PE 0105921F, Service Support to STRATCOM Space Activities (O&M).

A. Mission Description and Budget Item Justification

Navigation Warfare (NAVWAR) is deliberate defensive and offensive action to assure and prevent positioning, navigation, and timing (PNT) information through coordinated employment of space, cyberspace, and electronic warfare (EW) operations. The term NAVWAR is sometimes equated with "PNT Superiority". The Joint Navigation Warfare Center (JNWC) was established by DEPSECDEF Memo, 17 November 2004, as the DoD Center of Excellence, tasked to integrate and coordinate NAVWAR PNT capabilities across electronic spectrum, cyberspace, and space operations. NAVWAR leverages various techniques and technologies from these mission areas to negate or prevent hostile use of 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 JNWC develops and maintains the Department's premier collection of NAVWAR knowledge, and provides subject matter expertise support to warfighters, Department decision makers, the Federal Interagency (the Department of Homeland Security and other civil agencies concerned with the Critical National Infrastructure), and the Coalition. NAVWAR expertise is developed in part by execution of PNT Operational Field Assessments (POFAs), modeling and simulation, analysis, and exercise and training support. 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 and networks to basic goods and services are tracked, guided or disciplined by PNT systems such as GPS, NAVWAR is an ever increasing capability of interest and concern, especially if PNT systems are interrupted or lost. Likewise, as Global Navigation Satellite Systems (GNSS) proliferate, it becomes necessary to consider not only denying adversary use of GPS but also negating adversary use of alternate GNSS systems for PNT. The primary mission of the JNWC is to provide joint warfighter NAVWAR support through three broad mission areas:

a. Warfighter Operational Support - The JNWC applies knowledge of PNT vulnerabilities, prevention capabilities, and system operations to integrate NAVWAR as an element of warfighting operations. The JNWC provides 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. The JNWC 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. The JNWC also provides subject matter expertise and knowledge support to Department acquisition and policy decision makers, the Federal Interagency (the Department of Homeland Security and other civil agencies concerned with the Critical National Infrastructure), and the coalition.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675282: *Joint Navigation Warfare Center (JNWC)*

b. Test, Training, Exercises, and Experiments - This JNWC mission area is the centerpiece for maintaining NAVWAR currency of information for the warfighter. The JNWC conducts annual NAVWAR field test events, and provides NAVWAR technical assistance for training, exercises and experiments. The JNWC, as part of this effort, maintains Integrated Joint NAVWAR Test Roadmaps and current intelligence products on adversary NAVWAR capabilities and Coalition NAVWAR capabilities and vulnerabilities. JNWC GYPSY field test events focus on fielded operational systems and capabilities to integrate NAVWAR and PNT operations, to baseline current NAVWAR electronic protection, support, and attack capabilities, and to assist warfighters optimize and deconflict theater/tactical assets. JNWC FORTUNE field test events are more engineering focused and are used to evaluate specific NAVWAR capabilities or vulnerabilities, and to reduce engineering risk for GYPSY events. 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 Center (IAC) - The JNWC develops and maintains methods, standards, models and simulations used in NAVWAR analysis and operates the NAVWAR Information Analysis Center (IAC). JNWC evaluates new models for accuracy and applicability to specific situations and rapidly evolving threat environments. It also develops and maintains standard test methodologies created solely by the U.S. as well as test methods developed in collaboration with coalition partners. These standard methodologies ensure data sharing is efficient and effective, and ensures accurate feedback to the operational communities. The JNWC, as part of this effort, manages the GPS EA Frequency Clearance process and conducts independent analysis and verification of EA frequency clearance requests. It also maintains and upgrades the Global Positioning System Reliability Prediction Model (GPS-RPM) frequency clearance model 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 collects, analyzes, synthesizes, and disseminates 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. Activities also include studies and analysis to support both current program planning and execution and future program planning.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: NAVWAR Ops Support	2.244	0.000	0.000
Description: NAVWAR Operational Warfighter Support			
FY 2012 Accomplishments: Continued COCOM reachback analysis support to develop adversary, threat and intel assessments.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675282: *Joint Navigation Warfare Center (JNWC)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
N/A ***FY 2014 Plans:*** N/A			
Title: NAVWAR Test, Training, Exercises and Experiments ***Description:*** PNT Operational Field Assessments (FORTUNE) ***FY 2012 Accomplishments:*** Funds supported Field Tests, NATO trials, U.S. PNT Tests, Exercises and Experiments. ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** N/A	3.662	0.000	0.000
Title: NAVWAR Modeling, Simulation, Tools and Methods ***Description:*** Funds support the Information Analysis Center (IAC) to develop Global Positioning System Reliability Prediction Model (GPS-RPM) Upgrades, GPS frequency clearance evaluations, modeling and simulation methodologies, standards and analyses. ***FY 2012 Accomplishments:*** Continued support for the IAC, will develop additional GPS-RPM Upgrades, GPS frequency clearance evaluations, modeling and simulation methodologies, standards and analyses. ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** N/A	3.054	0.000	0.000
Accomplishments/Planned Programs Subtotals	8.960	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675282: *Joint Navigation Warfare Center (JNWC)*

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.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675282: *Joint Navigation Warfare Center (JNWC)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NAVWAR Warfighter Operational Support	C/T&M	Overlook Systems Technologies Inc.:Vienna VA; Kirtland AFB, NM	-	2.244	Dec 2011	0.000		0.000		-		0.000	Continuing	Continuing	TBD
NAVWAR Modeling, Simulation, Tools & Methods	C/CPAF	Overlook Systems Technologies Inc.:Vienna VA; Kirtland AFB, NM	-	3.054	Dec 2011	0.000		0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	5.298		0.000		0.000		0.000		0.000			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FORTUNE and GYPSY field tests, NATO trials, US Tests, Exercises and Experiments	PO	Multiple Gov Agencies:Vienna VA; Kirtland AFB, NM	-	3.662	Dec 2011	0.000		0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	3.662		0.000		0.000		0.000		0.000			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
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	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	8.960		0.000		0.000		0.000		0.000			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675282: *Joint Navigation Warfare Center (JNWC)*

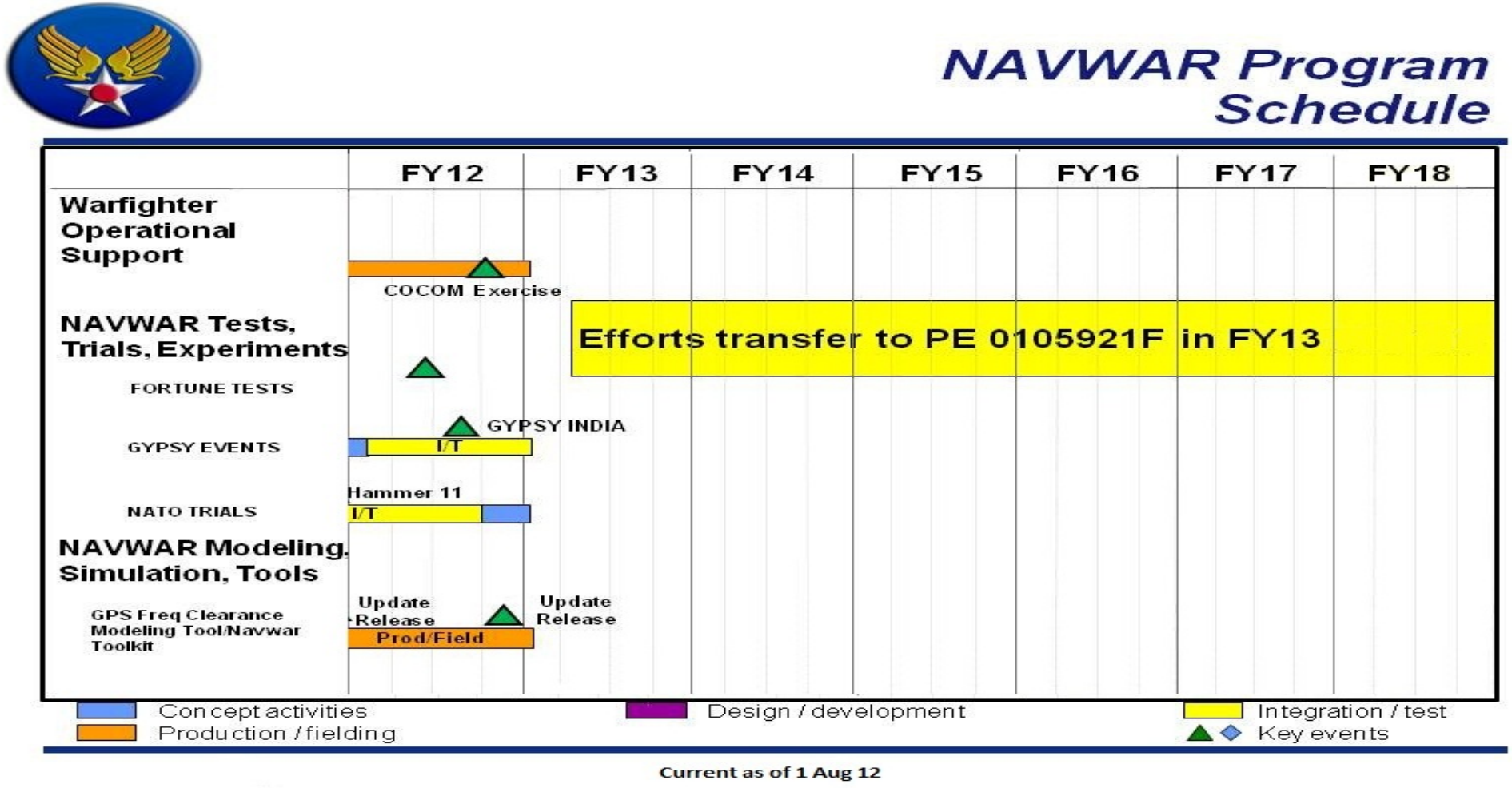


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101313F: *Strat War Planning System - USSTRATCOM*	**PROJECT** 675282: *Joint Navigation Warfare Center (JNWC)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Warfighter Operational Support Combatant Command Exercise	4	2012	4	2012
FORTUNE Field Test 2	2	2012	2	2012
GYPSY INDIA Field Test	3	2012	3	2012
GPS Frequency Clearance Modeling Tool Update Release 2	4	2012	4	2012

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675368: *GSIN (Global Integrated Sensor Network)*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675368: *GSIN (Global Integrated Sensor Network)*	-	3.122	9.734	11.048	-	11.048	7.947	6.084	3.568	3.633	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

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, the CJCS Plan ORD and the USSTRATCOM Plan ORD. GSIN nets together selected systems and sensors, from tactical to strategic, including the Nation's most modern and capable assets, taking advantage of their larger numbers, improved algorithms, mobility and forward deployment to provide earlier cross-cueing and expanded decision space when every second counts. GSIN will enable a User Defined Operating Picture (UDOP) to provide a single, unambiguous missile event picture allowing real-time senior collaboration for nuclear C2, improved senior leader situational awareness (SA), and decision-making.

The Nation's strategic C2, sensors and mission planning programs cannot rapidly exchange information across multiple missions, creating ambiguity that delays time critical national C2 decision making processes. GSIN establishes a unified schema integrating disparate Missile Warning/Missile Defense (MW/MD) data into a single exposed data set providing redundant and unambiguous MW/MD data to national leadership. GSIN enables existing sensors to provide data in net-centric formats consumable by other authorized systems and mission areas, thus reducing the need to acquire more sensors. Activities also include studies and analysis to support both current program planning, execution, and future program planning.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: GSIN Increments 2 - Schema, Configuration Control, Technical Outreach	2.048	1.208	0.000
Description: Continue to develop a common, XML net-enabled data schema to integrate Missile Warning, Missile Defense Sensor data for DISA Secret and below interoperability. Develop configuration control processes and procedures to manage the XML schema and associated XML messaging and services. Develop technical outreach for potential new GSIN data consumers and providers. Upgrade GSIN capabilities as DISA Enterprise Services evolve.			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675368: *GSIN (Global Integrated Sensor Network)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Continued development of a common, XML net-enabled data schema to integrate Missile Warning, Missile Defense Sensor data for DISA Secret and below interoperability. Develop configuration control processes and procedures to manage the XML schema and associated XML messaging and services. Develop technical outreach to potential GSIN data consumers and providers. Upgrade GSIN capabilities as DISA Enterprise Services evolve. ***FY 2013 Plans:*** Continues incremental development of common, XML net-enabled data schema to integrate Missile Warning, Missile Defense Sensor data for DISA Secret and below interoperability. Begin technical support of Space Situational Awareness data. Develop and modify configuration control processes and procedures to manage the XML schema and associated XML messaging and services. Continue to develop technical outreach to potential GSIN data consumers and providers. Upgrade GSIN capabilities as DISA Enterprise Services evolve. ***FY 2014 Plans:*** N/A			
Title: GSIN Increment 3 - Launch Characterization, Data Services, and Data Integration	0.474	1.321	0.400
Description: Support integration of Space Situational Awareness sensor data into the DoD Metadata Registry (MDR) and other appropriate registries/catalogs. Continue development of integrated Missile Warning and Missile Defense visualization and data software services to enable the display of data in a common operating picture. Conduct studies and demonstrations of data correlation, launch event characterization and assessment services for risk reduction evaluations. Continue modifications to data services. Continue studies to include demonstration and evaluation of Resource Broker and Space Situational Awareness capabilities. Minor enhancements and modifications to MD and MW data exposure services based on changes to common XML schema and DISA Enterprise Services. ***FY 2012 Accomplishments:*** Initiated efforts to support integration of Space Situational Awareness sensor data into the DoD Metadata Registry (MDR) and other appropriate registries/catalogs. Continued development of integrated Missile Warning and Missile Defense visualization and data software services to enable the display of data in a common operating picture. Conducted studies and demonstrations of data correlation, launch event characterization and assessment services for risk reduction evaluations. ***FY 2013 Plans:*** Support integration of Space Situational Awareness sensor data into the DoD Metadata Registry (MDR) and other appropriate registries/catalogs. Continue development of integrated Missile Warning and Missile Defense visualization and data software			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675368: *GSIN (Global Integrated Sensor Network)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
services to enable the display of data in a common operating picture. Conduct studies and demonstrations of data correlation, launch event characterization and assessment services for risk reduction evaluations. Continue modifications to data services. Continue studies to include demonstration and evaluation of Space Situational Awareness capabilities. ***FY 2014 Plans:*** Will support integration of Space Situational Awareness sensor data into the DoD Metadata Registry (MDR) and other appropriate registries/catalogs. Continues development of integrated Missile Warning and Missile Defense visualization and data software services to enable the display of data in a common operating picture. Conducts studies and demonstrations of data correlation, launch event characterization and assessment services for risk reduction evaluations. Continues modifications to data services. Continues studies to include demonstration and evaluation of Resource Broker and Space Situational Awareness capabilities. Complete Minor enhancements and modifications to MD and MW data exposure services based on changes to common XML schema and DISA Enterprise Services.			
Title: GSIN Increment 4 - Exposure of SSA Data from Commericial, Owner-Operator, and Allied Non-Traditional Sensors (NDPP) ***Description:*** Design, develop, expose and integrate SSA data from Commercial, Owner-Operator, and Allied non-traditional sensors into space production systems and the Global Information Grid. Develop implementation plans to mature data exposure capabilities. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** Design and develop the exposure of SSA data from Commercial, Owner-Operator, and Allied non-traditional sensors into space production systems and the Global Information Grid. ***FY 2014 Plans:*** Continues to develop, expose and integrate SSA data from Commercial, Owner-Operator, and Allied non-traditional sensors into space production systems. Develop implementation plans to mature data exposure capabilities.	0.000	2.580	3.850
Title: GSIN Increment 5 - TPY-2 SSA, Schema, Configuration Control, Technical Outreach, Data Integration ***Description:*** Design, develop, test, expose and integrate SSA data from the missile defense AN/TPY-2 sensor into space production systems and the Global Information Grid. Develop implementation plans to mature data exposure capabilities. Continue to develop configuration control processes and procedures to manage the XML schema and associated XML messaging and services. Continue to develop technical outreach for potential new GSIN data consumers and providers. Upgrade GSIN capabilities as DISA Enterprise Services evolve. Conduct data integration, studies and demonstrations of data correlation, launch event characterization and assessment services for risk reduction evaluations.	0.000	3.765	5.913

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675368: *GSIN (Global Integrated Sensor Network)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: N/A ***FY 2013 Plans:*** Initiates design and development activities for the exposure of SSA data from the missile defense AN/TPY-2 sensor into space production systems and the Global Information Grid. ***FY 2014 Plans:*** Continues development activities for the exposure and integration of SSA data from the missile defense AN/TPY-2 sensor into space production systems and the Global Information Grid. Continues development of configuration control processes and procedures to manage the XML schema and associated XML messaging and services. Continues development of technical outreach for potential new GSIN data consumers and providers. Upgrades GSIN capabilities as DISA Enterprise Services evolve.			
Title: SME Support ***Description:*** Provide missile warning, missile defense, space, intelligence Subject Matter Expert Support. ***FY 2012 Accomplishments:*** Provided missile warning, missile defense, space, intelligence Subject Matter Expert Support. ***FY 2013 Plans:*** Provides missile warning, missile defense, space, and intelligence Subject Matter Expert Support. ***FY 2014 Plans:*** Will continue to provide missile warning, missile defense, space, and intelligence Subject Matter Expert Support.	0.400	0.410	0.420
Title: Program Management Administration ***Description:*** Provide program management operations to support GSIN program. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** Will provide program management operations to support GSIN program.	0.200	0.450	0.465
Accomplishments/Planned Programs Subtotals	3.122	9.734	11.048

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675368: *GSIN (Global Integrated Sensor Network)*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

GSIN will use existing contract vehicles to manage, develop and modernize the combined Space Situational Awareness/Missile Warning/Missile Defense data exposure architecture and solution. These contract vehicles are already in place and available.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675368: *GSIN (Global Integrated Sensor Network)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Data Correlation, Visualization Architecture, Data Filtering Studies	C/CPAF	MIT/LL:Boston, MA	-	0.474	Nov 2011	1.121	May 2013	0.400	Mar 2014	-		0.400	Continuing	Continuing	TBD
Common Schema, Configuration and Control	C/CPFF	BAH:Omaha, NE	-	1.796	Oct 2011	1.208	May 2013	0.600	Mar 2014	-		0.600	Continuing	Continuing	TBD
Expose Space Situational Awareness Data--Commercial, Owner/ Operator, Allied	C/CPAF	Lockheed Martin:Colorado Springs, CO	-	0.000		2.280	Jun 2013	3.350	May 2014	-		3.350	Continuing	Continuing	TBD
Expose Space Situational Awareness Data - AN/ TPY-2 Sensor	C/CPAF	Raytheon:Woburn, MA	-	0.000		2.478	Jun 2013	3.697	May 2014	-		3.697	Continuing	Continuing	TBD
Expose Space Situational Awareness Data - AN/ TPY-2 Sensor (2)	C/CPAF	Lockheed Martin:Huntsville, AL	-	0.000		0.900	Jun 2013	1.100	May 2014	-		1.100	Continuing	Continuing	TBD
		Subtotal	0.000	2.270		7.987		9.147		0.000		9.147			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MW, MD, Space Subject Matter Expert Support	C/CPFF	Various:Omaha, NE	-	0.400	Aug 2012	0.410	May 2013	0.420	May 2014	-		0.420	Continuing	Continuing	TBD
		Subtotal	0.000	0.400		0.410		0.420		0.000		0.420			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
GSIN Testing	C/CPAF	Various:Omaha, NE	-	0.252	Mar 2012	0.887	Mar 2013	1.016	Jan 2014	-		1.016	Continuing	Continuing	TBD
		Subtotal	0.000	0.252		0.887		1.016		0.000		1.016			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101313F: *Strat War Planning System - USSTRATCOM*	PROJECT 675368: *GSIN (Global Integrated Sensor Network)*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration	C/FFP	Various:Omaha, NE	-	0.200	Jan 2012	0.450	Sep 2013	0.465	Sep 2014	-		0.465	Continuing	Continuing	TBD
		Subtotal	0.000	0.200		0.450		0.465		0.000		0.465			

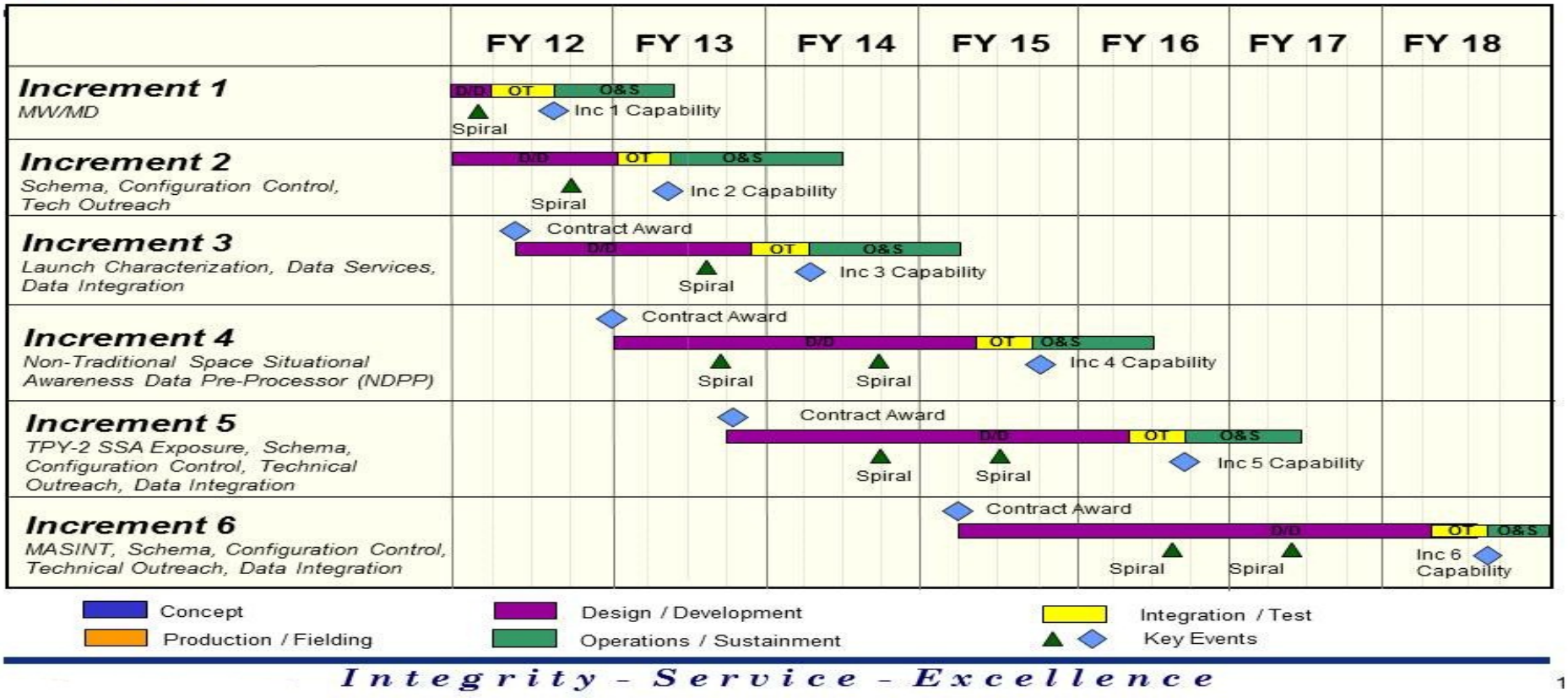
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	3.122		9.734		11.048		0.000		11.048			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101313F: *Strat War Planning System - USSTRATCOM*	**PROJECT** 675368: *GSIN (Global Integrated Sensor Network)*

U.S. AIR FORCE

GSIN Schedule



Integrity - Service - Excellence

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0101313F: *Strat War Planning System - USSTRATCOM*	**PROJECT** 675368: *GSIN (Global Integrated Sensor Network)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Increment 1 Spiral Delivery	1	2012	1	2012
Increment 1 Capability Delivered	3	2012	3	2012
Increment 2 Spiral Delivery	4	2012	4	2012
Increment 2 Capability Delivered	2	2013	2	2013
Increment 3 Contract Award	2	2012	2	2012
Increment 3 Spiral Delivery	3	2013	3	2013
Increment 3 Capability Delivered	2	2014	2	2014
Increment 4 Contract Award	1	2013	1	2013
Increment 4 Spiral 1 Delivery	3	2013	3	2013
Increment 4 Spiral 2 Delivery	3	2014	3	2014
Increment 4 Capability Delivered	4	2015	4	2015
Increment 5 Contract Award	4	2013	4	2013
Increment 5 Spiral 1 Delivery	4	2014	4	2014
Increment 5 Spiral 2 Delivery	3	2015	3	2015
Increment 5 Capability Delivered	3	2016	3	2016
Increment 6 Contract Award	1	2015	1	2015
Increment 6 Spiral 1 Delivery	3	2016	3	2016
Increment 6 Spiral 2 Delivery	2	2017	2	2017
Increment 6 Capability Delivered	3	2018	3	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0101314F: *Night Fist - USSTRATCOM*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	2.000	0.010	0.000	-	0.000	0.032	0.088	0.068	0.069	Continuing	Continuing
675152: *NIGHT FIST*	-	2.000	0.010	0.000	-	0.000	0.032	0.088	0.068	0.069	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Classified details upon request.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	2.000	0.010	0.000	-	0.000
Current President's Budget	2.000	0.010	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Misc Analysis	2.000	0.010	0.000
Description: Provided analysis, assessments and modeling support for proof of concept demonstrations and technical and analytical support during exercises.			
FY 2012 Accomplishments: Analysis and Assessments			
FY 2013 Plans:			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101314F: *Night Fist - USSTRATCOM*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Analysis and Assessments			
Accomplishments/Planned Programs Subtotals	2.000	0.010	0.000

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

N/A

E. Acquisition Strategy

N/A

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101314F: *Night Fist - USSTRATCOM*	PROJECT 675152: *NIGHT FIST*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Develop Defeat Options	Various	Various:Various,	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
Detect & Track Mobile Targets	Various	Various:Various,	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Strategic Multi-Layer Assessments	Various	Various:Various,	-	2.000	Nov 2011	0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	2.000		0.000		0.000		0.000		0.000			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Services	Various	Various:Various,	-	0.000		0.010	Apr 2013	0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.000		0.010		0.000		0.000		0.000			

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	2.000		0.010		0.000		0.000		0.000			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101314F: *Night Fist - USSTRATCOM*	PROJECT 675152: *NIGHT FIST*	

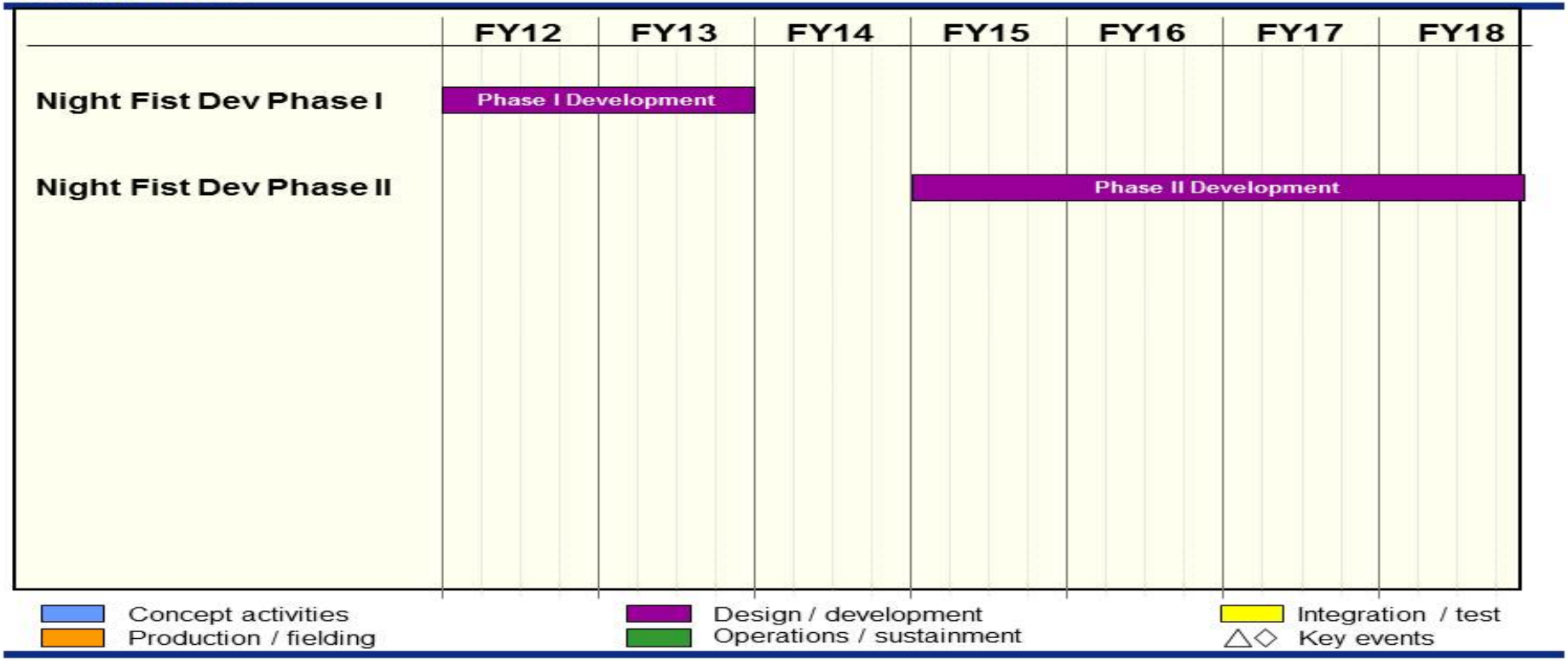
	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0101314F: *Night Fist - USSTRATCOM*	PROJECT 675152: *NIGHT FIST*

U.S. AIR FORCE

Night Fist Schedule



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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0102326F: *Region/Sector Operation Control Center Modernization Program*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	6.283	5.609	1.700	-	1.700	1.500	0.000	0.000	0.000	Continuing	Continuing
674592: *Region/Sector Operations Modernization Center (R/SAOC)*	-	6.283	5.609	1.700	-	1.700	1.500	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		
MDAP/MAIS Code(s): N32												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

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). The BCS-F Program, which supports Operation NOBLE EAGLE, is a next-generation battle management command and control system with enhanced capability to integrate data from existing and future civil and military defense surveillance systems into a comprehensive recognized air picture and National Capital Region/Integrated Air Defense System (NCR/IADS). This multi-input 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 (including Hawaii). The BCS-F system serves as the Air Force's Homeland Defense battle management, command, and control hub and integrates data from radar sensors, data links, and the supporting communications architecture. It provides the tactical communications and data link capabilities that enable planning, directing, coordinating, and controlling forces for air surveillance, air defense, and control of sovereign US air space (including the National Capital Region). BCS-F is a bi-national cooperative program with Canada, ensuring air defense and surveillance capability for the entire North American continent (including Hawaii). BCS-F achieved Initial Operational Capability in October 2006. The BCS-F Increment 3 program achieved Full Deployment 29 November 2012. Upon the full deployment declaration, the ACAT 1AC is transitioning to an inactive program.

NCR-IADS is the post-September 11 2001, quickly established, ground based air defense system using sensors to enhance the air surveillance picture incorporated in BCS-F.

Battle Control System-Modernization/Sustainment: The BCS Modernization program efforts include, but are not limited to, providing system changes to facilitate mission area changes such as Radiant Mercury (RM) Redundancy, Distributed Mission Operations (DMO), Battle Control Center (BCC) Expansion, Automatic Dependent Surveillance-Broadcast (ADS-B), Remote Tactical Air Picture (RTAP) extensibility, sensor integration (JLENS, LSTAR, STARS), and Certified Network Defense Service Provider (CNDSP). Activities also include studies and analysis to support both current program planning and execution, as well as future program planning.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0102326F: *Region/Sector Operation Control Center Modernization Program*

This program is in Budget Activity 7, Operational System Development, which incude development efforts to upgrade systems currently fielded or have approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	6.466	5.609	1.700	-	1.700
Current President's Budget	6.283	5.609	1.700	-	1.700
Total Adjustments	-0.183	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.183	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

Change Summary Explanation

The program is transitioning to modernization sustainment.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: BCS-F Increment 3	4.810	0.000	0.000
Description: The fielding and delivery of the ACAT 1AC program in Nov 2012. ***FY 2012 Accomplishments:*** Completed fielding deliver the ACAT 1AC program in Nov 2012 ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** N/A			
Title: NCR-IADS	0.399	0.398	0.000
Description: The fielding and delivery of a non-ACAT program. ***FY 2012 Accomplishments:***			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0102326F: *Region/Sector Operation Control Center Modernization Program*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Completed fielding delivery of version 3.2 in Dec 2012. ***FY 2013 Plans:*** Complete fielding delivery of version 3.3. ***FY 2014 Plans:*** N/A			
Title: Battle Control System Modernization/Sustainment ***Description:*** The development, systems engineering, test and evaluation of the Modernization/Sustainment program to include Release 3.2.2 efforts and beyond. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** This program is performing development, systems engineering, test and evaluation of the Modernization/Sustainment program to include Release 3.2.2 and beyond, RM Redundancy, CNDSP, and technical studies. ***FY 2014 Plans:*** This program will perform development, systems engineering, test and evaluation of the Modernization/Sustainment program to include Release 3.2.2 efforts and beyond.	0.507	3.252	1.485
Title: Program Management Administration (PMA) ***Description:*** Program Office support of BCS-F Increment 3, and the Modernization/Sustainment Program to include development, testing and fielding. ***FY 2012 Accomplishments:*** The program office supported BCS-F Increment 3, and the Modernization/Sustainment Program to include development, testing and fielding. ***FY 2013 Plans:*** The program office is supporting BCS-F Increment 3, and the Modernization/Sustainment Program to include development, testing and fielding. ***FY 2014 Plans:***	0.567	1.959	0.215

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0102326F: *Region/Sector Operation Control Center Modernization Program*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
The program office will support BCS-F Increment 3, and the Modernization/Sustainment Program to include development, testing and fielding.			
Accomplishments/Planned Programs Subtotals	6.283	5.609	1.700

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA07: Line Item # 833030: *Battle Control System - Fixed*	33.527	17.368	19.248		19.248	1.634	1.709	3.991	4.063	Continuing	Continuing

Remarks

E. Acquisition Strategy

Battle Control System-Increment 3: The BCS-Fixed program utilized a sole source contracting strategy that declared full deployment in November 2012, completing the ACAT 1AC program.

NCR-IADS Version 3: The NCR-IADS program utilizes a competitive contractor logistics support strategy to sustain and maintain the system.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0102326F: *Region/Sector Operation Control Center Modernization Program*	PROJECT 674592: *Region/Sector Operations Modernization Center (R/SAOC)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Continue acquisition activities associated with System Development	SS/CPIF	Thales Raytheon Systems:Fullerton, CA	-	1.964	Dec 2011	0.000		1.485	Feb 2014	-		1.485	0.000	3.449	40.108
		Subtotal	0.000	1.964		0.000		1.485		0.000		1.485	0.000	3.449	40.108

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Tech Spt	C/FFP	Various:Various,	-	1.803	Dec 2011	1.892	Oct 2011	0.000		-		0.000	Continuing	Continuing	TBD
System Engineering	SS/FFP	MITRE:Bedford, MA	-	1.442	Oct 2011	1.500	Oct 2011	0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	3.245		3.392		0.000		0.000		0.000			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
46th Test Wing/Other Test Act	Various	Various:Various,	-	0.108	Oct 2011	1.530	Oct 2011	0.000		-		0.000	0.000	1.638	9.101
NCR-IADS Integration Testing	Various	Various:Various,	-	0.399	Dec 2011	0.398	Dec 2012	0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	0.507		1.928		0.000		0.000		0.000			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management and Administration	Various	AFMC/ ESC:Hanscom AFB, MA	-	0.567	Oct 2011	0.289	Oct 2012	0.215	Oct 2013	-		0.215	Continuing	Continuing	TBD

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0102326F: *Region/Sector Operation Control Center Modernization Program*	PROJECT 674592: *Region/Sector Operations Modernization Center (R/SAOC)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.567		0.289		0.215		0.000		0.215			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	6.283		5.609		1.700		0.000		1.700			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0102326F: *Region/Sector Operation Control Center Modernization Program*	**PROJECT** 674592: *Region/Sector Operations Modernization Center (R/SAOC)*

BCS-F Program Schedule

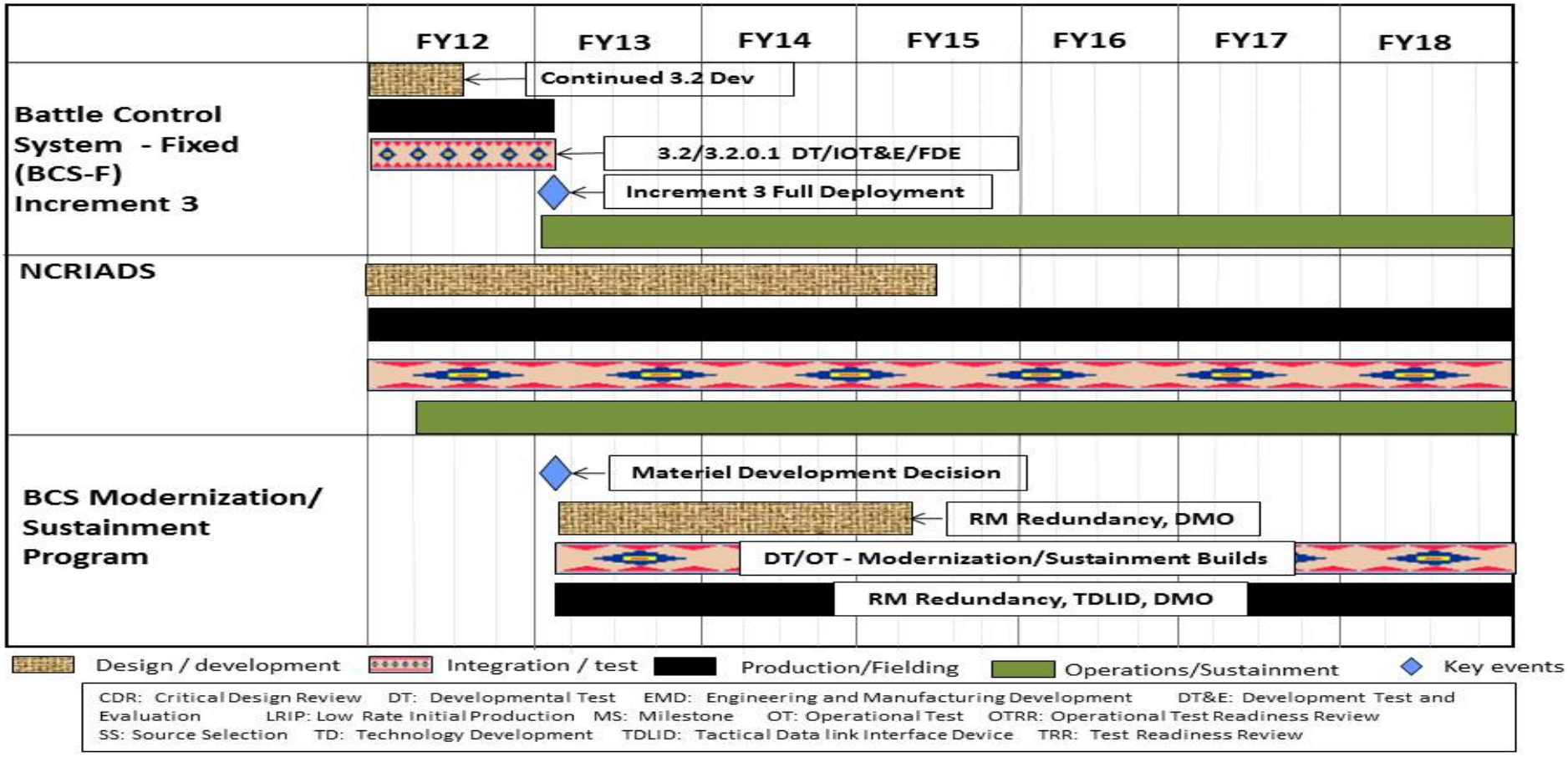


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0102326F: *Region/Sector Operation Control Center Modernization Program*	**PROJECT** 674592: *Region/Sector Operations Modernization Center (R/SAOC)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Continuation of Release 3.2 Software Development	1	2012	2	2012
Release 3.2 Integration/Test	1	2012	4	2015
Release 3.2 Production/Fielding	1	2012	1	2013
Increment 3 Full Deployment	1	2013	1	2013
Release 3.2 Sustainment	1	2013	4	2018
Materiel Development Decision	1	2013	1	2013
Radiant Mercury Redundancy/Distributed Military Operations	1	2013	2	2015
Developmental Test/Operational Test-Modernization/Sustainment Builds	1	2013	4	2018
Radiant Mercury Redundancy, Tactical Datalink Interface Device, Distributed Mission Operations	1	2013	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0102823F: *Strategic Aerospace Intelligence System Activities*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.014	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
675011: *Space Situational Awareness Initiatives*	-	0.014	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

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. This program element provides Space Intelligence Preparation of the Battlespace (SIPB) Human-to-Machine/ Machine-to-Machine Interface (HMMI) in 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.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0102823F: *Strategic Aerospace Intelligence System Activities*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.014	0.000	0.000	-	0.000
Current President's Budget	0.014	0.000	0.000	-	0.000
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Net Centric Capability	0.014	0.000	0.000
Description: Developed 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. ***FY 2012 Accomplishments:*** Completed development of 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. ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** N/A			
Accomplishments/Planned Programs Subtotals	0.014	0.000	0.000

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. Acquisition Strategy

Spiral 4: Followed an evolutionary acquisition strategy with spiral upgrades.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0102823F: *Strategic Aerospace Intelligence System Activities*

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0102823F: *Strategic Aerospace Intelligence System Activities*	PROJECT 675011: *Space Situational Awareness Initiatives*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Space Situational Awareness Initiatives	TBD	TBD:TBD,	-	0.014	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	0.014		0.000		0.000		0.000		0.000			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.014		0.000		0.000		0.000		0.000			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0102823F: *Strategic Aerospace Intelligence System Activities*	PROJECT 675011: *Space Situational Awareness Initiatives*

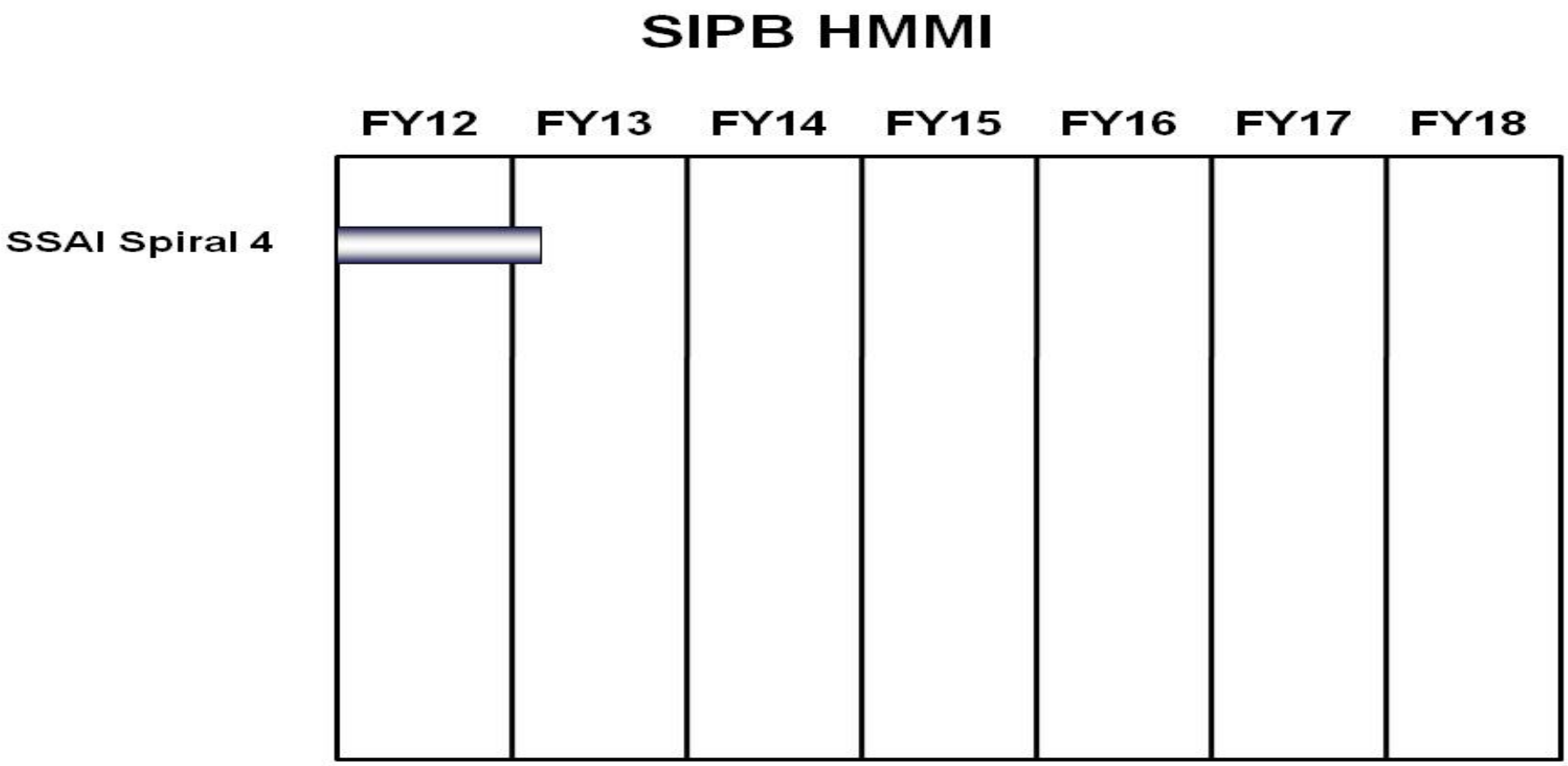


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0102823F: *Strategic Aerospace Intelligence System Activities*	**PROJECT** 675011: *Space Situational Awareness Initiatives*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Space Situational Awareness Initiatives	1	2012	1	2013

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0203761F: *Warfighter Rapid Acquisition Process (WRAP) Rapid Transition Fund*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	10.280	15.098	3.844	-	3.844	12.914	12.122	10.363	10.550	Continuing	Continuing
674936: *Warfighter Rapid Acquisition Program*	-	10.280	15.098	3.844	-	3.844	12.914	12.122	10.363	10.550	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Warfighter Rapid Acquisition Process (WRAP) is a CSAF-directed initiative that 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 allows the Air Force the flexibility to accelerate the development and fielding of operational initiatives resulting from innovation and transition them to the warfighter 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, actual or potential operational impacts, cost savings, project development, production, lifecycle costs, and project risk. 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 acquisition plan defined and approved as a criterion for project selection and subsequent funding. Each sponsoring Major Command/Agency must commit full project funding in the subsequent programming cycle. Congress will be notified when all projects have been approved by the end of the current fiscal year via Congressional Notification Letters.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0203761F: *Warfighter Rapid Acquisition Process (WRAP) Rapid Transition Fund*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	19.892	15.098	10.000	-	10.000
Current President's Budget	10.280	15.098	3.844	-	3.844
Total Adjustments	-9.612	0.000	-6.156	-	-6.156
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	-9.000	0.000			
• SBIR/STTR Transfer	-0.612	0.000			
• Other Adjustments	0.000	0.000	-6.156	-	-6.156

Change Summary Explanation

FY12 Decrease due to higher Air Force priorities

FY14 Decrease due to higher Air Force priorities

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Program selection/initiation	10.280	15.098	3.844

Description: WRAP accelerates the development, thus subsequent fielding, of operational initiatives resulting from innovation. It provides funding to promising operational initiatives so that they may begin formal development activities during the current fiscal year.

FY 2012 Accomplishments:

Developed operational initiatives for transition to the warfighter.

Program selection includes the following:

- Wideband Electronic Intelligence Multi-Beam Phased Array
- Advanced Wideband Digital Electronic Intelligence (ELINT) Processor Digital Signature Intelligence (SIGINT) Suite Insertion
- LITE-Weight
- Laser Joint Direct Attack Munition (JDAM) Height-of-Burst Sensor (HOBS)
- Advanced Targeting Pod Digital Video

FY 2013 Plans:

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0203761F: *Warfighter Rapid Acquisition Process (WRAP) Rapid Transition Fund*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Develop operational initiatives for transition to the warfighter. WRAP selection of qualified programs to be finalized by the end of April 2013. ***FY 2014 Plans:*** Develop operational initiatives for transition to the warfighter. Plan to select qualified initiatives to receive WRAP funding.			
Accomplishments/Planned Programs Subtotals	10.280	15.098	3.844

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. 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 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.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0203761F: *Warfighter Rapid Acquisition Process (WRAP) Rapid Transition Fund*	PROJECT 674936: *Warfighter Rapid Acquisition Program*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Force-Wide	TBD	USAF:TBD,	-	2.630	Sep 2013	15.098	Jun 2013	3.844	Jun 2014	-		3.844	0.000	21.572	12.242
LITE-Weight	C/CPFF	Harris Corporation:Melbourne, FL	-	0.700	Dec 2012	0.000		0.000		-		0.000	0.000	0.700	0.700
Advanced Targeting Pod Digital Video	SS/CPFF	Northrup Grumman Corporation:Rolling Meadows, IL	-	0.700	May 2013	0.000		0.000		-		0.000	0.000	0.700	0.700
Laser JDAM HOBS MIPR	MIPR	Military AF Testing Facility TBD:Eglin AFB, FL	-	0.500	Mar 2013	0.000		0.000		-		0.000	0.000	0.500	0.500
Laser JDAM HOBS	SS/CPFF	Boeing:St. Charles, MO	-	1.800	Dec 2012	0.000		0.000		-		0.000	0.000	1.800	1.800
Advanced ELINT/SIGINT Suite Insertion	C/CPFF	ITT Exelis:Morgan Hill, CA	-	0.750	Oct 2012	0.000		0.000		-		0.000	0.000	0.750	0.750
Wideband Electronic Intel Multi-Beam Array	C/FP	Macaulay-Brown:Dayton, OH	-	3.200	Oct 2012	0.000		0.000		-		0.000	0.000	3.200	3.200
		Subtotal	0.000	10.280		15.098		3.844		0.000		3.844	0.000	29.222	19.892

Remarks

--FY13 projects selected for WRAP funding are to be awarded within 90 days after the receipt of WRAP funds (30 June 13 for FY13).
--Air Force-Wide funds will be applied to down-select programs.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0203761F: *Warfighter Rapid Acquisition Process (WRAP) Rapid Transition Fund*	PROJECT 674936: *Warfighter Rapid Acquisition Program*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

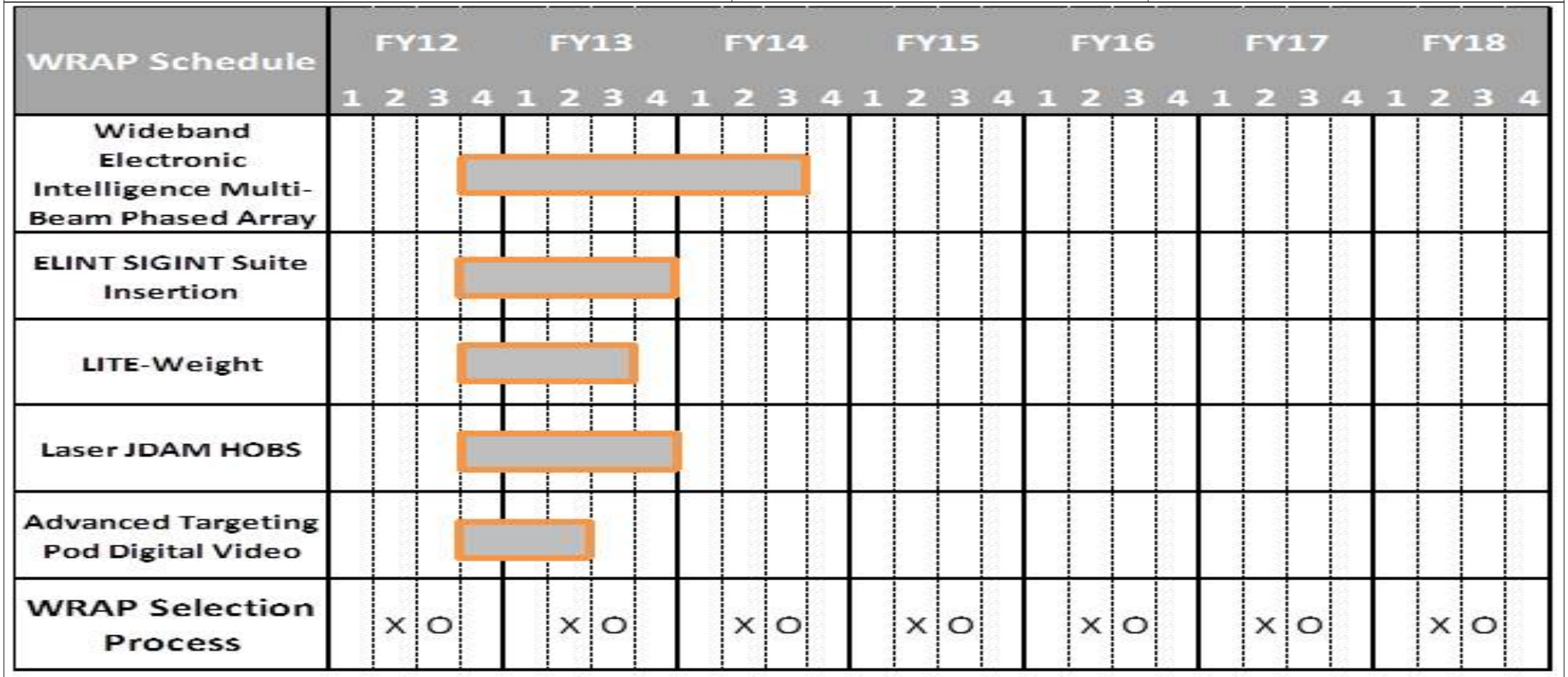
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	10.280		15.098		3.844		0.000		3.844	0.000	29.222	19.892

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0203761F: *Warfighter Rapid Acquisition Process (WRAP) Rapid Transition Fund*	PROJECT 674936: *Warfighter Rapid Acquisition Program*



X	Annual Data Call for WRAP Projects
O	Award of project funding for selected programs

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0203761F: *Warfighter Rapid Acquisition Process (WRAP) Rapid Transition Fund*	**PROJECT** 674936: *Warfighter Rapid Acquisition Program*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
FY 12 WRAP Project Initiation (Executed)	2	2012	2	2012
FY 12 WRAP Project Approval/Project funding (Executed)	3	2012	3	2012
FY 13 WRAP Project Approval/Project Funding (Planned)	2	2013	3	2013
FY14 WRAP Project Approval/Project Funding (Planned)	2	2014	3	2014
FY15 WRAP Project Approval/Project Funding (Planned)	2	2015	3	2015
FY16 WRAP Project Approval/Project Funding (Planned)	2	2016	3	2016
FY17 WRAP Project Approval/Project Funding (Planned)	2	2017	3	2017
FY18 WRAP Project Approval/Project Funding (Planned)	2	2018	3	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0205219F: *MQ-9 UAV*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	107.576	147.971	128.328	-	128.328	194.561	191.289	147.100	92.900	Continuing	Continuing
675246: *MQ-9 Development and Fielding*	-	107.576	147.971	128.328	-	128.328	194.561	191.289	147.100	92.900	Continuing	Continuing
Quantity of RDT&E Articles	3	0	0	0		0	0	0	0	0		

MDAP/MAIS Code(s): 424

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The basic MQ-9 Reaper system consists of the aircraft, sensors, a ground control station (GCS), Squadron Operations Center (SOC), 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 (RPA) designed to operate over-the-horizon at medium-to-high altitude for long endurance sorties. The aircraft is designed primarily to prosecute critical, emerging Time-Sensitive-Targets (TSTs) as a radar, Electro-optical/Infrared (EO/IR), and laser designator-based attack asset with on-board hard-kill capability (hunter-killer). It also performs Intelligence, Surveillance, Reconnaissance and Target Acquisition (ISR TA). In the hunter-killer role, the aircraft employs fused multi-spectral sensors to find, fix, and track ground targets using Automatic Target Cueing (ATC), high definition EO/IR, Metric Sensor and other capabilities, and assesses post-strike results. The MQ-9 system is continuing to develop and field capability through incremental upgrades. Future capabilities development activity includes airframe and airframe system improvements, such as; increasing the maximum gross takeoff weight capability of the aircraft from 10,500 to 11,700lbs; increasing the operational range and endurance of the baseline MQ-9 aircraft (adding external fuel tanks and/or airframe modifications such as wing extensions); incorporating an anti-ice/de-ice capability to transit light icing conditions (will involve wing/tail modifications as well as turbine inlet heating); propulsion system improvements; enhancing MQ-9 systems to include automatic takeoff and landing capability (ATLC); integrated redundant avionics; modifying the system to include provisions for a Foreign Military Sale exportable version of the weapon system; Predator Primary Data Link (PPDL) communication system upgrades and communications upgrades to include data link encryption, IP networking, and Beyond Line-of-Sight comm upgrades; navigation system upgrades; electrical system upgrades; incorporation of Elevated Temperature Wet (ETW) materials; secure voice and data communications, including SATCOM upgrades; sensor/stores management computer improvement; MIL-STD-1760 advanced weapons data bus; Universal Armament and Sensor Interface and Miniature Munitions/Store Interface; advanced sensor and weapon payloads; improved human-machine interface (HMI); integrating precision weapons (e.g. AGM-114 Hellfire missile, GBU-12/38/49 guided bombs, and Small Diameter Bomb variants); Mode 5 / Automatic Dependent Surveillance - Broadcast (ADS-B) integration; 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 weapon system functionality and capabilities. The MQ-9 program will continue to support other payload and capability development activities funded in other Program Elements (e.g. SIGINT, communications, Wide Area Motion Imagery (WAMI) leveraging Gorgon Stare Quick

Reaction Capability, advanced Counter-Improvised Explosive Device (C-IED), Dismount Detection Radar (DDR), missile defense, hyperspectral, and other sensors and weapons) and address reliability, maintainability, sustainability, and safety issues. Activities also include trade studies, analyses, preliminary systems engineering, system and subsystem level testing in accordance with DoD and military standards, and specification development in support of both current program planning and execution, and studies supporting analysis and investment in future program planning.

The GCS, common with the MQ-1 Predator, 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; provides a means for manual control; allows personnel to launch, recover, and monitor aircraft, payloads, and system communications status; incorporates secure data links to send aircraft and payload commands and receive system telemetry and payload data; monitors threats to the aircraft; displays the common operational picture; and provides support functions. Launch and Recovery GCS (LRGCS) allow for servicing, systems checks, maintenance, launch and recovery of aircraft under LOS control for hand-off to a mobile or fixed facility GCS, and conducting operations within line-of-sight range of the LRGCS. GCS upgrades will be developed and fielded in coordination with improvements to MQ-9 system capabilities and in response to evolving operational and information assurance/certification and accreditation requirements. Key efforts include GCS upgrades that add new LINUX processors, high definition monitors, ergonomic improvements, improved human-machine interfaces, open systems architecture, and improved crew habitability. In addition, the GCS upgrade effort also includes development/integration of the Unmanned Aircraft System (UAS) Command and Control (C2) Initiative (UCI) government-owned standard to enable improved capabilities for situational awareness and multi-mission management monitoring and oversight in the GCS and SOC. This project will also increase interoperability among developed systems by developing common standard and tools.

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

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	126.730	147.971	147.030	-	147.030
Current President's Budget	107.576	147.971	128.328	-	128.328
Total Adjustments	-19.154	0.000	-18.702	-	-18.702
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	-19.154	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	-18.702	-	-18.702

Change Summary Explanation

- FY14 decrease of $18.7M due to Service Cost Postion adjustment at MS-C

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0205219F: *MQ-9 UAV*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: MQ-9 System Development and Demonstration (SDD) ***Description:*** Complete development to meet MQ-9 Capabilities Production Document (CPD) requirements. ***FY 2012 Accomplishments:*** Continued high definition sensor capability and high definition integration and PPDL development. Software release version 904.6 will support development testing. ***FY 2013 Plans:*** Will continue development of airframe related development and test & begin ECP-2 - secure communications - weapon integration AGM-114P+/R (Hellfire P+/R) - HD video dissemination via Ku Line-of-Sight - Sensor control and integration - Integration and productionization - Integration, testing, production, and training documentation Milestones; CDR completed Jan 11. Interim software for Block 5 system activities scheduled for delivery in Sep 13. Developmental test begins for PPDL Human Machine Interface, Dual ARC-210 radios, left seat Synthetic Aperture Radar control, and forward bay reorganization. ***FY 2014 Plans:*** Will continue airframe related development and test to include; Secure Line of Sight (LOS), GFE Radios, Automatic Takeoff and Landing Capability (ATLC) Phase 1C, Vortex Phase 1 & 2, Test aircraft (retrofit), Community Sensor Model (CSM, Weapons (AGM-114 P+/R), and 904.6 software development.	25.603	41.776	26.140
Title: Ground Control Station (GCS) Development ***Description:*** Develop Ground Control Station (GCS) capabilities. Major capabilities include open system architecture, multi-level security and ergonomic cockpit design. ***FY 2012 Accomplishments:*** Continued GCS Block 50 development. ***FY 2013 Plans:***	18.995	13.124	9.293

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0205219F: *MQ-9 UAV*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Will continue Block 50 design and procure RDT&E SILs. ***FY 2014 Plans:*** Will continue Block 50 design; procure RDT&E Software Integration Labs (SILs), technical orders, software integration.			
Title: MQ-9 Electro-Optic / Infrared (EO/IR) Sensor ***Description:*** Develop improved MTS-B modes and capability including all digital high-definition (HD) camera formats and high definition improvements to improve imagery performance (definition and color) and to support future use of coordinate seeking weapons. ***FY 2012 Accomplishments:*** Continued High Definition improvements for EO/IR sensor. ***FY 2013 Plans:*** Will continue the MTS-B High Definition architecture, including design, fabrication, integration, and manned flight test/unmanned flight test of prototypes to achieve production readiness. Program Protection design, integration, and test. Electronic zoom prototype evaluation. MTS-B Prototype integration and test mission software for HD development, integration and test MTS-B HD platform integration/flight test & integration into SIL. System Qualification and Extended Reliability Testing. HD MTS-B Turret Unit Productionization - Document final design, conduct readiness reviews to begin production. Formally release all MTS-B HD design documents. Documentation and Training - Prepare technical orders and training materials. ***FY 2014 Plans:*** Will continue MTS-B High Definition architecture, including design, fabrication, integration, and manned flight test/unmanned flight test of prototypes to achieve production readiness.	26.923	19.671	15.410
Title: Other Government Costs (OGC) ***Description:*** Other Government Costs including urgent services, engineering change orders, program office support, studies and general research. ***FY 2012 Accomplishments:*** Continued OGC support. N/A ***FY 2013 Plans:***	5.079	13.451	13.965

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Will continue OGC Support ***FY 2014 Plans:*** Will continue Urgent and Program Management Services. Support Services to include DMS and corporate support.			
Title: Program Management Administration (PMA) ***Description:*** Program Management Administration ***FY 2012 Accomplishments:*** Continued PMA ***FY 2013 Plans:*** Will continue PMA ***FY 2014 Plans:*** Will continue PMA	2.211	2.559	2.109
Title: Operator Simulator ***Description:*** Develop operator simulators for training and updates to keep Operator Simulator current with upgrades to aircraft and Ground Control Station. ***FY 2012 Accomplishments:*** Continued updates to keep Operator Simulator current with upgrades to aircraft and Ground Station. ***FY 2013 Plans:*** Will continue updates to keep Operator Simulator current with upgrades to aircraft and Ground Station. Consists of: Trainer Enhancements, hi-def EO/IR enhancements, and Block 50 GCS Upgrades. ***FY 2014 Plans:*** Will continue updates to Operator Simulator with upgrades to trainers, Lynx SAR and high definition enhancements.	0.322	12.153	6.070
Title: Synthetic Aperture Radar (SAR) Enhancements ***Description:*** Improvements in MQ-9 capability to disseminate SAR data, improve Ground Moving Target Indicator (GMTI) tracking, automation of data exploitation via Continuous Look Attack Management for Predator (CLAMP) and classification of 3-D targeting. ***FY 2012 Accomplishments:***	6.797	7.547	5.020

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continued SAR data development phase 3, dual beam dismount development, 3-D targeting, and feature aided tracker. ***FY 2013 Plans:*** Will continue SAR data development phase 3, dual beam dismount development, 3-D targeting, and feature aided tracker. ***FY 2014 Plans:*** Will continue stationary targeting improvements for GPS-based weapons: prototype minor modification to Block 20A radar, and re-qualify radar software update and sensor control interface changes.			
Title: Test Support ***Description:*** Various MQ-9 testing activities such as flight testing including range time, controlled airspace, frequency management, project management and on-site facilities. Other testing activities include Joint Integrated Test Command (JITC) support and Edwards AFB acceptance testing support. ***FY 2012 Accomplishments:*** Continued test support. ***FY 2013 Plans:*** Will continue test support. ***FY 2014 Plans:*** Will continue test support.	1.232	2.327	2.327
Title: Communications ***Description:*** Develop MQ-9 communication capabilities including encrypted Line of Sight (LOS) data links to ROVER terminals (VORTEX) and beyond LOS military SATCOM usage. Development and integration of an IP based Remote Split Operations network/infrastructure to include: Design, development and test of IP based network interfaces, network systems managers, drafting Technical Orders and support documentation, Training Packages, Production Drawings and Retrofit Acceptance Test Plans. ***FY 2012 Accomplishments:*** Started development and integration of an IP based Remote Split Operations network/infrastructure to include: Design, development and test of IP based network interfaces, network systems managers, drafting Technical Orders and support documentation, Training Packages, Production Drawings and Retrofit Acceptance Test Procedures. ***FY 2013 Plans:***	2.506	8.148	1.110

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Will continue the development and integration of an IP based Remote Split Operations network/infrastructure to include: Design, development and test of IP based network interfaces, network systems managers, drafting Technical Orders and support documentation, Training Packages, Production Drawings and Retrofit ATPs. ***FY 2014 Plans:*** Will continue development of the Network Enterprise Management Kit, Satellite Earth Terminal Sub-System (SETSS)/Fixed Site Satellite Terminal (FSST) Tech Order Updates, RSO Tech Order Development, Training Course Development and various logistics support analyses.			
Title: Counter-IED Development and Demonstration ***Description:*** Adding "Step Stare" mode capability to the MTS-B EO/IR sensors; also includes associated GCS development and testing. ***FY 2012 Accomplishments:*** Continued to develop/modify sensor to add "Step Stare" mode capability to the MTS-B EO/IR sensors; also includes associated GCS development and testing. ***FY 2013 Plans:*** Will complete development/modification to sensor to add "Step Stare" mode capability to the MTS-B EO/IR sensors; also includes associated GCS development and testing. ***FY 2014 Plans:*** N/A	14.008	6.000	0.000
Title: Multi Transit Operations ***Description:*** Multi-aircraft transit operation is to develop a core functionality to allow one pilot to safely control multiple RPA in non-segregated airspace on an IFR flight plan between airfield and mission area(s) ***FY 2012 Accomplishments:*** Developed multi-aircraft transit operations functionality for RPA's. ***FY 2013 Plans:*** Will continue development of multi-aircraft transit operations functionality for RPA's. Incorporating UCI software architecture and improved Human Machine Interface upgrades to better enable monitoring and oversight of multi-mission activity. ***FY 2014 Plans:***	3.600	6.470	2.640

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Will continue development of multi-aircraft transit operations functionality for RPA's. Incorporates UCI software architecture and improved Human Machine Interface upgrades to better enable monitoring and oversight of multi-mission activity.			
Title: MQ-9 Technology Insertion ***Description:*** Develop program protection Technology Insertion capabilities and functionality for the MQ-9 Weapon System. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** Will develop program protection Technology Insertion capabilities and functionality for the MQ-9 Weapon System. ***FY 2014 Plans:*** Will continue development of program protection, Technology Insertion capabilities and functionality for the MQ-9 Weapon System including aircraft, sensors, and Ground Control Station documentation and drawings.	0.000	10.700	5.430
Title: Reliability and Maintainability ***Description:*** Develop MQ-9 modification improvements for aircraft and ground base infrastructure. ***FY 2012 Accomplishments:*** Developed reliability growth plan for MQ-9. ***FY 2013 Plans:*** Will develop MQ-9 modification improvements for aircraft and ground based infrastructure systems to improve mission capable rates and reduce reliability and maintainability cost. ***FY 2014 Plans:*** Will continue development of MQ-9 modification improvements for aircraft and ground based infrastructure to improve mission capable rates and reduce reliability and maintainability cost.	0.300	4.045	4.224
Title: Anti-ice ***Description:*** Develop anti-ice capability to allow the MQ-9 to detect and transit light icing conditions. There will be wing/tail modifications as well as turbine inlet heating. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:***	0.000	0.000	4.590

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0205219F: *MQ-9 UAV*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
N/A ***FY 2014 Plans:*** Will begin to develop anti-ice capability to allow the MQ-9 to detect and transit light icing conditions. There will be wing/tail modifications as well as turbine inlet heating.			
Title: Extended Range ***Description:*** Develop Extended Range capability to increase operational range and endurance of the baseline MQ-9. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** Will begin to develop Extended Range capability to increase operational range and endurance of the baseline MQ-9. Technical solutions may include extended wings/tails and incorporating external fuel tanks.	0.000	0.000	30.000
Accomplishments/Planned Programs Subtotals	107.576	147.971	128.328

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA04: Line Item # PRDTB1: *MQ-9*	659.592	553.530	272.217		272.217	433.705	494.319	541.534	559.942	1,619.304	7,724.889
• APAF: BA06:Line Item # PRDTB1: *MQ-9*	188.815	124.060	37.070		37.070	126.657	128.408	125.169	131.616	377.628	1,235.347
• APAF: BA05: Line Item # PRDTB2: *MQ-9 Mods*	110.744	238.360	102.970		102.970	104.102	128.052	205.537	160.998	1,142.890	2,298.855
• APAF: BA07: Line Item # PRDTB1: *MQ-9*	0.000	4.000	124.100		124.100	102.000	27.700	27.500	25.790	0.000	355.200
• OPAF: BA03: Line Item 834040: *AF Global Command & Control Sys*	3.907	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	3.907

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0205219F: *MQ-9 UAV*

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA04: Line Item # 845010: *Base Procured Equipment*	0.510	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.510
• RDTE: BA07: PE 0305219F: *MQ-1 Predator A UAV*	51.642	9.122	3.326		3.326	1.396	0.930	0.279	0.284	Continuing	Continuing
• RDTE: BA07: PE 0305206F: *Airborne Reconnaissance Systems*	16.047	16.359	13.040		13.040	6.419	0.000	0.000	0.000	Continuing	Continuing
• APAF: BA05: Line Item PRDTB3: *MQ-9 UAS Payloads*	74.611	93.461	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• APAF: BA06: PRDTB3: *MQ-9 UAS Payloads*	0.000	12.725	8.256		8.256	15.039	1.239	0.000	0.000	Continuing	Continuing
• RDTE: BA07: PE 0304260F: *Airborne SIGINT Enterprise*	25.874	35.340	19.818		19.818	28.354	27.561	33.198	33.795	Continuing	Continuing

Remarks

E. Acquisition Strategy

The MQ-9 Reaper system will be acquired via sole-source contracts with General Atomics-ASI, L3Comm, and Raytheon as the prime contractors. GA-ASI is the prime contractor for aircraft and ground control stations. L3Comm is the prime contractor for the Predator Satellite Link. Raytheon is the prime contractor for the MTS-B EO/IR sensor system.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0205219F: *MQ-9 UAV*	PROJECT 675246: *MQ-9 Development and Fielding*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MQ-9 System Development and Demonstration (SDD)	SS/CPIF	GA-ASI:Poway, CA	-	25.603	Feb 2012	41.776	Apr 2013	26.140	Oct 2013	-		26.140	Continuing	Continuing	377.185
Ground Control Station (GCS) Development	SS/ Various	GA-ASI:Poway, CA	-	18.995	Feb 2012	13.124	Jul 2013	9.293	Dec 2013	-		9.293	Continuing	Continuing	195.305
MQ-9 Electro-Optical / Infrared (EO/IR) Sensor	SS/ Various	Raytheon:McKinney, TX	-	26.923	Feb 2012	19.671	Dec 2012	15.410	Oct 2013	-		15.410	Continuing	Continuing	187.941
Operator Simulator	SS/CPIF	L3 Comm:Salt Lake City, UT	-	0.322	Jun 2012	12.153	Apr 2013	6.070	Dec 2013	-		6.070	Continuing	Continuing	75.210
Synthetic Aperture Radar (SAR) Enhancements	SS/CPFF	GA-RSG:Poway, CA	-	6.797	Feb 2012	7.547	Dec 2012	5.020	Oct 2013	-		5.020	Continuing	Continuing	58.118
Communication	SS/CPFF	GA-ASI:Poway, CA	-	2.506	Aug 2012	8.148	Jan 2013	1.110	Oct 2013	-		1.110	Continuing	Continuing	27.799
Counter-IED Development and Demonstration	SS/ Various	Various:Various,	-	14.008	May 2012	6.000	Apr 2013	0.000		-		0.000	0.000	20.008	31.555
GCS Multi Transit Ops	SS/CPFF	GA-ASI:Poway, CA	-	3.600	Feb 2012	6.470	Jan 2013	2.640	May 2014	-		2.640	Continuing	Continuing	47.390
MQ-9 Program Protection Technology Insertion	SS/CPFF	GA-ASI:Poway, CA	-	0.000		10.700	May 2013	5.430	Dec 2013	-		5.430	Continuing	Continuing	59.390
Reliability and Maintainability	SS/CPFF	GA-ASI:Poway, CA	-	0.300	Apr 2012	4.045	May 2013	4.224	Dec 2013	-		4.224	Continuing	Continuing	37.333
Anti-Ice	SS/CPFF	GA-ASI:Poway, CA	-	0.000		0.000		4.590	Dec 2013	-		4.590	Continuing	Continuing	23.900
Extended Range	SS/CPFF	GA-ASI:Poway, CA	-	0.000		0.000		30.000	Dec 2013	-		30.000	Continuing	Continuing	50.000
		Subtotal	0.000	99.054		129.634		109.927		0.000		109.927			1,171.126

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Support Services	Various	Various:,	-	5.079	Dec 2011	13.451	Oct 2012	13.965	Oct 2013	-		13.965	Continuing	Continuing	138.162
		Subtotal	0.000	5.079		13.451		13.965		0.000		13.965			138.162

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0205219F: *MQ-9 UAV*	PROJECT 675246: *MQ-9 Development and Fielding*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Support	Various	Various:,	-	1.232	Feb 2012	2.327	Oct 2012	2.327	Oct 2013	-		2.327	Continuing	Continuing	35.735
		Subtotal	0.000	1.232		2.327		2.327		0.000		2.327			35.735

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration	Various	Various:,	-	2.211	Feb 2012	2.559	Oct 2012	2.109	Oct 2013	-		2.109	Continuing	Continuing	39.321
		Subtotal	0.000	2.211		2.559		2.109		0.000		2.109			39.321

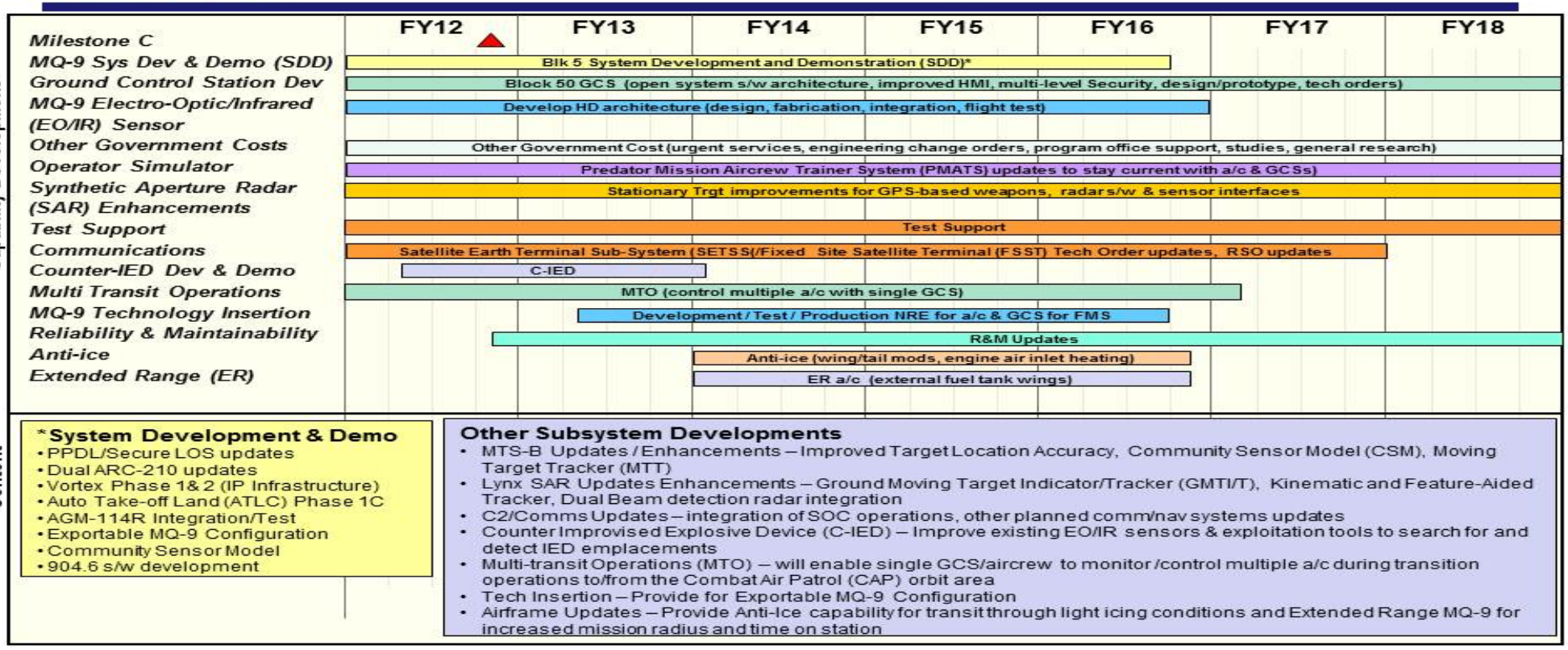
	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	107.576		147.971		128.328		0.000		128.328			1,384.344

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0205219F: *MQ-9 UAV*	PROJECT 675246: *MQ-9 Development and Fielding*

U.S. AIR FORCE

MQ-9 Reaper Program Schedule



Content

***System Development & Demo**
- PPDL/Secure LOS updates
- Dual ARC-210 updates
- Vortex Phase 1& 2 (IP Infrastructure)
- Auto Take-off Land (ATLC) Phase 1C
- AGM-114R Integration/Test
- Exportable MQ-9 Configuration
- Community Sensor Model
- 904.6 s/w development

Other Subsystem Developments
- MTS-B Updates / Enhancements – Improved Target Location Accuracy, Community Sensor Model (CSM), Moving Target Tracker (MTT)
- Lynx SAR Updates Enhancements – Ground Moving Target Indicator/Tracker (GMTI/T), Kinematic and Feature-Aided Tracker, Dual Beam detection radar integration
- C2/Comms Updates – integration of SOC operations, other planned comm/nav systems updates
- Counter Improvised Explosive Device (C-IED) – Improve existing EO/IR sensors & exploitation tools to search for and detect IED emplacements
- Multi-transit Operations (MTO) – will enable single GCS/aircrew to monitor /control multiple a/c during transition operations to/from the Combat Air Patrol (CAP) orbit area
- Tech Insertion – Provide for Exportable MQ-9 Configuration
- Airframe Updates – Provide Anti-Ice capability for transit through light icing conditions and Extended Range MQ-9 for increased mission radius and time on station

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0205219F: *MQ-9 UAV*	**PROJECT** 675246: *MQ-9 Development and Fielding*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Milestone C	4	2012	4	2012
MQ-9 System Development and Demonstration (SDD)	1	2012	3	2016
Ground Control Station (GCS) Development	1	2012	4	2018
MQ-9 Electro-Optic/Infrared (EO/IR) Sensor	1	2012	4	2016
Other Government Costs	1	2012	4	2018
Operator Simulator	1	2012	4	2018
Synthetic Aperture Radar (SAR) Enhancements	1	2012	4	2018
Test Support	1	2012	4	2018
Communications	1	2012	4	2017
Counter-IED Development and Demonstration	2	2012	1	2014
Multi Transit Operations	1	2012	1	2017
MQ-9 Technology Insertion	2	2013	3	2016
Reliability and Maintainability	4	2012	4	2018
Anti-ice	1	2014	4	2016
Extended Range (ER)	1	2014	4	2016

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207040F: *Multi-Platform Electronic Warfare Equipment*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	32.431	49.848	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
675310: *EA Pod DRFM Upgrade*	-	32.431	49.848	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Overall, this program element (PE) funds on-going sustainment, maintenance, and upgrade of Multi-Platform Electronic Attack (EA) jamming pods and associated combat test equipment as well as sustainment of various other Electronic Warfare equipment. Specifically, this program provides procurement, research and development, and operations and maintenance for sustaining the ALQ-131 and ALQ-184 EA jamming pods. These pods are the sole self-protection jamming systems for US Air Force A-10 aircraft and most models of the F-16 aircraft. This upgrade to the electronic attack pod is necessary to keep pace with adversary technological advances in surface-to-air and air-to-air missile systems. Digital Radio Frequency Memory (DRFM) allows an electronic system to digitally record and store characteristics of received signals in order to produce a jamming pulse that more precisely replicates the threat systems pulse. With the current/near term threat systems the A-10 and F-16 are likely to encounter, this level of fidelity is necessary to effectively protect these aircraft in this increasingly lethal environment. This PE is in Budget Activity 7 - Operational System Development because it supports upgrade development of the A-10 and F-16 EA pods which are fielded systems.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.000	49.848	0.000	-	0.000
Current President's Budget	32.431	49.848	0.000	-	0.000
Total Adjustments	32.431	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	32.431	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Pod Upgrade Program	32.431	48.428	0.000

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207040F: *Multi-Platform Electronic Warfare Equipment*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Electronic Attack Pod DRFM Upgrade SDD ***FY 2012 Accomplishments:*** Engineering,Management, and Development ***FY 2013 Plans:*** Continue development of electronic attack pod updgrade. ***FY 2014 Plans:*** N/A			
Title: Program Management Administration (PMA) ***Description:*** PMA procures supplies, travel, and contractor services required for the program office to execute the program. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** Will procure supplies, travel, and contractor services required to support the program office in execution of this program ***FY 2014 Plans:*** N/A	0.000	1.420	0.000
Accomplishments/Planned Programs Subtotals	32.431	49.848	0.000

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA 07: Line Item # 000075: *Other Production Charges*	0.000	0.000	35.442		35.442	35.667	41.486	42.363	0.000	Continuing	Continuing

Remarks

E. Acquisition Strategy

All major contracts within this project will be awarded through full and open competition.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207040F: *Multi-Platform Electronic Warfare Equipment*

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207040F: *Multi-Platform Electronic Warfare Equipment*	PROJECT 675310: *EA Pod DRFM Upgrade*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Eng, Mngmnt, Development	C/FP	Northop-Grumman:Warner-Robins, GA	-	27.168		39.243		0.000		-		0.000	Continuing	Continuing	18.000
		Subtotal	0.000	27.168		39.243		0.000		0.000		0.000			18.000

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Various support activities	MIPR	Various:Various,	-	3.088		3.080		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	3.088		3.080		0.000		0.000		0.000			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Subsystem testing activities	Various	ANG AFRC Test Command:Tucson, AZ	-	2.175		6.105		0.000		-		0.000	0.000	8.280	13.000
		Subtotal	0.000	2.175		6.105		0.000		0.000		0.000	0.000	8.280	13.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Admin (PMA)	MIPR	Various:Warner-Robins, GA	-	0.000		1.420		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.000		1.420		0.000		0.000		0.000			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207040F: *Multi-Platform Electronic Warfare Equipment*	PROJECT 675310: *EA Pod DRFM Upgrade*	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	32.431		49.848		0.000		0.000		0.000			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207040F: *Multi-Platform Electronic Warfare Equipment*	PROJECT 675310: *EA Pod DRFM Upgrade*

U.S. AIR FORCE

EA PUP Schedule

AFLCMC... Providing the Warfighter's Edge

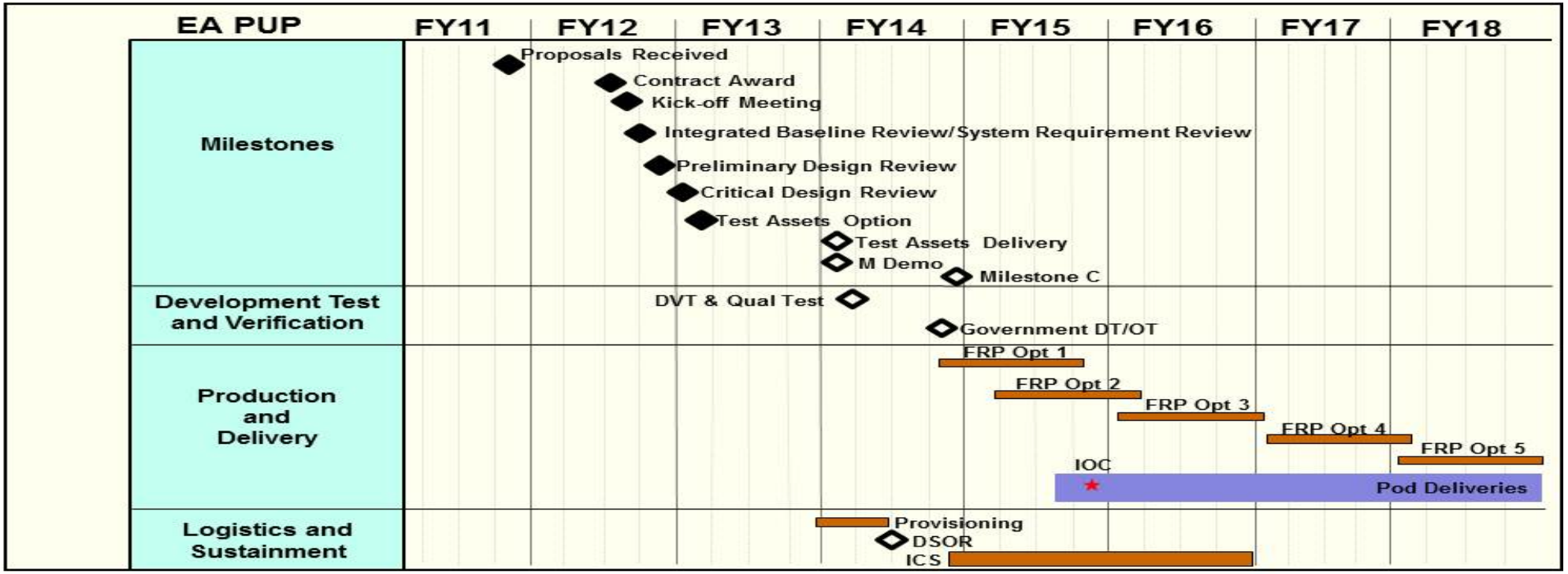


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207040F: *Multi-Platform Electronic Warfare Equipment*	PROJECT 675310: *EA Pod DRFM Upgrade*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Milestone C	4	2014	4	2014
Start of Operational Test	4	2014	4	2014

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207131F: *A-10 Squadrons*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	11.006	13.538	9.614	-	9.614	15.400	14.853	13.409	13.650	Continuing	Continuing
674809: *A-10 Squadrons*	-	11.006	13.538	9.614	-	9.614	15.400	14.853	13.409	13.650	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The A-10 is an essential component of successful joint air operations representing a crucial component of the Combat Air Forces (CAF) force structure. The A-10 concept of operations requires a flexible, adaptable and survivable weapon system providing close-air support, combat search and rescue, and special operations capabilities. Current high operational tempo experienced by the Expeditionary Air Force requires the A-10 to perform effectively in a variety of operational roles. The A-10 must conduct around-the-clock air operations under various weather conditions against numerous enemy threats employing a full spectrum of air defense systems.

FY 2014 RDT&E funds address evolving and continuing user requirements that must be incorporated within the Operational Flight Program (OFP) in order to operate improving weapons and targeting capabilities as they become available. User requirements are formally reviewed for incorporation with a 2-year release cycle. These requirements address hardware and software OFP deficiencies. Final integration of hardware and software requirements into a unified release occurs after rigorous testing, validation and verification using software integration laboratories (SIL), field representative assets, and production representative assets. Results of previously planned developmental and modernization actions provide the A-10 with new combat capabilities that employ a variety of smart weapons, improved situational awareness, and enhanced target identification and designation capability. The funds budgeted in the near term provide development of a SIL in support of the transition to organic software development. These funds also provide updates and integration of the aircraft OFP (Suites 8, 9, and 10), weapons integration, targeting pod updates and integration, communication/navigation/datalink improvements (e.g. Mode 5, Combatant Survivor Evader Locator (CSEL), Anti-Jam Embedded Global Positioning System/Inertial Navigation System (Embedded GPS/ INS), Improved Data Modem (IDM), etc.), self-protection integration (e.g. Electronic Protection, self-protection flares/chaff, Radar Warning Receiver, etc.), and Full Mission Trainer (FMT) concurrency development. Ongoing planning activities will continue to address diminishing manufacturing sources and obsolescence issues as required and provide replacement capabilities.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207131F: *A-10 Squadrons*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	11.006	13.538	13.410	-	13.410
Current President's Budget	11.006	13.538	9.614	-	9.614
Total Adjustments	0.000	0.000	-3.796	-	-3.796
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	-3.796	-	-3.796

Change Summary Explanation

Due to higher Air Force priorities, FY14 was reduced by $3.8M.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: OFP Development	9.733	12.448	8.412

Description: A-10C OFP Suite software is updated and released every two years to permit timely integration of new precision weapons, updated targeting pods, improved avionics, and enhanced electronic warfare capabilities. These upgraded capabilities are in response to evolving operational requirements including Urgent Operational Needs generated by the ever-changing operational environment of close air support.

FY 2012 Accomplishments:

FY12 efforts included initial fielding of helmet mounted cueing system, Lightweight Airborne Recovery System V12 (LARS V12), initiation of Suite 8 development, and the integration of Combatant Survivor Evader Locator's (CSEL) with CSEL Integration Module (CIM).

FY 2013 Plans:

FY13 efforts continue the development of Suite 8 including initial testing of LARSV12 and the test, evaluation, and initial integration of the Mode 5 radio Identify Friend or Foe capability into the A-10C OFP. These efforts respond to a DoD mandate for an FY14 Initial Operational Capability. A-10 FMT simulator software integration and development must be updated to remain concurrent with the aircraft's OFP software.

FY 2014 Plans:

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207131F: *A-10 Squadrons*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
FY14 continues Suite 8 development and testing, as well as the fielding of Suite 8. Suite 9 software development is planned to start in FY14 and will consist of advanced targeting pod integration, weapons integration, communications/navigation systems integration, and cockpit pilot-vehicle interface integration. Additionally, A-10 FMT simulator software integration and development must be updated to remain concurrent with the aircraft's OFP software.			
Title: OFP development PMA ***Description:*** Program management support cost. ***FY 2012 Accomplishments:*** Program management support cost. ***FY 2013 Plans:*** Program management support cost. ***FY 2014 Plans:*** Program management support cost.	1.273	1.090	1.202
Accomplishments/Planned Programs Subtotals	11.006	13.538	9.614

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: A01000: *A-10 Squardrons, PE 0207131F*	12.528	89.919	47.598		47.598	0.000	0.000	0.000	0.000	Continuing	Continuing
• APAF: BA05: Line Item #A01000: *Fighter Tactical Data Link, PE 0207445F*	0.674	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

E. Acquisition Strategy

Prior to FY 2009, A-10 OFP development efforts were conducted under the A-10 Prime Contract, awarded to Lockheed Martin Systems Integration in December 1997 through a full-and-open competition. Suite 8 development efforts began in FY12, with lab development and stand-up beginning in FY11 as A-10 OFP suites development and sustainment efforts transitioned from contractual work by Lockheed Martin to organic work by 309th Software Maintenance Group (SMxG) at Hill AFB. All additional suites beyond 8 will be performed by the 309th SMxG until directed otherwise. The A-10 FMT simulator OFP is managed by the Simulator Division at Wright-Patterson Air Force Base and is contractor developed and integrated.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207131F: *A-10 Squadrons*

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207131F: *A-10 Squadrons*	PROJECT 674809: *A-10 Squadrons*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
OFP Development (309th SMXG)	Various	309th SMXG:Hill AFB, UT	-	8.824	Nov 2011	10.329	Nov 2012	8.412	Jan 2014	-		8.412	Continuing	Continuing	
		Subtotal	0.000	8.824		10.329		8.412		0.000		8.412			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
USAF (Multiple)	Various	Various:Various,	-	0.889	Nov 2011	0.373	Nov 2012	0.675	Jan 2014	-		0.675	Continuing	Continuing	
		Subtotal	0.000	0.889		0.373		0.675		0.000		0.675			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
USAF (OFP)	Various	Various:Various,	-	0.350		1.838	Nov 2012	0.000	Jan 2014	-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.350		1.838		0.000		0.000		0.000			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA	Various	Various:,	-	0.943		0.998	May 2013	0.527	Jan 2014	-		0.527	Continuing	Continuing	
		Subtotal	0.000	0.943		0.998		0.527		0.000		0.527			

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	11.006		13.538		9.614		0.000		9.614			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207131F: *A-10 Squadrons*	PROJECT 674809: *A-10 Squadrons*

A-10 3600 Master Schedule (PEC 027131F)

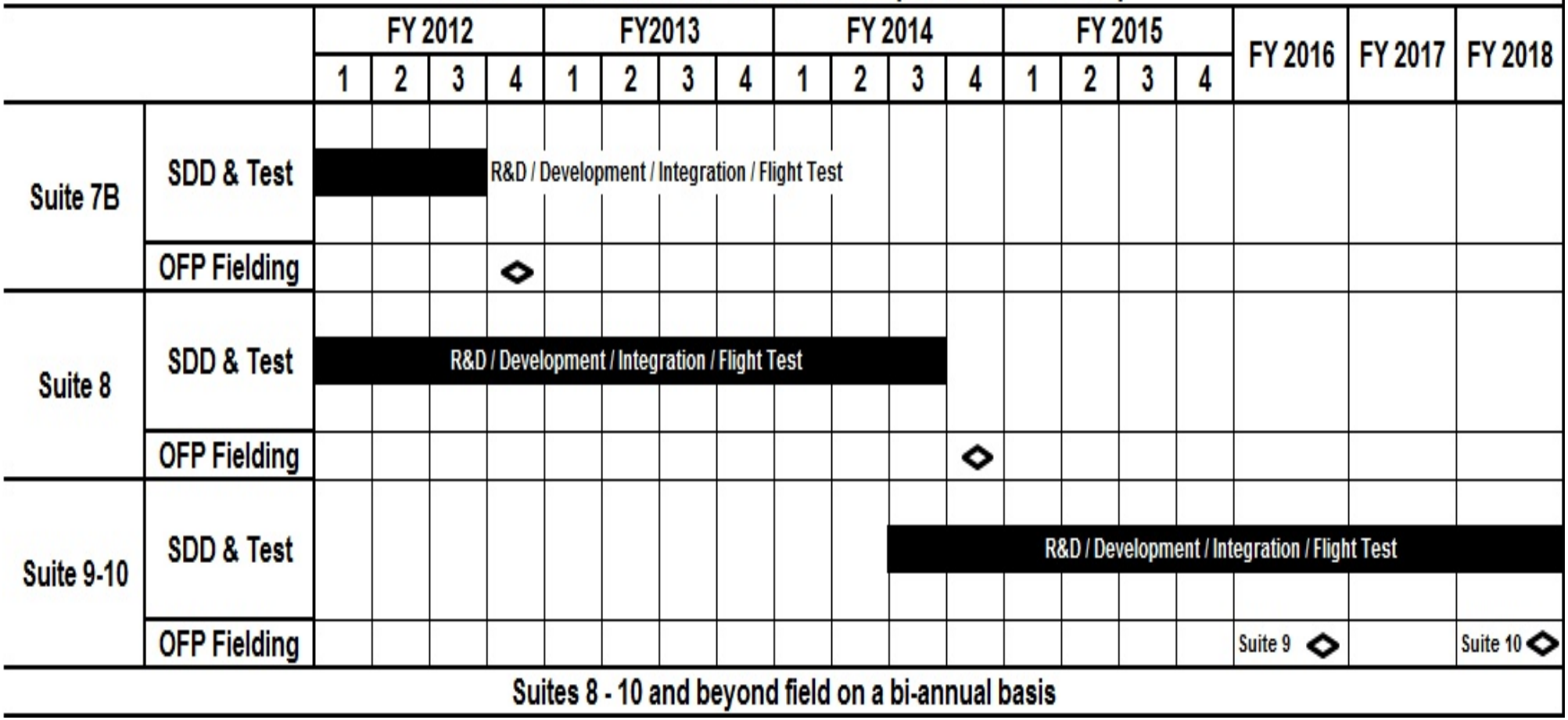


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207131F: *A-10 Squadrons*	**PROJECT** 674809: *A-10 Squadrons*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Suite 7B OFP Design, Development & Flight Test	1	2012	4	2012
Suite 7B Fields	4	2012	4	2012
Suite 8 - OFP System Design, Development & Flight Test	1	2012	4	2014
Suite 8 OFP Fields	4	2014	4	2014
Suite 9 OFP System Design, Development & Flight Test	3	2014	4	2016
Suite 9 OFP Fields	4	2016	4	2016
Suite 10 OFP System Design, Development & Flight Test	3	2016	4	2018
Suite 10 OFP Fields	4	2018	4	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207133F: *F-16 Squadrons*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	128.503	190.257	177.298	-	177.298	228.263	212.916	160.742	135.870	Continuing	Continuing
672671: *F-16 Squadrons*	-	128.503	190.257	177.298	-	177.298	228.263	212.916	160.742	135.870	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

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 35-year history, the F-16 has proven itself in combat in a variety of air-to-air and air-to-surface missions such as offensive and defensive counter-air, close air support, forward air control, 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. AFLCMC/WWM (The F-16 System Program 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 Five Year Defense Plan (FYDP) include:

a. Operational Flight Program (OFP) Development: Blk 40-52 OFP (M-tapes) are updated continually to integrate new precision weapons, advanced targeting pods, improved avionics, hardware and software mods to keep F-16 training simulators current, and other hardware (HW) Group B subsystems. Major tapes (e.g., M6/6+) are released every three years and a minor tape (e.g., M6.2+) is released 1 year after each major tape. The European Participating Air Forces (EPAF) countries participate in the development of M-tapes and share the cost of developing common capabilities and totally fund development of their unique capabilities. Generally, three major or minor tapes are under development/testing at any one time. Extensive ground and flight testing is required to field each M-tape. Advanced weapons integration includes joint air-to-surface stand-off missile (JASSM) and joint direct attack munitions (JDAM, Laser JDAM), small diameter bomb (SDB and SDB II), advanced medium range air-to-air missile (AMRAAM) AIM-120D, Sidewinder (AIM-9X/AIM-9X Block II), and updates to existing weapons. JASSM-ER (Extended Range) integrates JASSM-ER on F-16 Blk 40-50 aircraft, includes NRE, SEEK EAGLE, test assets, integration, and test. Weapons integration also includes tasks such as performing risk reduction activities on advanced weapon integration, developing and integrating advanced racks, pylons, adapters, and the universal armament interface (UAI), and ensuring nuclear surety, safety and compatibility. Updates to electronic warfare systems allow for incorporation of latest updates for changing threat environment reducing war fighter vulnerabilities. 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. Major new capabilities currently being integrated via M-tapes include GPS inertial navigation set (GPS/INS) updates to improve targeting accuracy and GPS security, EGBU-12 (laser/GPS guided bomb), Mode 5 identification friend or foe (IFF), SDB with UAI, AIM-120D, joint mission planning system (JMPS), and Alpha II Lite. As part of OFP transition and M6.5/M7+ OFP upgrade, Lockheed Martin Aeronautics (LM Aero) and Ogden Air Logistics Center will split responsibility for software development. LM Aero will produce the common USAF/EPAF core software tape for USAF M6.5+ and serve as the

baseline for the USAF M7+ OFP. OO-ALC will have software development responsibility for the M7+ software/hardware candidates being incorporated on USAF jets with M7+ Phase III OFP development scheduled to field in FY16. M8+ will be the initial CAPES OFP.

b. F-16 Blk 40-52 Legacy SLEP structures: includes full scale durability test (FSDT) which requires a test fixture and structural analysis to begin structural testing. The test fixture began fabrication in FY11. FSDT is intended to determine whether the F-16 Block 40-52 airworthiness certification can be extended from the current certified service life of 8,000 equivalent flight hours (EFH) to 10,000+ EFH. In accordance with the Aircraft Structural Integrity Program (ASIP) and MIL-STD 1530C, testing will support Blk 40-52 structural upgrade program that replaces or reworks known life-limited structure to preclude the onset of widespread fatigue damage, maintain safety of flight and enhance aircraft availability beyond 8,000 hours. Engineering, Manufacturing and Development (EMD) extends through FY16.

c. F-16 Blk 40-52 Combat Avionics Programmed Extension Suite (CAPES): This avionics modernization program is needed to keep the F-16 Blk 40-52 aircraft viable in the threat environment beyond 2025. It includes but is not limited to an active electronically scanned array (AESA) radar that offers improved destruction of enemy air defenses (DEAD), and advanced electronic protection capabilities as well as improved reliability and maintainability; center display unit (CDU), which replaces the existing flight instrument cluster with a large higher resolution color multi-function display; electronic warfare suite (EW), which provides a single-point access for automated or hands-on EW system control; and an integrated broadcast service (IBS) that integrates multiple intelligence broadcasts into a system of systems and migrates tactical receive terminals into a single related joint tactical terminal (JTT) family and modular mission computer (MMC) throughput memory upgrades, high speed data communications within the aircraft systems. FY12 risk reduction funding was available as part of SLEP avionics to initiate this capability modernization.

d. Auto ground collision avoidance system (AGCAS) builds on the Air Force research laboratories (AFRL) fighter risk reduction program (FRRP) demonstrated capability and results in the AGCAS capability being production ready for incorporation in the M6.2+ OFP fielding in FY14 with potential for nearly eliminating controlled flight into terrain (CFIT) accidents, a leading cause of F-16 loss of pilot and aircraft accidents.

e. EMD hardware/advanced capability improvements: EMD HW provides funding to develop, test, and qualify, weapon systems, aircraft subsystems replaced or modified due to requirements changes, pre-planned product improvements (P3I), diminishing manufacturing sources (DMS) and parts obsolescence. The approach to contracting varies by individual project. These hardware improvements include but are not limited to flight systems, improved navigation, multiplex architecture, modular mission computer (MMC) throughput memory upgrades, high speed data communications within the aircraft systems, embedded GPS inertial navigation set (GPS/INS) updates, Blk 40 air-to-air interrogator (AAI), digital video recorder, advanced data transfer equipment (ADTE) and related data transfer and retrieval devices, display upgrades and display generators, radio/communication studies, and Control Actuation System (CAS) data link. Advanced capability improvements include software integration, sensor upgrades, radar updates and other self-protection/electronic protection (EP) enhancements, 4th/5th gen fighter network communications, lab and/or on-aircraft evaluation of potential subsystem changes/capability improvements on the F-16 as well as establishment of associated requirement specification changes. These capability improvements also fund integration of pods including updates and tech order changes (SNIPER, Harm targeting system (HTS), low (altitude) infrared targeting and navigating (LITENING)) etc. Advanced capabilities also includes integration of new replacement DMS hardware for a crash survivable data recorder.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207133F: *F-16 Squadrons*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	131.069	190.257	255.898	-	255.898
Current President's Budget	128.503	190.257	177.298	-	177.298
Total Adjustments	-2.566	0.000	-78.600	-	-78.600
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.499	0.000			
• SBIR/STTR Transfer	-3.065	0.000			
• Other Adjustments	0.000	0.000	-78.600	-	-78.600

Change Summary Explanation

FY14 reduction for CAPES of -$84.8M

FY14 increase for Legacy SLEP of +$6.2M

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: OFP Updates Blk 40-52 OFP	82.683	76.723	83.238

Description: OFP Updates-Blk 40-52 OFP (M-tapes) are updated continually to integrate new weapons, targeting pods, improved avionics. M6.1+ has completed FDE scheduled in CY 2013. M6.5+/M7+ is in Phase III Development with M6.5+ common candidates to include UAI updates and EGI updates and M7+ candidates to include AIM 9X Block II. Phase III anticipated start late CY 2012. The USAF M6.5+ OFP will not field, however, this OFP drop will become the baseline for M7+ Phase III. M7+ fielding is planned for FY16.

FY 2012 Accomplishments:

M5.2+ has fielded. M6.1+ Phase III FDE is complete with fielding scheduled for early CY13. M6.2+ Minor Tape has started early flight testing, M7+ Phase III development efforts start 1QFY13 and DTO is ongoing as detail design and code efforts for Phase III at OO-ALC. OFP transition from LM Aero to OO-ALC will be completed and final System Integration Lab (SIL) HW assets are now on contract. M6.5+ Phase III contract has been negotiated to begin requirements definition for M6.5+ common OFP development efforts with EPAF.

FY 2013 Plans:

Continue OFP software design and begin integration and DTE efforts for M6.2+ Minor tape which incorporates Auto GCAS as well as new FAA SW requirement that will allow Mode 5 to field as part of the M6.2+ Minor Tape. M6.5+ merges with M7+ as part of

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Phase III risk reduction. Begin M8+ SW candidate assessment to include Combat Avionics Programmed Extension Suite (CAPES) OFP integration and initiates Alpha II Lite. ***FY 2014 Plans:*** Finalize DT/OT testing and field M6.2+ Minor Tape in 2Q2014 which incorporates Auto GCAS as well as new FAA SW requirement that will allow Mode 5 to field. M7+ OFP baseline will incorporate all M6.5+ candidates as part of final design, code and unit test and enters into SIL testing. Phase 0/1 efforts continue for M8+ SW candidates and requirements are defined as part of the F-16 CAPES OFP. Begin JASSM-ER NRE, procure SEEK EAGLE test assets.			
Title: Flight Test ***Description:*** F-16 Baseline Flight Test funds F-16 test and evaluation at the Combined Test Facility (CTF) at Edwards AFB and DT/OT Test facility at Eglin AFB including integration test of associated subsystems and weapons as well as maintain test schedule for F-16 Block 40-52 MMC OFPs, weapons integration, and sub-systems to ensure capabilities meet ACC's fielding schedule. ***FY 2012 Accomplishments:*** FY12 funding supports CTF infrastructure (Government and Contractor). M5.2+ completed Fighter Development Evaluation (FDE). M6+ OFP has completed FDE testing. Auto GCAS DT has started as well as M7+ DTO testing completing late CY 2012. Continue Legacy OFP (M4+/M5+) advanced weapons/subsystem regression testing. ***FY 2013 Plans:*** FY13 funding supports CTF infrastructure (Government and Contractor) and DT flight DTE sorties for M6.2+ Minor Tape OFP as well as M7+ DTO testing. ***FY 2014 Plans:*** FY14 funding supports CTF infrastructure (Government and Contractor). M6.2+ Minor Tape OFP completes FDE as well as M7+ DTO testing.	22.124	24.446	25.463
Title: Combat Avionics Programmed Extension Suite (CAPES) ***Description:*** F-16 Blk 40/50 Combat Avionics Programmed Extension Suite (CAPES): This avionics modernization program is needed to keep the F-16 Blk 40-52 aircraft viable in the threat environment beyond 2025. It includes but is not limited to an active electronically scanned array (AESA) radar that offers improved destruction of enemy air defenses (DEAD), and advanced electronic protection capabilities as well as improved reliability and maintainability; center display unit (CDU), which replaces existing flight instrument cluster with large higher resolution color multi-function display; electronic warfare (EW) updates (ALQ-213), which provides a single-point access for automated or hands-on EW system control; and integrated broadcast service	11.444	68.445	42.999

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
(IBS) that integrates multiple intelligence broadcasts into a system of systems and migrates tactical receive terminals into a single related joint tactical terminal (JTT) family. ***FY 2012 Accomplishments:*** The CAPES avionics modernization program initiated risk reduction efforts for Group A/B HW. CAPES ASP was held Jun 2012 and AESA NTE was received in late CY 2012. Initial risk reduction efforts require our prime integrator and subsystem vendors to define the F-16 CAPES avionics architecture, determine potential requirements, conduct studies on RF compatibility impacts, and gather assistance to draft the system requirement document (SRD). A flight demo has been initiated to assess CDU system functionality, performance and interfaces to determine unique requirements for the integration of the CDU into an F-16 Block 40/42 aircraft. ***FY 2013 Plans:*** CAPES AESA UCA has been awarded as part of the Radar Modernization Program with vendor selection scheduled for 4QFY13, test assets will be procured at that time. ***FY 2014 Plans:*** Continue AESA EMD as well as initiate CAPES integration contract with F16 Prime Contractor. Finalize all procurement of EMD test assets.			
Title: Legacy Service Life Extension Program (SLEP) Structures ***Description:*** F-16 Blk 40/50 Legacy Service Life Extension Program (SLEP) Structures: This structural-SLEP includes full scale durability test (FSDT) which started in FY11 and requires a test fixture and structural analysis to begin testing. FSDT is intended to determine whether the F-16 Block 40-52 airworthiness certification can be extended from the current certified service life of 8,000 EFH to 10,000+ EFH. In accordance with the Aircraft Structural Integrity Program (ASIP) and MIL-STD 1530C, testing will support Blk 40/50 structural upgrade program that replaces or reworks known life-limited structure to preclude the onset of widespread fatigue damage, maintain safety of flight and enhance aircraft availability beyond 8,000 hours. FSDT started in FY11 and EMD begins 3QFY13 and extends through FY16. ***FY 2012 Accomplishments:*** Initiates structures EMD design to extend the current certified service life of 8,000 EFH to 10,000+ EFH. In accordance with the Aircraft Sructural Integrity Program (ASIP) and MIL-STD 1530C, testing will support Blk 40/50 structural uprgrade program that replaces or reworks know life-limited structure to preclude the onset of widespread fatigue damage, maintain safety of flight and enhance aircraft availability beyond 8,000 EFH. ***FY 2013 Plans:***	0.800	8.867	18.181

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continue FSDT analysis. Legacy SLEP EMD MS B forecast March 2013 and EMD contract award June 2013 for design to extend the current certified service life of 8,000 EFH to 10,000+ EFH. In accordance with the Aircraft Structural Integrity Program (ASIP) and MIL-STD 1530C, testing will support Blk 40/50 structural upgrade program that replaces or reworks known life-limited structure to preclude the onset of widespread fatigue damage, maintain safety of flight and enhance aircraft availability beyond 8,000 hours. ***FY 2014 Plans:*** Continue FSDT analysis and structures EMD design to extend the current certified service life of 8,000 EFH to 10,000+ EFH. In accordance with the Aircraft Structural Integrity Program (ASIP) and MIL-STD 1530C, testing will support Blk 40/50 structural upgrade program that replaces or reworks known life-limited structure to preclude the onset of widespread fatigue damage, maintain safety of flight and enhance aircraft availability beyond 8,000 hours.			
Title: EMD HW/Advanced Capibilities Improvements	0.500	0.478	0.500
Description: EMD hardware (HW)/advanced capability improvements: EMD HW provides funding to develop, test, and qualify aircraft weapons systems including F-16 subsystems replaced or modified due to requirements changes, pre-lanned product improvements (P3I) and diminishing manufacturing source (DMS)and parts obsolescence. The approach to contracting varies by individual project. These hardware improvements include but are not limited to flight systems, improved navigation, mux architecture, MMC throughput memory upgrades, high speed data communications within the aircraft systems, embedded GPS/ INS updates, Blk 40 air-to-air interrogator (AAI), digital video recorder, advanced data transfer equipment (ADTE) and related data transfer devices and interfaces, display upgrades, radio/communication studies, and CAS data link. Advanced capability improvements include software integration, sensor upgrades, radar updates and other self-protection/electronic protection (EP) enhancements, 4th/5th gen fighter network communications, lab and/or on-aircraft evaluation of potential subsystem changes/ capability improvements on the F-16 as well as establishment of associated requirement specification changes. These capability improvements also fund integration of pods including updates and tech order changes (SNIPER, HTS, LITENING) etc. Also includes integration of new replacement DMS hardware for a crash survivable data recorder. ***FY 2012 Accomplishments:*** EMD HW/advanced capabilities improvements varies by individual project and is used to develop, test, and qualify aircraft subsystems replaced or modified due to requirements changes, pre-planned product improvements (P3I) and diminishing manufacturing source (DMS) and parts oboslescense unique to data transfer devices and interfaces (Micro CID). Advanced capability improvements include software integration, sensor upgrades, 4th/5th gen fighter network communications, lab and/or on-aircraft evaluation of potential subsystem changes/capability improvements on the F-16 as well as establishment of associated			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
requirement specification changes. These capability improvements also fund integration of pods including updates and tech order changes. ***FY 2013 Plans:*** EMD HW/advanced capabilities improvements varies by individual project and is used to develop, test, and qualify aircraft subsystems replaced or modified due to requirements changes, pre-planned product improvements (P3I) and diminishing manufacturing source (DMS) and parts obsolescense unique to data transfer devices (Micro CID). Advanced capability improvements include software integration, sensor upgrades, 4th/5th gen fighter network communications, lab and/or on-aircraft evaluation of potential subsystem changes/capability improvements on the F-16 as well as establishment of associated requirement specification changes. These capability improvements also fund integration of pods including updates and tech order changes. ***FY 2014 Plans:*** EMD HW/advanced capabilities improvements varies by individual project and is used to develop, test, and qualify aircraft subsystems replaced or modified due to requirements changes, pre-planned product improvements (P3I) and diminishing manufacturing sources (DMS) and parts obsolescence unique to data transfer devices (Micro CID). Advanced capability improvements include software integration, sensor upgrades, 4th/5th gen fighter network communications, lab and/or on-aircraft evaluation of potential subsystem changes/capability improvements on the F-16 as well as establishment of associated requirement specification changes. These capability improvements also fund integration of pods including updates and tech order changes.			
Title: Auto Ground Collision Avoidance System ***Description:*** This program will nearly eliminate controlled flight into terrain (CFIT) accidents, a leading cause of F-16 loss of pilots and aircraft accidents. One study predicted this capability could have saved 10 pilots and 15 aircraft lost from CFIT accidents had it been available. Air Force 1067 signed by the Combat Air Force Requirements Oversight Council (CAFROC) on 3 Mar 2008 directed development of Auto GCAS for F-16 Blk 40-52 aircraft for fielding with M6.2+. The requested solution is for Auto GCAS and other flight control safety enhancements identified in Phase II for F-16 Blocks 40-52 aircraft to be integrated and delivered with the M6.2+ OFP in FY14. The effort is to qualify and release a digital flight control computer (DFLCC) configuration that is backward compatible with M6.1+ F-16 USAF OFP that can initiate DFLCC Time Compliance Technical Order (TCTO) upgrades without Auto GCAS in the core avionics. Production configurations of the remaining software items will be incorporated during the M6.2+ effort and will enable the Auto GCAS function. ***FY 2012 Accomplishments:***	6.741	5.061	0.000

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Completed Auto GCAS Phase IIIb efforts that address in-flight anomalies via software updates. The contractor incorporates avionics and flight control requirements or requirement revisions (core avionics, DTS, mission planning and flight control OFPs) into DTO #2. Key efforts include configuring the Design Try Out (DTO) #2 digital flight control (DFLCC) flight test OFP as a production OFP and formally regression testing it with the F-16 USAF M6.1+ avionics suite so fielding of the DFLCC with an Auto GCAS enabled OFP can be initiated via TCTO prior to fielding with M6.2+ OFP. ***FY 2013 Plans:*** Continue Auto GCAS integration and testing for incorporation into the M6.2+ OFP (Minor Tape) scheduled to field in FY 2014 and finish updating support equipment software to accommodate Auto GCAS testing.			
Title: Program Mgmt Support Cost ***Description:*** Effort includes advisory and analytical suppost (A&AS), travel, and Air Force Life Cycle Management Center/Fighter Bomber (AFLCMC/FB) wing bills. ***FY 2012 Accomplishments:*** includes A&AS, travel, and AFLCMC/FB wing bills. ***FY 2013 Plans:*** includes A&AS, travel, and AFLCMC/FB wing bills. ***FY 2014 Plans:*** includes A&AS, travel, and AFLCMC/FB wing bills.	4.211	6.237	6.917
Accomplishments/Planned Programs Subtotals	128.503	190.257	177.298

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: F01600: *Modifications, PE 0207133F*	56.746	6.896	11.794		11.794	20.137	14.143	27.919	248.639	1,958.553	2,344.827
• APAF: BA07: F01600: *Post Production Support,PE 0207133F*	4.537	8.506	3.455		3.455	11.101	15.271	15.546	15.826	Continuing	Continuing

Remarks

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E. 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 modification development efforts. Starting with M7+ OO-ALC will be primary OFP SW developer.

The F-16 Blk 40-52 Legacy SLEP and CAPES programs will keep the F-16 aircraft viable in the threat environment beyond 2025 by extending the service life and increasing the capabilities of the F-16. Legacy SLEP EMD runs through FY17. CAPES AESA Radar EMD ends in FY18.

The EMD hardware development line provides funding to develop, test, and qualify aircraft subsystems upgrades, communication upgrades, parts obsolescence and diminishing manufacturing source (DMS). The approach to contracting varies by individual project. LM Aero is the prime contractor on all systems except the General Electric engines and the Pratt & Whitney engines. Contract types are Time and Material (T&M), Cost Plus Incentive Fee (CPIF), Cost Plus Fixed Fee (CPFF) and Firm Fixed Price (FFP).

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
OFP Updates	Various	Various:Various,	-	82.683	Nov 2011	76.723	Nov 2012	83.238	Nov 2013	-		83.238	Continuing	Continuing	
CAPES - Avionics	Various	Various:Various,	-	11.444	Mar 2012	68.445	Sep 2013	42.999	Mar 2014	-		42.999	Continuing	Continuing	352.206
Service Life Extension Program (SLEP Structures	Various	Various:Various,	-	0.800	Mar 2012	8.867	Mar 2013	18.181	Nov 2012	-		18.181	Continuing	Continuing	95.209
EMD HW / Advanced Capabilities	Various	Various:Various,	-	0.500	Sep 2012	0.478	May 2013	0.500	Mar 2014	-		0.500	Continuing	Continuing	
Auto GCAS	Various	Various:Various,	-	6.741	Feb 2012	5.061	Jan 2013	0.000		-		0.000	Continuing	Continuing	32.877
Reprogramming Pending	TBD	Various:,	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	102.168		159.574		144.918		0.000		144.918			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Flight Tests	Various	Various:Various,	-	22.124	Oct 2011	24.446	Oct 2012	25.463	Oct 2013	-		25.463	Continuing	Continuing	
		Subtotal	0.000	22.124		24.446		25.463		0.000		25.463			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Mgmt Support Costs	Various	Not specified.:,	-	4.211	Jan 2012	6.237	Jan 2013	6.917	Jan 2014	-		6.917	Continuing	Continuing	
		Subtotal	0.000	4.211		6.237		6.917		0.000		6.917			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
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	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	128.503		190.257		177.298		0.000		177.298			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
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F-16 Program Schedule – USAF (R-4 Exhibit)

U.S. AIR FORCE

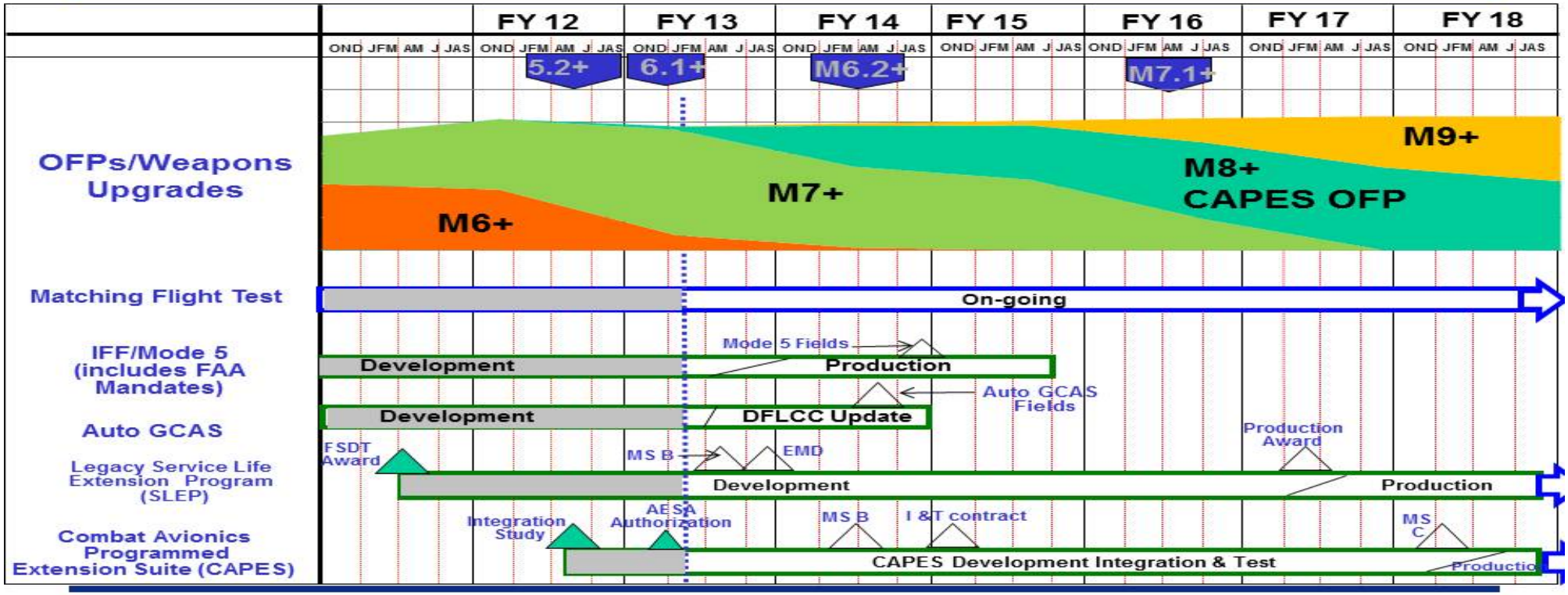


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
M5.2+ Field	3	2012	3	2012
M6.1+ Field	2	2013	2	2013
M6.2+ Minor Tape Field	2	2014	2	2014
Auto GCAS Field	3	2014	3	2014
Mode 5 IFF Field	4	2014	4	2014
Legacy Service Life Extension Program (SLEP) Structures EMD	4	2013	1	2017
CAPES AESA Radar Authorization, Integration	1	2013	2	2016
CAPES MS B	2	2014	2	2014

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	184.665	192.677	244.289	-	244.289	426.331	459.242	427.772	335.936	Continuing	Continuing
670131: *Initial Operational Test and Evaluation*	-	121.548	92.555	74.975	-	74.975	203.496	227.037	174.600	83.476	Continuing	Continuing
676020: *F-15*	-	63.117	100.122	169.314	-	169.314	222.835	232.205	253.172	252.460	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The F-15 is the most versatile fighter in the world today. The F-15C/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 operations both domestic 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 and acquisition support 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 precision timing, data delivery and processing technology, precision registration systems, cockpit Head Up Display (HUD), instrumentation digitization and modernization, central computer processing power increases, digital mission event recording systems and an infrared (IR) based fire control system. Funds are also used, as required, to resolve Diminishing Manufacturing Sources and Material Shortage (DMSMS) issues. 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. 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 aircrew training

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*			R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	194.831	192.677	354.193	-	354.193
Current President's Budget	184.665	192.677	244.289	-	244.289
Total Adjustments	-10.166	0.000	-109.904	-	-109.904
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	-4.412	0.000			
• SBIR/STTR Transfer	-5.754	0.000			
• Other Adjustments	0.000	0.000	-109.904	-	-109.904

Change Summary Explanation

FY2012: Funding decrease for higher Air Force priorities.

FY2014: Funding decreases for the Eagle Passive/Active Warning Suvivability System (EPAWSS), the Advanced Display Core Processor (ADCP) II, and higher Air Force priorities; add funding to start new weapons integration effort.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*	PROJECT 670131: *Initial Operational Test and Evaluation*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
670131: *Initial Operational Test and Evaluation*	-	121.548	92.555	74.975	-	74.975	203.496	227.037	174.600	83.476	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Operational Flight Program (OFP) Development efforts and Flight test have been moved to BPAC 676020

A. Mission Description and Budget Item Justification

This includes development of the F-15E APG-82(V)1 Active Electronically Scanned Array (AESA) radar, the F-15C/D and F-15E Advanced Display Core Processor (ADCP) II and the F-15C/D and F-15E Eagle Passive/Active Warning Survivability System (EPAWSS).

The APG-82(V)1 will supply the F-15E with a digital radar that will provide improved range and resolution, as well as a significant improvement in reliability. This AESA radar has the ability to provide electronic attack and protection capabilities.

The ADCP II will develop a common mission computer for the F-15C/D and F-15E. The current mission computers of both platforms have reached their limits of speed, memory and throughput. Additionally, digital systems have changed the security requirements of both platforms and the older mission computers cannot be upgraded to meet these new requirements. A common mission computer is expected to reduce overall development costs as well as long term maintenance costs. The program will also develop a new F-15C/D cockpit display to replace an obsolete one.

EPAWSS will replace the obsolete Tactical Electronic Warfare System (TEWS), which will help the aircraft survive in high threat environments.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: F-15E Radar Modernization Program (RMP) APG-82(V)1	53.776	6.823	0.000
Description: New digital AESA radar replacing legacy analog APG-70 radars on all F-15E aircraft. This includes technical and acquisition related studies.			
FY 2012 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*	PROJECT 670131: *Initial Operational Test and Evaluation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continued DT&E and completed modification of test aircraft. ***FY 2013 Plans:*** Complete DT&E and IOT&E. Upgrade trainers. Complete EMD phase of program ***FY 2014 Plans:*** Not Applicable			
Title: Eagle Passive/Active Warning Survivability System (EPAWSS) ***Description:*** Planned replacement of the existing F-15 self-protection, Tactical Electronic Warfare System (TEWS). This includes technical and acquisition related studies. ***FY 2012 Accomplishments:*** Not applicable ***FY 2013 Plans:*** New Start FY13. Evaluate EPAWSS integration requirements and interface characteristics. Early acquisition planning, security planning and specification development. Technical and acquisition related studies. ***FY 2014 Plans:*** Continue acquisition planning, security planning and specification development. Technical and acquisition related studies. Develop EMD procurement package for award of EMD contract to design, fully integrate, test and install EPAWSS on the F-15C/D and F-15E.	0.000	5.082	20.000
Title: Advanced Display Core Processor (ADCP) II (formerly known as Computer Processor Modernization Program and Advanced Display Core Processor Plus w/Vertical Situation Display. FY12 combined programs) ***Description:*** New central computer for both F-15E and F-15C/D modernization. Program provides a central computer upgrade for 219 F-15Es to replace ADCP. F-15C/D provides 175 modern computers and a high resolution color display to replace the current F-15C/D Vertical Situation Display (VSD). This includes technical and acquisition related studies. ***FY 2012 Accomplishments:*** Subsystem System Requirements Review (SRR), Preliminary Design Review (PDR), Aircraft SRR, Subsystem Critical Design Review (CDR). Continued software prototyping. Began EMD. ***FY 2013 Plans:***	66.398	79.490	54.055

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*	PROJECT 670131: *Initial Operational Test and Evaluation*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continue EMD. Critical Design Review (CDR). Initial hardware build. OFP Suite 8E rehost for F-15 C/D. Software development and testing on prototype hardware. Vertical Situation Display Replacement (VSDR) design and integration. ***FY 2014 Plans:*** Continue EMD. Initial EMD ADCP II units. Complete initial Common OFP (Suite 8E rehost for F-15 C/D). Software development and testing on EMD hardware. Begin system stability and endurance testing. Finalize installation TCTO for flight test. Flight Test Readiness Review for Operational Assessment. Delivery of VSDR EMD units.			
Title: Program Mgt Support Costs ***Description:*** Program Management Support Costs ***FY 2012 Accomplishments:*** Program Management Support Costs ***FY 2013 Plans:*** Program Management Support Costs ***FY 2014 Plans:*** Program Management Support Costs	1.374	1.160	0.920
Accomplishments/Planned Programs Subtotals	121.548	92.555	74.975

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: Line Item # F01500: *Aircraft Modification: F-15: PEs 0207130/0207134/0207445/0809731*	255.586	148.378	354.624		354.624	497.514	518.373	372.220	475.079	Continuing	Continuing
• APAF: BA07: Line Item # 000071: *Aircraft Replacement Support Equip (BP12)*	1.545	3.536	0.000		0.000	0.000	0.000	0.000	0.000	0.000	1.545
• APAF: BA07: Line Item # F0150P: *F-15 Post Production Support*	2.076	2.363	2.403		2.403	2.448	2.492	2.537	2.583	Continuing	Continuing
• APAF: BA06: Line Item # 000999: *Initial Spares/Repair Parts (BP16)*	7.474	22.654	23.125		23.125	46.752	46.991	48.650	38.065	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*	PROJECT 670131: *Initial Operational Test and Evaluation*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost

Remarks

D. Acquisition Strategy

Program is a continuation of effort which includes the development for all F-15 models. Funds are executed organically in support of equipment improvement, study, analysis, and test. Acquisition and management strategies for each program are independently developed and use a variety of contract methods and types to accomplish program objectives.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*	PROJECT 670131: *Initial Operational Test and Evaluation*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
F-15E RMP EMD Contract	SS/CPAF	Boeing:St Louis, MO	-	22.538	Dec 2012	5.471	Mar 2013	0.000		-		0.000	Continuing	Continuing	
F-15E RMP	Various	Various:Various,	-	31.238	Mar 2013	1.352	Jun 2013	0.000		-		0.000	Continuing	Continuing	
F-15 ADCP II	SS/CPFF	Boeing:St. Louis, MO	-	30.620	Dec 2012	30.000	Jun 2013	30.000	Mar 2014	-		30.000	Continuing	Continuing	
F-15 ADCP II Various	Various	Various:Various,	-	35.778	Nov 2012	49.490	Nov 2012	24.055	Dec 2013	-		24.055	Continuing	Continuing	
F-15 EPAWSS	TBD	TBD:TBD,	-	0.000		5.082	Apr 2013	20.000	Jan 2014	-		20.000	Continuing	Continuing	
		Subtotal	0.000	120.174		91.395		74.055		0.000		74.055			

Remarks

The individual program reference to "various" contract methods addresses other government costs for trainers, test, hardware, special studies, telemetry kits, etc. that are required to meet each program's objectives. The execution vehicles between these DoD entities vary by effort.

FY12PB - Project 670131 includes APG-82(V)1 and ADCP II programs only. All other programs funded under Project 676020.

FY13PB - Project 670131 includes APG-82(V)1, ADCP II and EPAWSS only. All other programs funded under Project 676020.

FY14PB - Project 670131 includes APG-82(V)1, ADCP II and EPAWSS only. All other programs funded under Project 676020.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*	PROJECT 670131: *Initial Operational Test and Evaluation*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support Costs	Various	Various:Various,	-	1.374	Sep 2012	1.160	Sep 2013	0.920	Sep 2014	-		0.920	Continuing	Continuing	
		Subtotal	0.000	1.374		1.160		0.920		0.000		0.920			

Remarks

The individual program reference to "various" contract methods addresses other government costs for trainers, test, hardware, special studies, telemetry kits, etc. that are required to meet each program's objectives. The execution vehicles between these DoD entities vary by effort.

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	121.548		92.555		74.975		0.000		74.975			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*	PROJECT 670131: *Initial Operational Test and Evaluation*

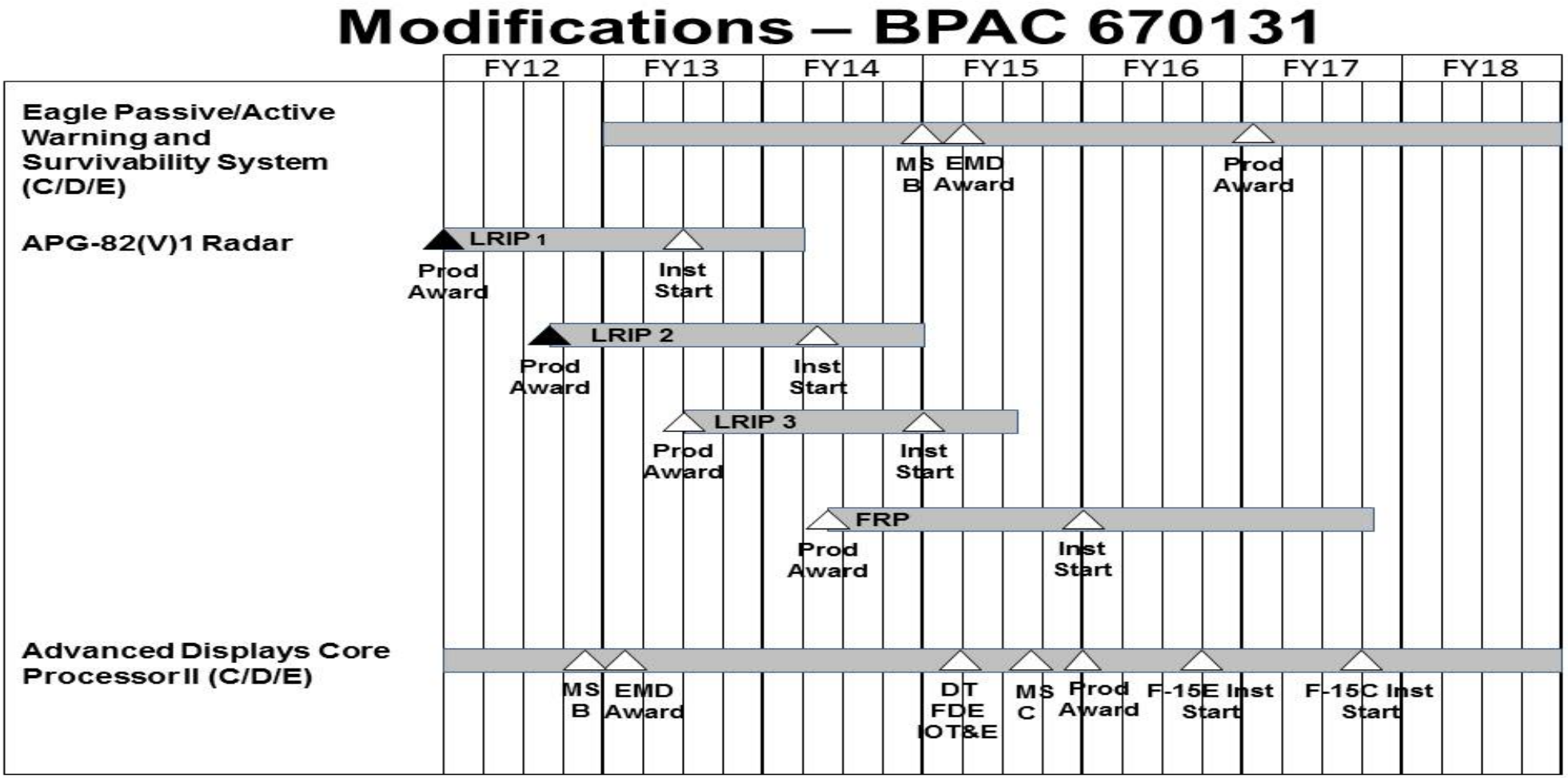


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*	PROJECT 670131: *Initial Operational Test and Evaluation*

Schedule Details

	Start		End	
Events	Quarter	Year	Quarter	Year
F-15E APG-82(V)1 RMP EMD - Complete	1	2012	2	2013
F-15E APG-82(V)1 RMP LRIP 1	1	2012	2	2014
F-15E APG-82(V)1 RMP LRIP 2	3	2012	1	2015
F-15E APG-82(V)1 RMP LRIP 3	2	2013	4	2015
ADCP II EMD	1	2012	3	2016
ADCP II MS C	3	2015	3	2015
ADCP II Production contract award	4	2015	4	2015
EPAWSS--FY13 New Start	2	2013	3	2018
EPAWSS MS B	1	2015	1	2015
EPAWSS EMD contract award	2	2015	2	2015

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*	PROJECT 676020: *F-15*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
676020: *F-15*	-	63.117	100.122	169.314	-	169.314	222.835	232.205	253.172	252.460	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Project 676020 was created in the FY 2012 President's Budget to improve management of F-15 development. Funds were moved from Project 670131 to Project 676020.

A. Mission Description and Budget Item Justification

This effort includes development of F-15 Electronic Protection (EP) capabilities and provides funding for Operational Flight Program (OFP) upgrades and for Flight Testing.

EP will enhance digital Active Electronic Scanned Array (AESA) radar capabilities to counter sophisticated electronic threats. The development of F-15 EP will maximize Key System Attibutes (KSA) and EP techniques for F-15E Radar Modernization Program (RMP) in Suite 8E; ensure remaining KSAs and EP techniques for F-15E RMP are included in Suite 9; ensure legacy EP for F-15C APG-63(v)3, commensurate with the APG-63(v)1 radar legacy EP capability, is included in Suite 9; and maximize additional advanced EP for F-15C APG-63(v)3 in Suite 9."

For the F-15 to maintain operational effectiveness, the program must continuously provide the platforms with improved capabilities. To accomplish this there is an on-going need to develop software upgrades and to flight test new capabilities and systems. The OFP funding line allows the Air Force to release software upgrades approximately every 3 years. At any one time the program has three OFP upgrades in work: one in requirements definition/pricing, one in code writing and test, and one in flight test and release preparation. The flight Test funding line allows the Air Force to fund the on-going test effort.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Operational Flight Program (OFP) Development Efforts	22.179	74.366	107.745
Description: Provides OFP program software and hardware updates to integrate new capabilities on all F-15 aircraft. This includes technical and acquisition related studies.			
FY 2012 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*	PROJECT 676020: *F-15*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continued Suite 8E Phase 1 and initiated S8E Phase 2 planning and contracting actions. Continued Suite 7C (otherwise known as Suite 7M) development efforts and complete Critical Design Review (CDR). Continuation of organic software support and Special Projects development efforts. Trainer upgrades. ***FY 2013 Plans:*** Complete S8E requirements definition and initiate S8E Phase 2 development. Continue Suite 7C (otherwise known as Suite 7M) development and CDR. Integrate Alpha 2 Lite into the OFP. Continuation of organic software support and Special Projects development efforts. Trainer upgrades. ***FY 2014 Plans:*** Finish coding, conduct bench testing and begin flight testing of S8E. Complete S7C development and operational flight testing, conduct verification and validation of technical publications, prepare for delivery. Complete integration of Alpha 2 Lite and begin integration of Joint-Air-to-Surface Standoff Missile-Extended Range (JASSM-ER) into the OFP. Begin Phase I Suite 9 development. Continuation of organic software support and Special Projects development efforts.			
Title: Flight Test ***Description:*** Flight testing of improvements initiated in prior years. Baseline infrastructure and personnel support for F-15 Developmental Test (DT) and Operational Test (OT) operations. Purchases long-lead test support assets and unique aircraft test instrumentation. This includes technical and acquisition related studies. ***FY 2012 Accomplishments:*** F-15 Flight Test Support provides prime contractor support cadre at Eglin and Nellis for DT/OT support, avionics integration lab Operations and Maintenance (O&M), Combined Test Force (CTF) O&M, and long-lead test unique equipment, i.e., program specific aircraft instrumentation, weapons instrumentation kits, weapons simulators, data reduction/handling equipment. ***FY 2013 Plans:*** F-15 Flight Test Support provides prime contractor support cadre at Eglin and Nellis for DT/OT support, avionics integration lab O&M, CTF O&M, and long-lead test unique equipment, i.e., program specific aircraft instrumentation, weapons instrumentation kits, weapons simulators, data reduction/handling equipment. ***FY 2014 Plans:*** F-15 Flight Test Support provides prime contractor support cadre at Eglin and Nellis for DT/OT support, avionics integration lab O&M, CTF O&M, and long-lead test unique equipment; i.e., program specific aircraft instrumentation, weapons instrumentation kits, weapons simulators, data reduction/handling equipment.	11.741	16.049	16.328
Title: F-15C/D BLOS	6.157	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*	PROJECT 676020: *F-15*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Provide F-15C/D beyond line of sight (BLOS) communications capability on all long term aircraft. This includes technical and acquisition related studies. ***FY 2012 Accomplishments:*** Software development and qualification.			
Title: F-15 Radar Enhancements ***Description:*** Improvements to F-15 Electronic Protection (EP) and other radar enhancements. This includes technical and acquisition related studies. ***FY 2012 Accomplishments:*** Initial EP capability integration, technology maturation, hardware purchases for radar lab development and testing. Assessment of existing EP effectiveness. ***FY 2013 Plans:*** EP software development, technology maturation, and OFP risk reduction. ***FY 2014 Plans:*** Continue implementation of EP into Suite 8E. Continue technology acceleration efforts for Suite 9. Initiate Suite 9 EP implementation.	21.784	8.732	44.161
Title: Program Management Support Costs ***Description:*** Program Management Support Costs. ***FY 2012 Accomplishments:*** Program Management Support Costs. ***FY 2013 Plans:*** Program Management Support Costs. ***FY 2014 Plans:*** Program Management Support Costs.	1.256	0.975	1.080
Accomplishments/Planned Programs Subtotals	63.117	100.122	169.314

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*		R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*	PROJECT 676020: *F-15*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: Line Item # F01500: *F-15 Modification of In-Service Aircraft, PEs 0207130/0207134/0207445/0809731*	255.586	148.378	354.624		354.624	497.514	518.373	372.220	475.079	Continuing	Continuing
• APAF: BA06: Line Item # 000999: *Initial Spares/Repair Parts (BP16)*	7.474	22.654	23.125		23.125	46.752	46.991	48.650	38.065	Continuing	Continuing
• APAF: BA07: Line Item # F0150P: *F-15 Post Production Support*	2.076	2.363	2.403		2.403	2.448	2.492	2.537	2.583	Continuing	Continuing
• APAF: BA07: Line Item # 000071: *Aircraft Replacement Support Equip (BP12)*	1.545	3.536	0.000		0.000	0.000	0.000	0.000	0.000	0.000	98.302

Remarks

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. Acquisition and management strategies for each program are independently developed and use a variety of contract methods and types to accomplish program objectives.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*	PROJECT 676020: *F-15*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
OFP Suite 7/8/9 Development and Test	C/CPAF	Boeing:St. Louis, MO	-	20.179	Dec 2012	51.887	Mar 2013	84.862	Mar 2014	-		84.862	Continuing	Continuing	
OFP Suite 7/8/9 Development and Test Various	Various	Various:Various,	-	2.000	Jan 2013	22.479	Jun 2013	22.883	Mar 2014	-		22.883	Continuing	Continuing	
F-15 Beyond Line of Sight (BLOS)--FY12 New Start	C/TBD	TBD:TBD,	-	6.157	Sep 2013	0.000		0.000		-		0.000	Continuing	Continuing	
F-15 Radar Enhancement	SS/CPFF	Boeing:St Louis, MO	-	19.784	Nov 2012	8.732	Mar 2013	40.000	Jan 2014	-		40.000	Continuing	Continuing	
F-15 Radar Enhancement Various	Various	Various:Various,	-	2.000	Dec 2012	0.000		4.161	Dec 2013	-		4.161	Continuing	Continuing	
		Subtotal	0.000	50.120		83.098		151.906		0.000		151.906			

Remarks

The individual program reference to "various" contract methods addresses other government costs for trainers, test, hardware, special studies, telemetry kits, etc. that are required to meet each program's objectives. The execution vehicles between these DoD entities vary by effort.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Boeing (Contractor Test Support)	SS/FFP	Boeing:St. Louis, MO	-	10.741	Apr 2012	11.800	Apr 2013	13.000	Jan 2013	-		13.000	Continuing	Continuing	
Flight Test Support	Various	Various:,	-	1.000	Dec 2012	4.249	Jun 2013	3.328	Mar 2014	-		3.328	Continuing	Continuing	
		Subtotal	0.000	11.741		16.049		16.328		0.000		16.328			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*	PROJECT 676020: *F-15*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

The individual program reference to "various" contract methods addresses other government costs for trainers, test, hardware, special studies, telemetry kits, etc. that are required to meet each program's objectives. The execution vehicles between these DoD entities vary by effort.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Mgt Support Costs	Various	Various:Various,	-	1.256	Sep 2012	0.975	Sep 2013	1.080	Sep 2014	-		1.080	Continuing	Continuing	
		Subtotal	0.000	1.256		0.975		1.080		0.000		1.080			

Remarks

The individual program reference to "various" contract methods addresses other government costs for trainers, test, hardware, special studies, telemetry kits, etc. that are required to meet each program's objectives. The execution vehicles between these DoD entities vary by effort.

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	63.117		100.122		169.314		0.000		169.314			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207134F: *F-15E Squadrons*	PROJECT 676020: *F-15*

Modifications – BPAC 676020

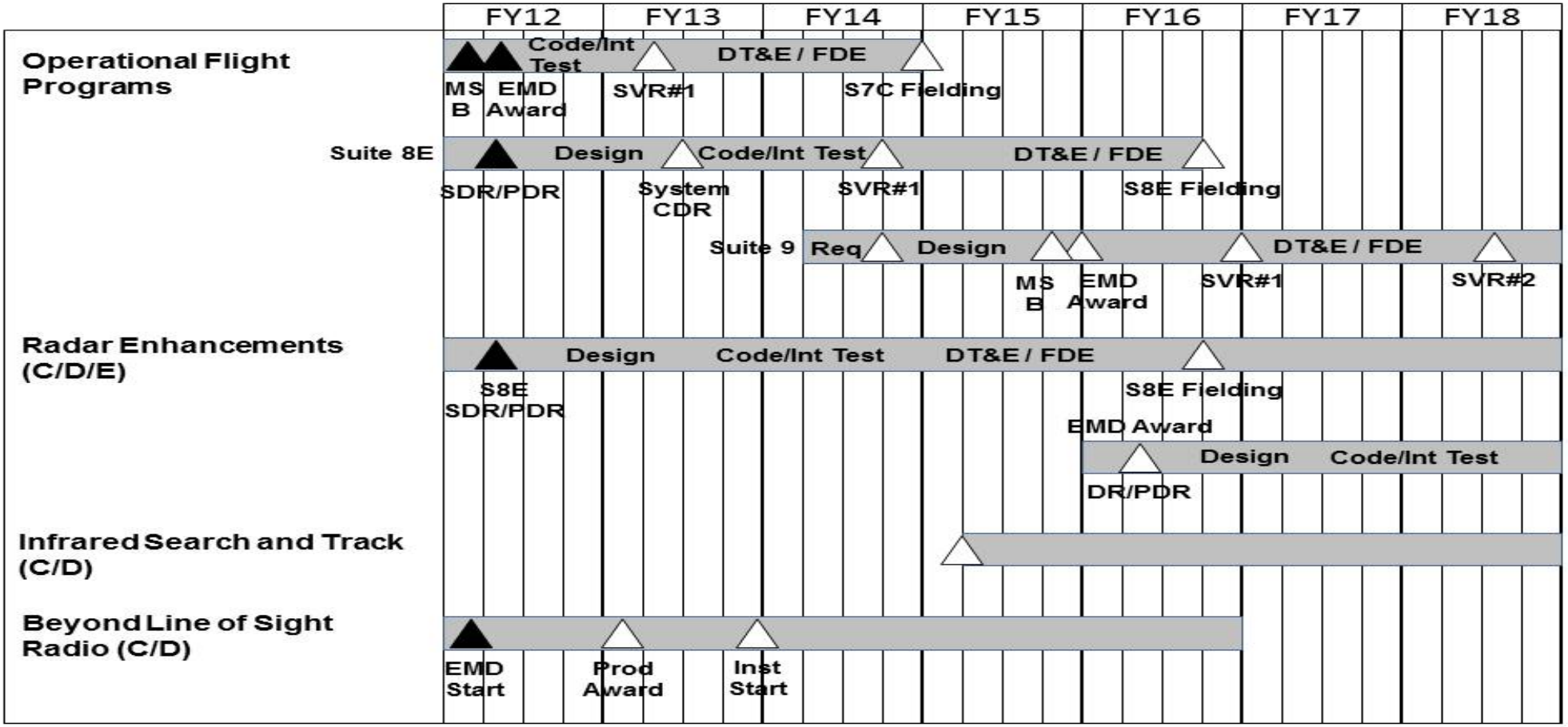


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207134F: *F-15E Squadrons*	**PROJECT** 676020: *F-15*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
OFP Continuous Development	1	2012	4	2018
OFP Suite 7C Fielding	2	2015	2	2015
OFP Suite 8E Fielding	3	2016	4	2016
F-15C/D BLOS Development	2	2013	2	2013
F-15C/D BLOS Production Start	2	2013	2	2016
Radar Enhancements Development	1	2012	4	2018
Radar Enhancements Suite 8E Fielding	4	2016	4	2016
Infrared Search and Track Development	1	2015	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207136F: *Manned Destructive Suppression*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	8.515	13.683	13.138	-	13.138	15.017	15.133	15.191	15.464	Continuing	Continuing
674595: *F-16 HARM Targeting System*	-	8.515	13.683	13.138	-	13.138	15.017	15.133	15.191	15.464	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Manned Destructive Suppression (MDS) program element 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 and Block 40/42 aircraft with the ability to employ the AN/ASQ-213 Pod. With the introduction of HTS Revision 7 (HTS R7) in 2007, the AN/ASQ-213 Pod now has a precision geo-location capability to target Precision Guided Munitions (PGMs) to destroy fixed and mobile enemy air defense elements. Additionally, by relocating the AN/ASQ-213 HTS R7 Pod to the aircraft's left inlet hard point, the F-16 can simultaneously carry the HTS R7 Pod and an Advanced Targeting Pod (ATP). HTS R7 fielding is complete and represents 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 derived precision targeting data can be provided to all Joint Forces via Link-16. This effort continues preplanned product improvements (P3I) for the HTS and applies technologies similar to those demonstrated in the Advanced Tactical Targeting Technologies (AT3) program and HTS R7 development.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207136F: *Manned Destructive Suppression*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	13.253	13.683	14.037	-	14.037
Current President's Budget	8.515	13.683	13.138	-	13.138
Total Adjustments	-4.738	0.000	-0.899	-	-0.899
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	-4.441	0.000			
• SBIR/STTR Transfer	-0.297	0.000			
• Other Adjustments	0.000	0.000	-0.899	-	-0.899

Change Summary Explanation

FY12 funding reprogrammed to higher Air Force priorities.
FY14 adjustment for program re-phasing.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: P3I R7 Software Upgrade (SWUP)	6.985	10.067	10.094
Description: P3I R7 Software Upgrade (SWUP)			
FY 2012 Accomplishments: HTS R7.7 SWUP flight testing support and additional software releases for flight testing continues, culminating in the release of R7.7 SWUP software. Studies continue on risk reduction efforts for future P3I phase(s). HTS R7.7 SWUP formal developmental flight testing and all associated data analysis and release of upgraded software will be completed. Risk reduction activities and candidate selection study efforts for follow-on upgrades continue. Also, final steps will be completed to potentially award the R7.8 SWUP development. The major pushes of this year will be releasing R7.7 SWUP software to the field, continued risk reduction candidate selection activities for follow-on P3I efforts, and planned award of the R7.8 SWUP development.			
FY 2013 Plans: HTS R7.8 SWUP development continues from risk reduction and program definition to software development and preparation for flight testing. Studies continue on risk reduction efforts for future P3I phase(s). Mission support, i.e., program management for administrative and technical support activities continue. The major thrusts of this year are R7.8 SWUP design and code activities and planning for subsequent flight testing.			
FY 2014 Plans:			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207136F: *Manned Destructive Suppression*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
HTS R7.8 SWUP development continues in software development and start of initial flight testing. Studies continue on risk reduction efforts for future P3I phase(s). Mission support, i.e., program management for administrative and technical support continue. The major thrusts of this year is R7.8 SWUP design, code and testing preparation for the first initial flight testing.			
Title: Flight Test ***Description:*** Flight Test ***FY 2012 Accomplishments:*** Government flight test operations continue to include test planning and execution activities for final HTS R7.7 SWUP DT&E efforts, scheduling support for all needed resources and required configurations for each flight test mission. Ground testing continues via anechoic chamber testing, as needed. The test organization continues to conduct each mission to include F-16 test aircraft operations, threat ranges and associated support, air re-fueling, and range control support. Post-mission flight test support for each mission also continues. Initial test planning for HTS R7.8 SWUP continues. ***FY 2013 Plans:*** Government flight test operations continue to include test planning, and risk mitigation plans to address scarcity of resources; i.e., aircraft and ranges. This funding also includes test data analysis support and baselining of requirements from actual test data results during HTS SWUP R7.7 flight tests. ***FY 2014 Plans:*** Government flight test operations completes planning phase and enters into initial flight testing of R7.8 SWUP software capabilities. This funding also include test data analysis support and baselining of requirements from actual test data results during initial flight testing. Ground testing such as anechoic chamber testing will be conducted, as needed. The test organization will conduct each mission to include F-16 test aircraft operations, threat ranges and associated support, air re-fueling, and range control support. Post-mission flight test support for each mission is planned.	0.869	1.900	1.549
Title: Mission Planning ***Description:*** Joint Mission Planning System (JMPS) (Formerly Air Force Mission Support System (AFMSS)) ***FY 2012 Accomplishments:*** Continue mission planning software upgrade effort to include correcting deficiencies, additional engineering software releases and formal fielding in conjunction with HTS R7.7 SWUP software release. ***FY 2013 Plans:***	0.038	0.888	0.635

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207136F: *Manned Destructive Suppression*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continue mission planning in conjunction with HTS R7.8 software upgrade. This effort will begin planning this year to address deficiencies, additional engineering software releases and forward fielding. ***FY 2014 Plans:*** Continue mission planning in conjunction with HTS R7.8 software upgrade. This effort will include development and testing of candidate upgrades and initial engineering releases in support of fielding.			
Title: Program Management Administration (PMA) ***Description:*** Program Management Administration ***FY 2012 Accomplishments:*** PMA support continues for our Technical and Acquisition Management Support (TAMS) 4 contract as well as our Technical and Engineering Acquisition support (TEAS) 6 contract. Additionally, supplies required to support normal program office functions and travel required for mission accomplishment continue. Required support for common directorate support is included. ***FY 2013 Plans:*** PMA support continues for our Technical and Acquisition Management Support (TAMS) 4 contract as well as our Technical and Engineering Acquisition support (TEAS) 6 contract. Additionally, support continues for supplies required for normal program office functions and travel required for mission accomplishment. Required support for common directorate support continues. ***FY 2014 Plans:*** PMA support continues for our Technical and Acquisition Management Support (TAMS) 4 contract as well as our Technical and Engineering Acquisition support (TEAS) 6 contract. Support continues for supplies required for normal program office functions and travel required for mission accomplishment. Required support for common directorate support continues.	0.623	0.828	0.860
Accomplishments/Planned Programs Subtotals	8.515	13.683	13.138

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• No other investment funding: *N/A*	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

E. Acquisition Strategy

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207136F: *Manned Destructive Suppression*

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207136F: *Manned Destructive Suppression*	PROJECT 674595: *F-16 HARM Targeting System*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
HTS R7 SWUP/P3I	SS/CPIF	Raytheon Systems Co.:Tucson, AZ	-	6.985	Jan 2012	11.537	May 2013	10.094	May 2014	-		10.094	Continuing	Continuing	
JMPS (Formerly AFMSS)	MIPR	Multiple:Multiple,	-	0.038	Dec 2011	0.818	May 2013	0.635	Jan 2014	-		0.635	Continuing	Continuing	
		Subtotal	0.000	7.023		12.355		10.729		0.000		10.729			

Remarks

HTS R7.7 SWUP/P3I was released Dec 2012. HTS R7.8 SWUP risk reduction began in Jul 2011 with HTS R7.8 SWUP development scheduled to begin in May 2013.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Test	PO	412 TW:Edwards AFB, CA	-	0.869	Jan 2012	0.500	Jun 2013	1.549	Jun 2014	-		1.549	Continuing	Continuing	
		Subtotal	0.000	0.869		0.500		1.549		0.000		1.549			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration	C/Various	Multiple:Eglin AFB, FL	-	0.623	Oct 2011	0.828	Oct 2012	0.860	Oct 2013	-		0.860	Continuing	Continuing	
		Subtotal	0.000	0.623		0.828		0.860		0.000		0.860			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207136F: *Manned Destructive Suppression*	PROJECT 674595: *F-16 HARM Targeting System*	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	8.515		13.683		13.138		0.000		13.138			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207136F: *Manned Destructive Suppression*	PROJECT 674595: *F-16 HARM Targeting System*

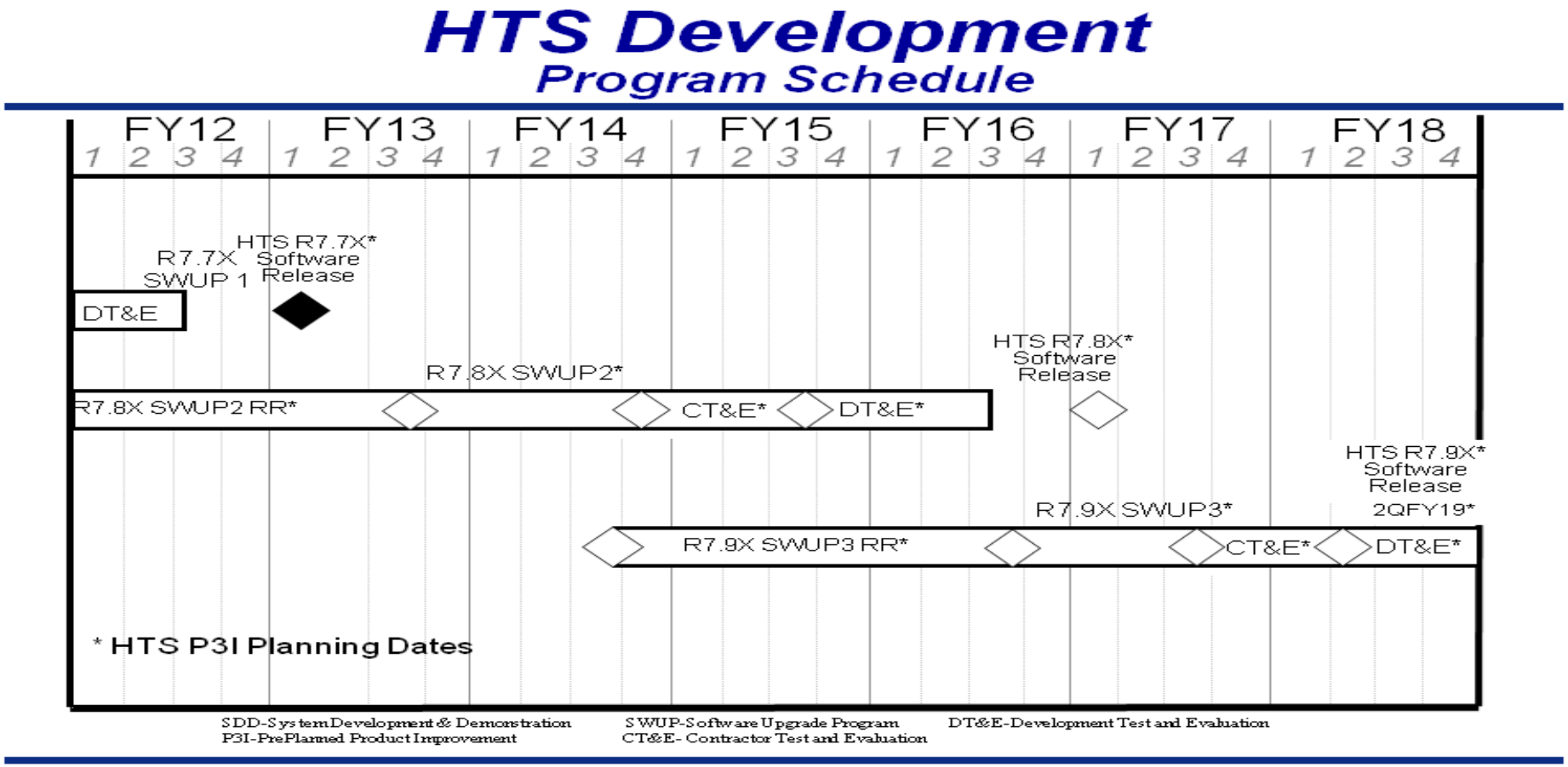


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207136F: *Manned Destructive Suppression*	**PROJECT** 674595: *F-16 HARM Targeting System*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
R7.7 SWUP Flight Test (DT&E)	1	2012	2	2012
HTS R7 7X Software Release	1	2013	1	2013
HTS P3I Risk Reduction for Next Phase Contract	1	2012	3	2013
R7.8 SWUP Contract	3	2013	2	2016
R7.8 SWUP Flight test (CT&E/DT&E)	3	2014	4	2015
HTS R7 8X Software Release	3	2016	3	2016
HTS R7.9X SWUP Risk Reduction	3	2014	4	2016
R7.9X SWUP 3 (CT&E/DT&E)	3	2017	2	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207138F: *F-22A Squadrons*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	2,838.139	531.767	371.667	328.542	-	328.542	248.319	339.213	423.458	431.079	Continuing	Continuing
674785: *F-22*	2,838.139	531.767	371.667	328.542	-	328.542	248.319	339.213	423.458	431.079	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	6	0	0	0		
MDAP/MAIS Code(s): 265												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Totals include funding for PRCP Program Number, 265, F-22

F-22 development and production is complete. This program is a remaining compilation of F-22 OFP development, capability enhancements, and mandates necessary to keep the F-22 weapon system the world's most capable fighter. The Cost to Complete and Total Cost for projects in this program element are documented in the R3. The Cost to Complete and Total Cost on the R2 are entered as "Continuing" and not reflective of the total cost for projects in this program element since the R2 does not account for prior years funding.
F-22 Mandates is a new start in FY14.

A. Mission Description and Budget Item Justification

The F-22 Raptor represents the USAF's top priority for providing the Joint Force with air dominance, operational access, homeland and cruise missile defense for the next 20+ years. The F-22 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. While F-22 aircraft production has completed as of May 2012, funding for F-22 modernization is "continuing" beyond the FYDP. The Engineering and Manufacturing Development (EMD) and production phase of F-22 acquisition is complete. The program is now continuing the pre-planned and evolutionary modernization effort through incremental development phases that enhance the F-22 anti-access, area denial, and Global Strike capability. The development program modernizes and upgrades the air vehicle, engine, and training systems to improve/enhance F-22 weapons, communications, and Intelligence Surveillance Reconnaissance (ISR) capabilities.

BA7- This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207138F: *F-22A Squadrons*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	571.320	371.667	328.542	-	328.542
Current President's Budget	531.767	371.667	328.542	-	328.542
Total Adjustments	-39.553	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	-22.501	0.000			
• SBIR/STTR Transfer	-17.052	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

Change Summary Explanation

FY 2012: $39.5M reduction due to $19.0M OMNIBUS Reprogramming, $3.5M RAND BTR. amd $17.1M SBIRs

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Software Support	40.117	36.886	41.360

Description: Operational Flight Plan (OFP) testing in the Raptor Integration Lab (RAIL) and the Avionics Integration Lab (AIL), Developmental and Operational flight test, Pilot Training Systems (PTS) software upgrades, Synthetic Aperature Radar (SAR) mapping capability development for the Pilot Training Systems (PTS), Trainer/Integrated Maintenance Information System (IMIS) Software Enhancements

FY 2012 Accomplishments:

In FY 2012: Update 4 software support OFPs are completed. Flight testing of all the Update 4 software products will be completed and fielded. Pilot Training Systems (PTS) Software upgrades. Synthetic Aperature Radar (SAR) mapping capability development for the PTS. IMIS to continue ADA to C++ conversion focusing on Present TO and Air Vehicle interface modules and completion of the Forms, Templates, and Engine modules.

FY 2013 Plans:

In FY 2013: Update 4 software support Operational Flight Programs are completed and will be fielded. Software to support two new capabilities (Intraflight Data Link Gateway Mode - 5th to 4th generation IFDL capability and AIM-9X Basic - ability to launch Block 1 AIM-9X missile) will be Coded and Tested for integration into Update 5. Pilot Training Systems (PTS) Software upgrades

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207138F: *F-22A Squadrons*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
and Synthetic Aperature Radar (SAR) mapping capability development for the PTS will occur. IMIS to continue ADA to C++ conversion with focus on completion of the Present TO and Air Vehicle Interface modules. ***FY 2014 Plans:*** In FY 2014: Update 5 Operational Flight Programs, to include the Automatic Ground Collision Avoidance System, Intraflight Data Link Gateway Mode and AIM-9X Basic, will be tested in the Raptor Integration Lab (RAIL), Avionics Integration Lab (AIL), and at Developmental Test. Pilot Training Systems (PTS) Software upgrades. Synthetic Aperature Radar (SAR) mapping capability development for the PTS. IMIS to continue ADA to C++ conversion with focus on completion of all modules and transition as system of record for the F-22.			
Title: System Engineering/Program Management Support ***Description:*** Provides for F-22 program-wide planning and execution to include studies, analysis, and requirements definition. ***FY 2012 Accomplishments:*** In FY 2012: Provides for F-22 program wide planning and execution comprised of, but not limited to the following: Future Capabilities Planning and F-22 Mandates Requirements Definition, Cost Estimating Data, and Systems Engineering Process Management. ***FY 2013 Plans:*** In FY 2013: Same as prior year. ***FY 2014 Plans:*** In FY 2014: Same as prior year.	11.600	18.135	19.143
Title: Mission Support ***Description:*** Mission support of the F-22 Program Office; travel, computer costs, misc contracts, etc. ***FY 2012 Accomplishments:*** In FY 2012: Funds provide management and oversight activities in direct support of F-22 Increment Development, RAMMP, Aircraft Structural Integrity Program (ASIP), Flight Test Support, 3.2B Should Cost analysis, and 3.2B Milestone B documentation. ***FY 2013 Plans:*** In FY 2013: Same as prior year. Increment 3.2B activities under separate Program Element 0605213F. ***FY 2014 Plans:*** In FY 2014: Same as prior year. Increment 3.2B activities under separate Program Element 0605213F.	19.497	10.817	10.828
Title: Reliability and Maintainability Maturation Program (RAMMP)	32.804	11.202	10.984

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207138F: *F-22A Squadrons*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: The Reliability, Availability, and Maintainability Maturation Program (RAMMP) provides for the development and integration of upgrades to reach mature reliability, availability and maintainability (RAM). The associated RAMMP RDT&E effort develops candidate RAMMP initiatives which are down-selected for implementation based on their development maturity and impact on F-22 life cycle costs. RAMMP provides the development for the Automatic Back-Up Oxygen System(ABOS), other Life Support System (LSS) development projects, and other Urgent Response Requirements required by the Aircraft. ***FY 2012 Accomplishments:*** (U) In FY 2012: Provides for development of multiple efforts to improve Mean Time Between Maintenance (MTBM), Maintainability, and reduce F-22 Weapon System Life Cycle Costs. Continue RAMMP development projects including, but are not limited to: Mighty Tough Boot Development, AMNS Liner Redesign, Canopy Wax, Canopy Topcoat Redesign, Redesign Right Hand IRCM Door Bell Crank, AMAD Plenum Sealing, SES Air Filter, Gland Redesign, SMFD Black light Redesign to Low Power LED, Driver B RF Circuit Redesign, Improved External Fuel Drain Valve, Eliminate EMD GINS from Fleet, IMIS LO Handheld, Automated Backup Oxygen System, and 3rd Gen Radar Support Electronics (RSE) Isolator. ***FY 2013 Plans:*** (U) In FY 2013: Provides for development of multiple efforts to improve Mean Time Between Maintenance (MTBM), Maintainability, and reduce F-22 Weapon System Life Cycle Costs. FY2013 active RAMMP development projects include, but are not limited to: Mighty Tough Boot Development, AMNS Liner Redesign, IFB Rain Erosion Nose Cap, Canopy Topcoat Redesign, SES Air Filter, APU Plenum Sealing, Gland Redesign, Automated Backup Oxygen System, SMFD Backlight to Lower Power LED, Gland Redesign, and Driver B RF Circuit Redesign. ***FY 2014 Plans:*** In FY 2014: Provides for development of multiple efforts to improve Mean Time Between Maintenance (MTBM), Maintainability, and reduce F-22 Weapon System Life Cycle Costs. FY2014 active RAMMP development projects include, but are not limited to: Mighty Tough Boot, AMNS Liner Redesign, IFB Rain Erosion Nose Cap, and Gland Redesign.			
Title: Increment 3.2A	84.379	81.811	33.534

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: The F-22 Increment 3.2A Modernization Program consists of the software development necessary to provide Increment 3.2A capabilities including improvements to Electronic Protection, Combat Identification and Link-16 Receive. ***FY 2012 Accomplishments:*** In FY 2012: The detailed design phase will continue and will culminate in a Critical Design Review. Preliminary work will continue to prepare lab and test facilities for Development, Integration, and Test. All software coding, integration and testing will begin. ***FY 2013 Plans:*** In FY 2013: Work will continue to prepare lab and test facilities for Development, Integration, and Test. All software coding, integration and testing will continue. Developmental Test will be conducted. ***FY 2014 Plans:*** In FY2014: Same as prior year.			
Title: Increment 3.2B ***Description:*** The F-22 Increment 3.2B Modernization Program consists of the software development necessary to provide Increment 3.2B capabilities including Intra-Flight Data Link Improvements, Electronic Protection, AIM-9X and AIM-120D integration with Common Weapon Engagement Zone, Geolocate 2.0 and Stores Management System Common Split Bus. The Enhanced Stores Management System (ESMS) program is a hardware development and risk reduction program required to integrate any new weapons on the F-22 beyond Increment 3.1. ***FY 2012 Accomplishments:*** In FY 2012: MDD will be accomplished. Work to prepare lab and test facilities for Development, Integration and Test continues. Increment 3.2B will continue Design efforts; this effort will require all detailed design phase work necessary to start product development and to plan for the remaining phase efforts required to incorporate Increment 3.2 capabilities into the F-22 weapon system as described in the Increment 3.2 Operational Capability Description Document. ***FY 2013 Plans:*** In FY 2013: Increment 3.2B FY13 activities under separate Program Element 0605213F. ***FY 2014 Plans:*** In FY 2014: Increment 3.2B FY13 activities under separate Program Element 0605213F.	112.456	0.000	0.000
Title: Combined Test Force (CTF)	73.216	76.031	75.388

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: The F-22 Combined Test Force (CTF), located at Edwards Air Force Base, conducts full-up weapons system testing to assess the synergistic effect of the F-22 combined characteristics of stealth, speed, maneuverability, and integrated avionics in mission accomplishment. The CTF uses operationally significant ground and flight test scenarios, when practical, to identify system performance deficiencies early before they are more difficult and costly to resolve. Starting in FY13, CTF efforts directly associated with Increment 3.2B development are located in the 3.2B program documentation, Program Element 0605213F. ***FY 2012 Accomplishments:*** In FY 2012: The significant programs undergoing flight test at AFFTC include: Update 3.6 and update 4 software testing; AIM-9X Risk reduction and AIM-9X SEEK EAGLE testing, arresting gear, External Fuel Tank testing, 6 gallon testing, Bio-fuel Certification, and ECS OBOGS investigations. Small projects currently-planned also include: NUCIF, MOP, dragging brake issue, Weapon Bay Door Redesign, and cracking/missile fin rub. ***FY 2013 Plans:*** In FY 2013: The significant programs undergoing flight test at AFFTC include: major software improvements associated with Increment 3.2A; Update 5 testing. Other small program requirements are expected to require testing such as supersonic tanks; AIM-9 employment with tanks; and Auto Ground Collision Avoidance software. ***FY 2014 Plans:*** In FY 2014: The significant programs undergoing flight test at AFFTC include: major software improvements associated with Increment 3.2A; Update 5 testing. Other small program requirements are expected to require testing such as supersonic tanks; AIM-9 employment with tanks; and Auto Ground Collision Avoidance software.			
Title: Laboratory Test & Operations (LTO) ***Description:*** Lab Test & Operations is a continuous activity that plans and conducts development, integration, test, & verification (IT&V) of F-22 OFPs with F-22 hardware. LTO provides ready state maintenance, staffing, and operation of 20 development labs including 5 unique major System Integration Laboratories (SILs): the Agile Integration Lab (AIL); the Raptor Integration Lab; the Air Combat Simulation (ACS) Lab; the Vehicle Management System (VMS) Vehicle Integration Facility (VIF); and the Vehicle System Simulator (VSS). Through the ACS, LTO provides the combat air forces with advanced mission-level test and training capability through a fully representative simulation. Starting in FY13, LTO efforts directly associated with Increment 3.2B development are located in the Increment 3.2B program documentation, Program Element 0605213F. ***FY 2012 Accomplishments:*** In FY 2012: Maintain lab ready state availability in support of F-22 programs. Update critical systems as required to support new aircraft configurations and capabilities. Accomplish OFP verification and risk reduction. Support pilot training in support of	72.096	79.800	72.374

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Air Combat Command exercises and war gaming; Air Force Operational Test & Evaluation Center test planning; and test event rehearsals. Support periodic Air Warfare Center operational mission data updates. ***FY 2013 Plans:*** In FY 2013: Same as prior year. ***FY 2014 Plans:*** In FY 2014: Same as prior year.			
Title: VAX Migration ***Description:*** The F-22 VAX Migration program develops, integrates, tests, and deploys computer infrastructure and software tools to replace existing VAX-based resources used to develop, field, and sustain F-22 capabilities. The current VAX architecture is obsolete, resulting in increased program risk, and delays in development due to reliance upon increasingly unreliable and unsupportable infrastructure. ***FY 2012 Accomplishments:*** In FY 2012: Continue development and delivery of the Network User Control Interface (NUCIF) card allowing for non-VAX computers to interface with F-22 test aircraft and development labs; continue site-by-site replacement of VAX systems through deployment of PC-based systems, compilers and software support tools including Dimensions, Cradle, Quicksilver, Deployment of instrumentation tools, simulation tools and user unique tools. ***FY 2013 Plans:*** In FY 2013: Same as prior year. ***FY 2014 Plans:*** In FY 2014: Same as prior year.	22.950	9.741	7.153
Title: F-22 Small Project Roll-up ***Description:*** Provides for F-22 modernization activities including, but not limited to: LO Signature Mgmt, EN/Threat Modeling Support, DT Weapons Assets, PT Dynamic SAR, Flight Test Engine Refurbishment, Support Equipment Development, and OGC/ GFE. ***FY 2012 Accomplishments:***	15.504	9.873	5.135

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
In FY 2012: Continue F-22 modernization development and support activities including, but not limited to: LO Signature Mgmt, Test Agent Support, PT Dynamic SAR, AIM-9X Risk Reduction, Support Equipment Development, Test Aircraft Instrumentation, and OGC/GFE. ***FY 2013 Plans:*** In FY 2013: Continue F-22 modernization development and support activities including, but not limited to: DT Weapons Assets, Threat Modeling Support, Test Agent Support, PT Dynamic SAR, AIM-9X Risk Reduction, and OGC/GFE. ***FY 2014 Plans:*** In FY 2014: Continue F-22 modernization development and support activities including, but not limited to: DT Weapons Assets, Threat Modeling Support, Test Agent Support, Flight Test Engine Refurbishment, and OGC/GFE.			
Title: Crypto Modernization ***Description:*** Crypto Modernization provides for development to support crypto-graphic updates required by the National Security Agency (NSA). Two crypto-graphic projects are currently in work: the KOV-20 Field Upgrade (field upgrade only) and the KOV-20 Crypto Modernization. ***FY 2012 Accomplishments:*** FY 2012: Crypto Modernization activities: KOV-20 Field Upgrade to begin fleet retrofit with upgraded KOV-20 units. KOV-20 Crypto Modernization will conduct requirements analysis and generation phase will be accomplished and the design phase will begin. ***FY 2013 Plans:*** In FY 2013: KOV-20 Crypto Modernization will continue the design phase and transition into coding and testing. ***FY 2014 Plans:*** In FY 2014: Same as prior year.	0.020	13.990	15.544
Title: Advanced Technology Development ***Description:*** Technology Maturation and risk reduction of Classified F-22 related development efforts ***FY 2012 Accomplishments:***	26.255	16.334	13.472

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
In FY 2012: Technology Maturation and risk reduction of Classified F-22 related development efforts. Study and analysis of a variety of Special Projects for integration onto our platform continues. Perform proof of concept demonstration on select projects. Detailed integration efforts begin on successfully demonstrated projects. ***FY 2013 Plans:*** In FY 2013: Same as prior year. ***FY 2014 Plans:*** In FY 2014: Same as prior year.			
Title: Line In-The-Sky Auto Ground Collision Avoidance System (AGCAS) ***Description:*** (U) The LIS AGCAS will be designed and integrated on the F-22 to prevent the aircraft from unintentionally descending below ground level. This capability will be fielded with Update 5. ***FY 2012 Accomplishments:*** FY 2012: Requirements development and coding for AGCAS will be accomplished. In addition, design work will begin to develop design solutions for Block 20, 30, and 35. ***FY 2013 Plans:*** In FY 2013: Same as prior year. ***FY 2014 Plans:*** In FY 2014: Software code, integration, and test will continue. Development test will be conducted.	2.890	7.047	13.886
Title: Increment 3.1/3.2A Cost and Software Data Report (CSDR) ***Description:*** This funding pays for both the Increment 3.1 and Increment 3.2A Cost and Software Data Reports. ***FY 2012 Accomplishments:*** In FY 2012: Funds provide CSDR's for both Increment 3.1 and Increment 3.2A. ***FY 2013 Plans:*** In FY 2013: No planned effort in FY13 ***FY 2014 Plans:*** In FY 2014: No planned effort in FY14.	7.443	0.000	0.000
Title: F-22 Mandates	0.000	0.000	9.741

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: The F-22 Mandates program consists of the software and hardware development necessary to provide mandates such as Mode 5, Mode S, and numerous Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) mandates to the F-22. These mandates are required by the Joint Requirements Oversight Council (JROC), Federal Aviation Administration (FAA), and the International Civil Aviation Organization (ICAO). This is an FY14 new start. ***FY 2012 Accomplishments:*** In FY 2012: No planned activity in FY12. ***FY 2013 Plans:*** In FY 2013: No planned activity in FY13. ***FY 2014 Plans:*** In FY 2014: Funding will begin the various elements associated with capabilities analysis and selection, requirements development, design maturity, and early software modeling and test. The intent is to satisfy the product development process by delivering design content required to reach the next milestone.			
Title: Open System Architecture ***Description:*** Conduct studies and analysis to reduce the risk of integrating Open Architecture (OA) hardware and fusion architecture onboard the F-22. The goal of this effort is to ultimately reduce the F-22 costs and timeline (development, test, and fielding) with more cost-effective solutions. ***FY 2012 Accomplishments:*** In FY 2012: Study and analysis of the Open System Architecture integration onto F22. ***FY 2013 Plans:*** In FY 2013: No planned effort in FY13 ***FY 2014 Plans:*** In FY 2014: No planned effort in FY14.	10.540	0.000	0.000
Accomplishments/Planned Programs Subtotals	531.767	371.667	328.542

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: F02200: *F-22A Squadrons, PE 0207138F**	386.835	332.349	463.970		463.970	397.286	407.038	465.765	467.081	Continuing	Continuing

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA01: F02200: *Advanced Tactical Fighter,PE 0207219F***	85.722	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• OPAF: BA03: 837300: *Other Procurement, PE0207138F, F-22A Squadrons*	1.162	0.669	0.947		0.947	1.378	1.144	0.992	1.010	Continuing	Continuing
• OPAF: BA03: 834010: *Other Procurement, PE0207138F, F-22A Squadrons*	0.537	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• MILCON: PE 0207138F: *MILCON*	16.500	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• RDT&E: BA07: PE0207163F: *AIM-120D, AMRAAM****	10.515	18.990	23.830		23.830	23.940	5.820	0.000	0.000	0.000	15.110
• RDT&E: BA07: PE 0605213F: *Increment 3.2B*****	0.000	140.100	131.100		131.100	137.700	86.300	34.600	1.423	Continuing	Continuing

Remarks

NOTES:

*Includes PE 0207138F BP's 11 (Aircraft Modifications), 12 (Age Equipment), 16 (Initial Spares), and 19 (Depot Activation)

**Includes PE 0207219F BP 10 (Air Vehicle) and 11 (FY12 Low Cost Modifications)

***Includes PE 0207163F AIM-120D RDT&E, portion of funds supports the Increment 3.2B effort.

****Includes PE 0605213F Increment 3.2B funding is identified in the Increment 3.2B documentation

E. 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 to initiate requirements analysis, the design phase and the development, integration and verification phase of a specific incremental development effort. The (REDI) II contract is a follow-on Indefinite Delivery/Indefinite Quantity contract to the current REDI contract. REDI II provides maximum flexibility to manage various modernization projects. The REDI II contract allows for the issuance of orders for efforts associated with the planning, analysis, design, development,

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qualification ,test and documentation of F-22 weapon system performance enhancements, life-cycle improvements, Operational Flight Program (OFP) upgrades, and associated efforts essential to accomplishing the F-22 mission.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Support	SS/CPIF	Lockheed Martin:Fort Worth, TX	232.941	40.117	Dec 2011	36.886	Dec 2012	41.360	Dec 2013	-		41.360	Continuing	Continuing	
System Engineering / Program Management	SS/CPIF	Lockheed Martin:Fort Worth, TX	176.533	11.600	Dec 2011	18.135	Dec 2012	19.143	Dec 2013	-		19.143	Continuing	Continuing	
RAMMP	SS/CPFF	Lockheed Martin:Fort Worth, TX	110.105	32.804	Jan 2012	11.202	Jan 2013	10.984	Jan 2014	-		10.984	Continuing	Continuing	
Increment 3.2A	SS/CPIF	Lockheed Martin:Fort Worth, TX	170.382	84.379	Dec 2011	81.811	Nov 2012	33.534	Nov 2013	-		33.534	3.109	373.215	
Increment 3.2B	SS/CPIF	Lockheed Martin:Fort Worth, TX	306.938	112.456	Dec 2011	0.000		0.000		-		0.000	0.000	419.394	
VAX Migration	SS/CPIF	Lockheed Martin:Fort Worth, TX	144.368	22.950	Dec 2011	9.741	Dec 2012	7.153	Dec 2013	-		7.153	0.000	184.212	
F-22 Small Projects	SS/ Various	Lockheed Martin:Fort Worth, TX	525.068	15.504	Dec 2011	9.873	Oct 2012	5.135	Oct 2013	-		5.135	Continuing	Continuing	
Crypto-Modernization	SS/CPIF	Lockheed Martin:Fort Worth, TX	0.976	0.020	Dec 2011	13.990	Nov 2012	15.544	Nov 2013	-		15.544	10.244	40.774	
Advanced Technology Development	Various	Various:Various,	18.699	26.255	Jan 2012	16.334	Mar 2013	13.472	Jan 2014	-		13.472	Continuing	Continuing	
Auto Ground Collision Avoidance System (AGCAS)	SS/CPIF	Lockheed Martin:Fort Worth, TX	0.000	2.890	Sep 2012	7.047	Mar 2013	13.886	Nov 2013	-		13.886	0.000	23.823	
Increment 3.1 and 3.2 Cost and Software Data Report	SS/CPFF	Lockheed Martin:Fort Worth, TX	0.000	7.443	Mar 2013	0.000		0.000		-		0.000	0.000	7.443	
F-22 Mandates	SS/ Various	Lockheed Martin:Fort Worth, TX	0.000	0.000		0.000		9.741	Feb 2014	-		9.741	331.554	341.295	
Open System Architecture	SS/CPIF	Lockheed Martin:Fort Worth, TX	0.000	10.540	Dec 2011	0.000		0.000		-		0.000	0.000	10.540	
		Subtotal	1,686.010	366.958		205.019		169.952		0.000		169.952			

Remarks

FY13-18 Increment 3.2B costs and estimated contract award dates are summarized in separate documentation PE/BPAC 0605213F/654785. All Increment 3.2B efforts and funding prior to FY13 continues to be shown in PE/BPAC 0207138F/674785.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Combined Test Force	Various	Various:Various,	585.346	73.216	Dec 2011	76.031	Nov 2012	75.388	Nov 2013	-		75.388	Continuing	Continuing	
Laboratory Test & Operations (LTO)	SS/ Various	Lockheed Martin:Ft Worth, TX	456.678	72.096	Dec 2011	79.800	Nov 2012	72.374	Nov 2013	-		72.374	Continuing	Continuing	
		Subtotal	1,042.024	145.312		155.831		147.762		0.000		147.762			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Mission Support	C/Various	Various:Various,	110.105	19.497	Oct 2011	10.817	Oct 2012	10.828	Oct 2013	-		10.828	Continuing	Continuing	
		Subtotal	110.105	19.497		10.817		10.828		0.000		10.828			

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2,838.139	531.767		371.667		328.542		0.000		328.542			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
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Baseline F-22 Program Schedule Summary

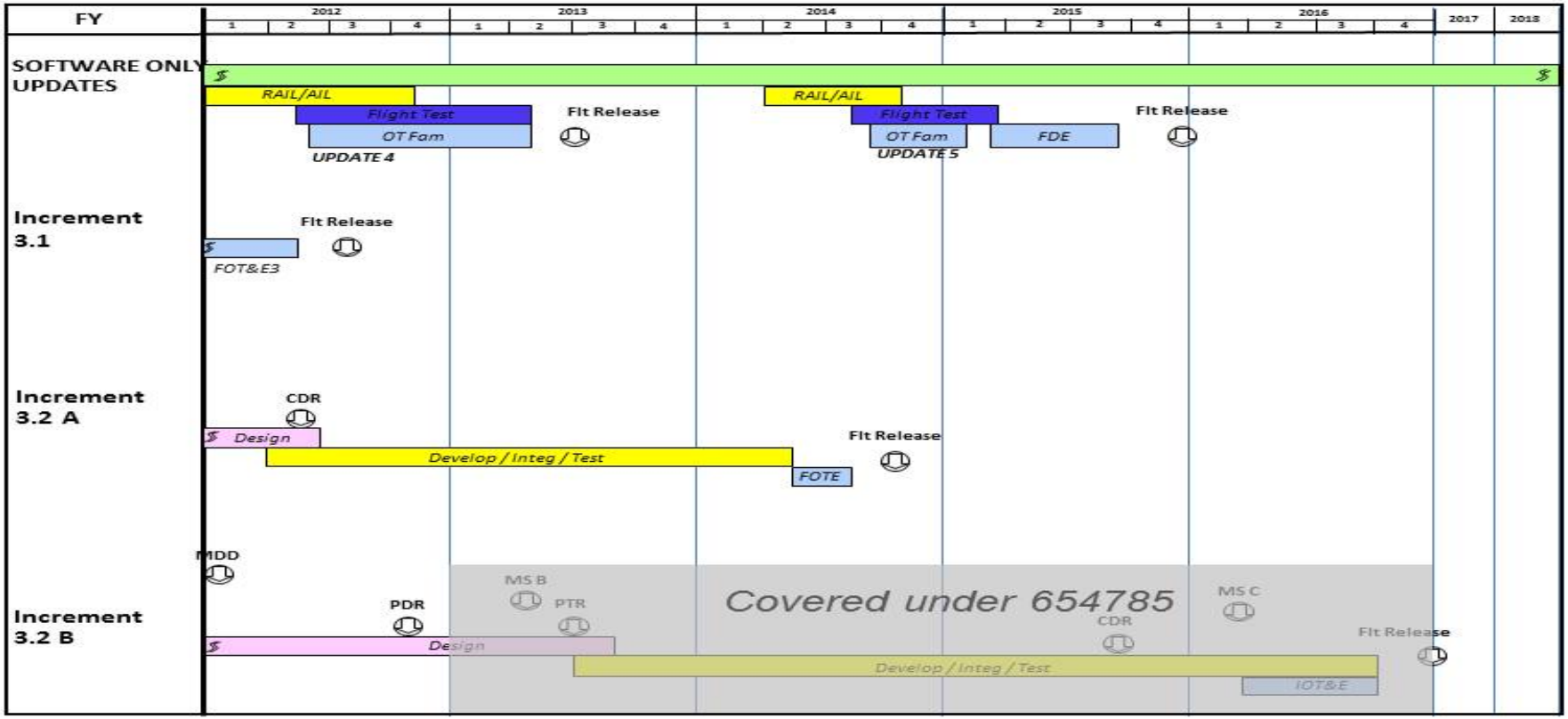
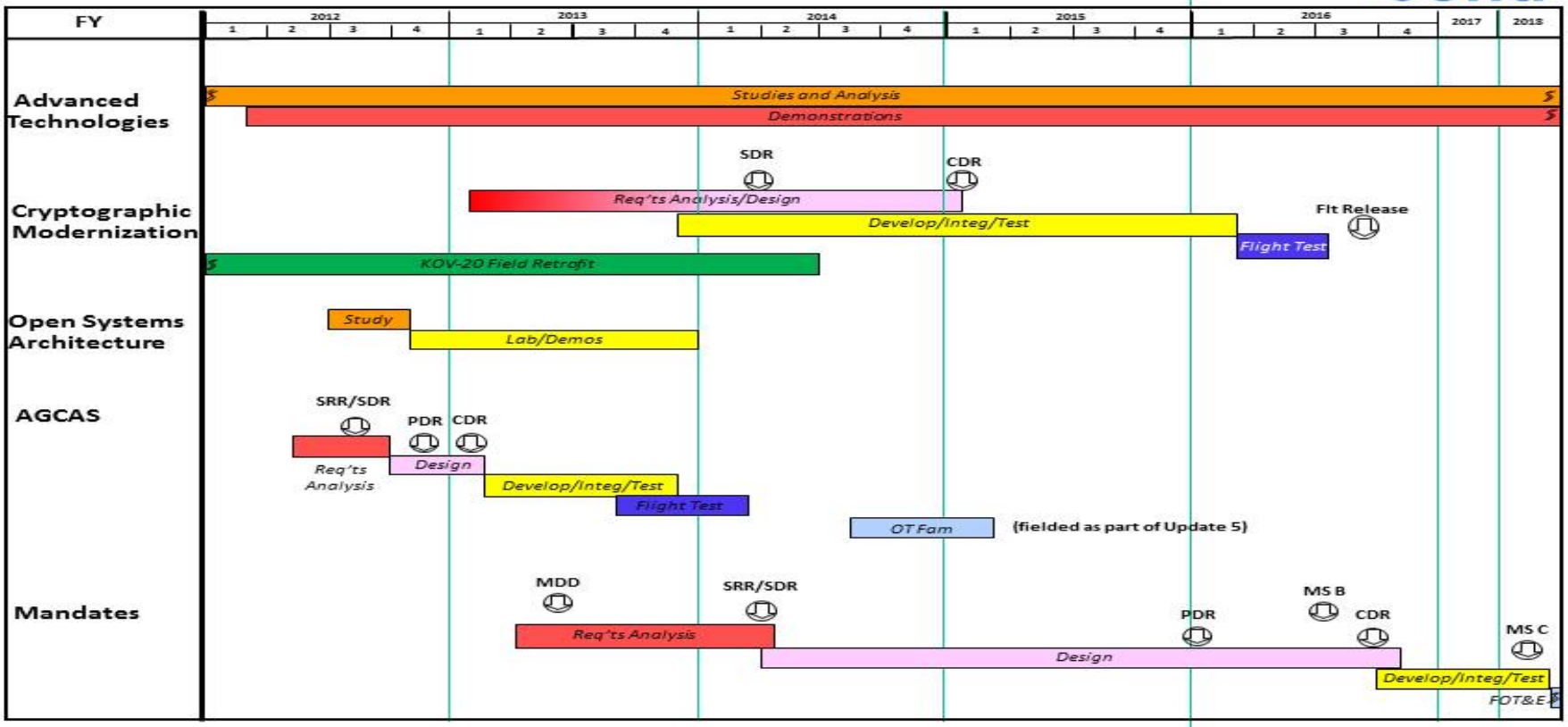


Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207138F: *F-22A Squadrons*	PROJECT 674785: *F-22*

F-22 Baseline Modernization Schedule, cont.



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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207138F: *F-22A Squadrons*	**PROJECT** 674785: *F-22*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Increment 3.1 Development, Integration, & Test - Actual Start: 4Q 2007	1	2012	1	2012
Increment 3.2B Material Development Decision (MDD)	1	2012	1	2012
Increment 3.2B System Requirements Review (SRR)	1	2012	1	2012
Increment 3.2B System Design Review (SDR)	1	2012	1	2012
Increment 3.2B Preliminary Design Review (PDR)	3	2012	3	2012
Increment 3.2A Critical Design Review (CDR)	2	2012	2	2012
Initiate 3.2A Development, Integration, & Test	1	2012	1	2012
Advanced Technology Development Studies & Analysis	1	2012	4	2018
Advanced Technology Development Demonstrations	1	2012	4	2018
Open Systems Architecture	2	2012	4	2013
AGCAS Requirements Analysis	2	2012	4	2012
AGCAS System Requirements Review (SRR)	3	2012	3	2012
AGCAS System Design Review (SDR)	3	2012	3	2012
Initiate AGCAS Design	4	2012	4	2012
AGCAS Preliminary Design Review (PDR)	4	2012	4	2012
AGCAS Critical Design Review (CDR)	1	2013	1	2013
AGCAS Development, Integration, & Test	1	2013	4	2013
F-22 Mandates Material Development Decision (MDD)	2	2013	2	2013
F-22 Mandates System Requirements Review (SRR)	1	2014	1	2014
F-22 Mandates System Design Review (SDR)	1	2014	1	2014
F-22 Mandates Preliminary Design Review (PDR)	1	2016	1	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	0.000	9.682	8.117	33.000	-	33.000	104.866	132.174	229.912	300.050	Continuing	Continuing
675346: *F-35*	0.000	0.000	8.117	23.000	-	23.000	104.866	132.174	229.912	300.050	Continuing	Continuing
676011: *JSF DUAL CAPABLE AIRCRAFT*	0.000	9.682	0.000	10.000	-	10.000	0.000	0.000	0.000	0.000	Continuing	Continuing
MDAP/MAIS Code(s): 198												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The F-35 Joint Strike Fighter (JSF) Program is developing a family of highly common, affordable, next generation, multi-role aircraft to meet the needs of the USMC, USN, USAF and international partners. The three variants are the F-35A Conventional Takeoff and Landing (CTOL); F-35B Short Takeoff and Vertical Landing (STOVL); and the F-35C Carrier Variant (CV). Maximum commonality among the variants, consistent with National Disclosure Policy, will minimize life cycle costs. FY2014 continues EMD development and testing of the F-35. As the initial capabilities are being delivered from the System Development and Demonstration (SDD) program, capability planning for Follow-on Development (FoD) is underway. Capability requirements are being assessed and FoD capability planning continues based upon the approved Fifth Generation Fighter Modernization Initial Capabilities Document (ICD), an approved Electronic Warfare ICD, and the results of an OSD Tiger Team Review. Follow-on Development will provide capability enhancements, required systems upgrades and cost improvements through an incremental acquisition approach.

Additionally, the Joint Contract Specification requirements call for the F-35A (CTOL) Variant Air Vehicle to have the capabilities and provisions for Dual Capable Aircraft (DCA) operations. DCA refers to the capability to carry and deliver conventional or non-conventional weapons. DCA operation for the F-35A is internal carriage of two B-61s.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*			R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	9.967	8.117	50.084	-	50.084
Current President's Budget	9.682	8.117	33.000	-	33.000
Total Adjustments	-0.285	0.000	-17.084	-	-17.084
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.285	0.000			
• Other Adjustments	0.000	0.000	-17.084	-	-17.084

Change Summary Explanation

FY14 adjustments for proper program alignment and funding for higher Air Force priorities

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 675346: *F-35*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675346: *F-35*	0.000	0.000	8.117	23.000	-	23.000	104.866	132.174	229.912	300.050	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

NOTE:
R-2A costs shown above reflect service funding only.

R-2A (section B)/R-3 displays combined service funding for JSF Follow-on Development.

JSF FoD Includes:
USAF:PE 0207142F BPAC 675346
USN: FY13 PE 0604800N Project Unit 2261
USN: FY14 PE 0604800N Project Unit 3353
USMC: FY13 PE 0604800M Project Unit 2262
USMC: FY14 PE 0604800M Project Unit 3351

JSF DCA Includes:
USAF PE 0207142F BPAC 676011
USN N/A
USMC N/A

A. Mission Description and Budget Item Justification

F-35 Follow-on Development (FoD) provides continuing incremental upgrades of the three F-35 variants and associated ground equipment. The FoD acquisition strategy is based upon incremental development of capabilities with each increment consisting of two development cycles. FoD capability planning includes an efficient transition from F-35 SDD to Follow-on Development. As SDD development activities ramp down through FY17, the FoD program will assume responsibility for new development and the maintenance of associated developmental infrastructure. FoD capability planning currently includes Milestone B in late FY15 to enable Block 4 Engineering and Manufacturing Development efforts from FY16 through FY18, followed by DT and OT testing in 2020 with delivery of capabilities in early 2021. A Materiel Development Decision (MDD) formally approving FoD Material Solution Analysis and Technology Development/Risk Reduction phases for technology acquisition is planned in late FY13.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 675346: *F-35*

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Air Vehicle Follow-on Development (Capability Planning) ***Description:*** FY2014 capability planning effort will focus on mission requirements analysis, early engineering, risk reduction and preparations leading to formal acquisition approval of Block 4. Program planning will consist of engineering and development support for defining, managing and acquisition of capability enhancements required to address threats indicated in the Electronic Warfare ICD, the Fifth Generation Fighter Modernization ICD and as further defined in the F-35 Follow-on Development Increment 1 (Block 4) Capability Development Document (CDD) (Note: CDD approval planned in FY-14). ***FY 2013 Plans:*** Early capabilities planning, requirements and alternatives analysis, and U.S. and Partner investment planning in accordance the Production, Sustainment, & Follow-on Development Memorandum of Agreement. Initial FoD funding was included in projects 2262 & 2261 for USN & USMC. FY14 funding will be reflected in projects 3353 & 3351. ***FY 2014 Plans:*** Requirements analysis and technical requirements development, systems engineering, and technical planning. A formal Systems Requirements Review is planned in FY14.	0.000	16.834	24.034
Title: Developmental Test and Evaluation ***Description:*** Initiate Laboratory and Test Aircraft Upgrade and other test planning activities required for Block 4 and later development , integration, test and evaluation. Changes are needed to support development and evaluation of improvements driven by changes in threat and as identified in the Electronic Warfare ICD and the Fith Generation Fighter Modernization ICD. . ***FY 2014 Plans:*** Near term funding will support infrastructure upgrades required for development of enhanced capabilities. This includes replacement of engines and other life limited components on DT aircraft that will be at end of life upon completion of SDD, as well as laboratory upgrades to support development and verification of capabilities to address advanced threats.	0.000	0.000	17.100
Title: Development Support ***Description:*** Technical and Analytical Support ***FY 2014 Plans:***	0.000	0.000	4.582

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 675346: *F-35*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Initiate development support for defining, managing and acquiring the envisioned F-35B capability enhancements identified in approved requirements documents.			
Title: Management Services ***Description:*** Includes management support, travel, engineering technical services, acquisition planning, studies and analysis in support of FoD Program objectives. ***FY 2014 Plans:*** Acquisition and program planning, documentation development to include all regulatory and statutory requirements required in preparation for Milestone B approval in late FY2015 or early FY16 to begin FoD Increment 1, Block 4 E&MD	0.000	0.000	3.630
Accomplishments/Planned Programs Subtotals	0.000	16.834	49.346
Other Service Program Funding Adjustment	-	8.717	26.346
Air Force Subtotals	0.000	8.117	23.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• RDTE: BA05: PE 0604800F: *JSF SDD, BPAC 653831*	1,366.147	1,192.506	782.335		782.335	621.432	486.094	175.591	77.992	0.000	22,151.183
• RDTE:BA05: PE 0604800F: *JSF Deployability and Suitability Enhancements, BPAC 653832*	0.000	17.800	34.000		34.000	33.000	30.000	0.000	0.000	Continuing	Continuing
• RDTE: BA07: PE 207142F: *Dual Capable Aircraft (DCA), BPAC 676011*	9.682	0.000	10.000		10.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• RDTEN: BA05: PE 604800N: *JSF SDD (CV), BPAC 2261*	605.998	724.392	507.753		507.753	570.181	450.625	254.021	23.023	0.000	22,922.837
• RDTEN: BA05: PE 604800M: *JSF SDD (STOVL), BPAC 2262*	617.695	737.149	482.823		482.823	557.360	439.945	244.047	96.185	0.000	22,962.048
• RDTEN:BA05: PE 604800N: *USRL, BPAC 3194*	26.044	19.534	0.000		0.000	0.000	0.000	0.000	0.000	0.000	149.262
• International R&D (SDD/FoD): *Int'l Parnter (SDD/FOD)*	145.664	149.346	4.411		4.411	0.000	0.000	0.000	0.000	0.000	4,947.074

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*		R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 675346: *F-35*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA01: ATA000: *JSF CTOL, PE 0207142F, BP10*	3,289.615	3,124.302	3,060.770		3,060.770	3,921.250	3,894.217	5,250.891	5,850.477	150,878.750	189,907.778
• APAF: BA01:ATA000: *JSF CTOL Advance Procurement, PE 207142F, BP10*	228.977	293.400	363.783		363.783	482.795	509.828	578.000	588.404	18,585.140	22,633.855
• APN: BA01: BP0147: *JSF (CV), PE 0204146N*	1,447.097	1,007.632	1,135.444		1,135.444	1,082.046	1,468.775	2,054.690	2,532.068	26,737.969	45,618.677
• APN: BA01: BP0147C: *JSF Advance Procurement (CV), PE 204146N*	109.066	65.180	94.766		94.766	132.063	185.904	246.779	190.141	3,364.677	5,219.579
• APN: BA01:BP0152: *JSF (STOVL), PE 0204146M*	1,141.906	1,404.737	1,267.260		1,267.260	1,209.937	1,461.056	2,125.324	2,814.618	29,224.711	41,203.070
• APN: BA01: BP0152C: *JSF Advance Procurement (STOVL), PE 204146M*	117.229	106.199	103.195		103.195	143.887	203.057	226.014	136.732	4,095.291	5,755.765
• International Production: *International Production*	1,808.640	3,453.903	5,738.517		5,738.517	7,563.725	8,328.889	8,153.307	7,347.293	Continuing	Continuing
• OPN: BA04: BP4265: *JSF Other Procurement, PE 204261N*	5.665	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	5.665
• OPN: BA03: BP4267: *JSF Logistics Information System (ALIS), PE 204261N*	0.000	3.826	4.827		4.827	4.554	4.604	5.729	5.830	43.558	72.928
• APAF: BA06: ATA000: *JSF Initial Spares, PE 0207142F, BP16*	149.556	181.833	103.582		103.582	235.183	271.211	235.251	342.508	Continuing	Continuing
• APN: BA06:ATA000: *Initial Spares (CV), PE 0204146N, BP0605*	29.902	41.466	42.060		42.060	17.310	32.270	121.283	63.995	Continuing	Continuing
• APN: BA06: ATA000: *Initial Spares (STOVL), PE 0204146M, BP0605*	23.430	99.006	41.707		41.707	131.216	94.193	66.423	127.264	Continuing	Continuing
• MILCON: BA01: PE 0207142F: *JSF Military Construction*	24.250	13.530	41.900		41.900	72.100	65.000	66.170	11.000	1,554.200	2,358.300

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 675346: *F-35*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• USN MILCON: BA01: *USN JSF Military Construction*	144.400	117.600	209.000		209.000	320.500	151.700	48.100	0.000	830.600	2,259.300
• APAF: BA05: ATA000: *JSF Modifications, PE 0207142F, BP11*	0.000	147.995	157.777		157.777	245.462	223.683	252.141	256.680	Continuing	Continuing
• OPAF: BA01: 821800: *Joint Strike Fighter, PE 0207142F*	0.000	0.600	2.200		2.200	2.943	2.471	2.345	2.387	0.000	12.946
• APN: BA05: BP0593: *Modifications (CV), PE 204146N*	0.000	0.000	31.100		31.100	52.900	62.130	98.980	102.456	Continuing	Continuing
• APN: BA05: BP0592: *Modifications (STOVL), PE 204146M*	0.000	0.000	147.130		147.130	291.910	284.360	176.610	181.234	Continuing	Continuing
• RDTEN: BA05:PE 604800N: *F-35C Follow-on Development (CV), BPAC 3353*	0.000	0.000	11.442		11.442	19.996	60.963	115.057	173.276	Continuing	Continuing
• RDT&EN:BA05: PE 604800N: *F-35C Sustainment/Capability Enhancements (CV),BPAC 3352*	0.000	0.000	14.992		14.992	14.997	14.991	0.000	0.000	0.000	44.980
• RDT&EN: BA05: PE 604800M: *F-35B Sustainment/Capability Enhancements (STOVL),BPAC 3350*	0.000	0.000	14.904		14.904	14.976	14.960	0.000	0.000	0.000	44.840
• RDTE: BA07: PE 604800M: *F-35B Follow-on Development (STOVL), BPAC 3351*	0.000	0.000	14.904		14.904	19.968	60.837	114.965	172.906	Continuing	Continuing

Remarks

This is a joint program with no executive service. Service Acquisition Executive (SAE) authority alternates between the Department of the Navy and the Department of the Air Force and currently resides with the Navy. Program Element 0604800N/0604800M continues USN development efforts budgeted in 0603800N prior to FY2002. The United Kingdom and other International countries are participants in the SDD phase of JSF.

Note: The USAF/USN/USMC PROCUREMENT lines include Aircraft Procurement and Advanced Procurement only. Initial Spares and Repair Parts for all Services are reflected in separate lines. International Partner Funding includes funds provided under the Italy and Netherlands Bilateral agreements.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 675346: *F-35*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost

RELATED RDT&E: Funding prior to JSF SDD (FY94-FY01): USN PE 0603800N $1,950,617; USAF PE 0603800F $1,907,352; DARPA PE 0603800E $118,056; and International Partner contributions of $253.921 for a total of $4,229,896.

D. Acquisition Strategy

To enable the ability to adjust to potential discrepancies discovered during SDD Block 3 Test and Evaluation, the engineering and development planning support for Follow-on Development will be procured under a cost type contract. A fee provision will be used to target and motivate contractor performance. A separate Basic Ordering Agreement or Indefinite Quantity/Indefinite Delivery contract is planned to provide a long term approach to upgrading and maintaining laboratories and test aircraft. Both Development Support and Management Services will primarily use CPFF Delivery Orders.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 675346: *F-35*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Requirements Analysis, Systems Engineering and Risk Reduction	SS/CPFF	Lockheed Martin:Ft Worth, TX	0.000	0.000		16.834	Aug 2013	24.034	Mar 2014	-		24.034	Continuing	Continuing	107.984
		Subtotal	0.000	0.000		16.834		24.034		0.000		24.034			107.984

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical and Analytic Support LM	SS/CPFF	Lockheed Martin:Ft Worth, TX	0.000	0.000		0.000		4.582	Mar 2014	-		4.582	Continuing	Continuing	10.062
		Subtotal	0.000	0.000		0.000		4.582		0.000		4.582			10.062

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Laboratory and Test Aircraft Infrastructure	TBD	Lockheed Martin:Ft Worth, TX	0.000	0.000		0.000		17.100	Jan 2014	-		17.100	Continuing	Continuing	
		Subtotal	0.000	0.000		0.000		17.100		0.000		17.100			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Support and Milestone Preparations	TBD	Various:Various,	0.000	0.000		0.000		2.895	Nov 2013	-		2.895	Continuing	Continuing	
PMA	Various	Various:Various,	0.000	0.000		0.000		0.735		-		0.735	Continuing	Continuing	
		Subtotal	0.000	0.000		0.000		3.630		0.000		3.630			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 675346: *F-35*	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Subtotals	0.000	0.000		16.834		49.346		0.000		49.346			
Other Service Program Funding Adjustment	-	-		8.717		26.346		-		26.346	-	35.063	-
Project Cost Totals	0.000	0.000		8.117		23.000		0.000		23.000			

Remarks

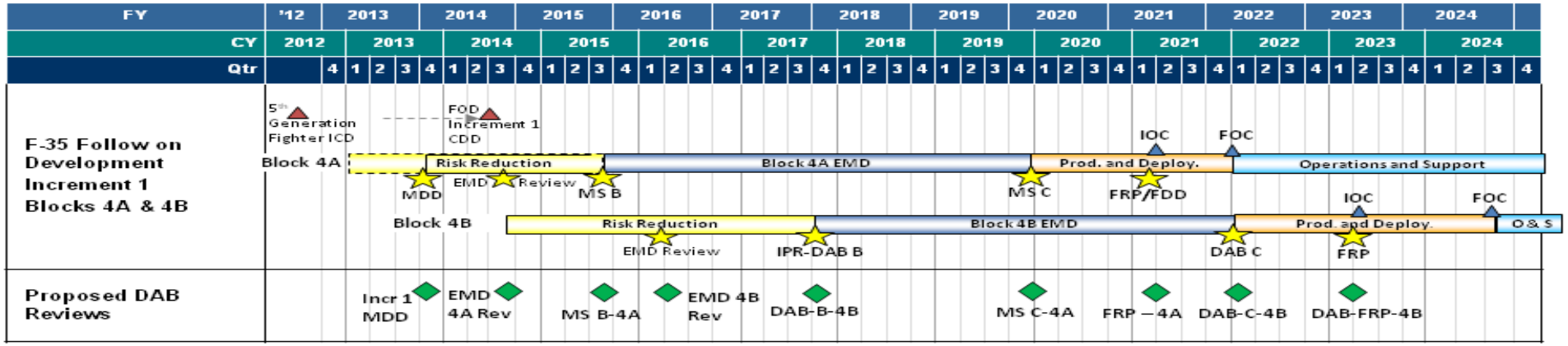
NOTE: R-2A/R-3 displays combined service funding for JSF Follow-on Development.

JSF FoD Includes:
USAF PE 0207142F BPAC 675346
FY13: USN PE 0604800N Project Unit 2261
FY14: USN PE 0604800N Project Unit 3353
FY13: USMC PE 0604800M Project Unit 2262
FY14: USMC PE 0604800M Project Unit 3351

JSF DCA Includes:
USAF PE 0207142F BPAC 676011
USN N/A
USMC N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 675346: *F-35*

FoD Top Level Planning Schedule



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6 February 2013

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207142F: *F-35 Squadrons*	**PROJECT** 675346: *F-35*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Block 4A Risk Reduction	1	2014	3	2015
Block 4A Engineering and Manufacturing Development	3	2015	1	2018
Block 4A DT/OT	3	2018	4	2018
Block 4B Risk Reduction	2	2014	4	2017
Block 4B Engineering and Manufacturing Development	4	2017	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 676011: *JSF DUAL CAPABLE AIRCRAFT*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
676011: *JSF DUAL CAPABLE AIRCRAFT*	0.000	9.682	0.000	10.000	-	10.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

NOTE:
JSF FoD Includes:
USAF:PE 0207142F BPAC 675346
USN: FY13 PE 0604800N Project Unit 2261
USN: FY14 PE 0604800N Project Unit 3353
USMC: FY13 PE 0604800M Project Unit 2262
USMC: FY14 PE 0604800M Project Unit 3351

JSF DCA Includes:
USAF PE 0207142F BPAC 676011
USN N/A
USMC N/A

A. Mission Description and Budget Item Justification

The Joint Strike Fighter (JSF) program will develop and deploy a family of highly common, affordable next generation, stealthy, multi-role strike fighter aircraft that meets the needs of the USN, USAF, USMC and allies with maximum commonality among the variants, consistent with National Disclosure Policy, to minimize life cycle costs. The Joint Contract Specification requirements call for the F-35A (CTOL) Variant Air Vehicle to have the capabilities and provisions for Dual Capable Aircraft (DCA) operations. DCA refers to the capability to carry and deliver conventional or non-convnentional weapons. DCA operation is internal carriage of two non-conventional weapons. In accordance with the Operational Requirements Document, DCA will be integrated in the first post-SDD block upgrade in time to meet Joint Strategic Capabilities Plan force structure requirements.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: DCA	9.682	0.000	10.000
Description: This effort provides for the assessment of Dual Capable Aircraft (DCA) weapon integration impacts on the Joint Strike Fighter (JSF) aircraft, early in the weapon design phase. It identifies and avoids potential technical and cost risks, as well			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 676011: *JSF DUAL CAPABLE AIRCRAFT*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
as defining the integration and certification trade-space to field the DCA capability with the B61 weapon. This effort also supports follow-on risk reduction efforts that will ensure future integration alignment with the first feasible post SDD block upgrade, and is expected to include full integration efforts pending Service decisions. ***FY 2012 Accomplishments:*** Initiate efforts assess the feasibility and trade-space of incorporating dual-capability in to the first post SDD block upgrade. ***FY 2014 Plans:*** Initiate risk reduction efforts required to integrate dual-capability on F-35A (CTOL). Developmental alignment with post SDD block upgrades will be determined based on analysis performed in FY12 and FY13.			
Accomplishments/Planned Programs Subtotals	9.682	0.000	10.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• RDTE: BA05: PE 0604800F: *JSD SDD, BPAC 653831*	1,366.147	1,192.506	782.335		782.335	621.432	486.094	175.591	77.992	0.000	22,151.183
• RDTEN: BA05: PE 604800N: *JSD SDD (CV), BPAC 2261*	605.998	724.392	507.753		507.753	570.181	450.625	254.021	23.023	0.000	22,922.837
• RDTEN: BA05: PE 604800M: *JSD SDD (STOVL), BPAC 2262*	617.695	737.149	482.823		482.823	557.360	439.945	244.047	96.185	0.000	22,962.048
• APN: BA01:BP0152C: *JSF Advance Procurement (STOVL), PE 204146M*	117.229	106.199	103.195		103.195	143.887	203.057	226.014	136.732	4,095.291	5,755.765
• RDTEN:BA05: PE 604800N: *USRL, BPAC 3194*	26.044	19.534	0.000		0.000	0.000	0.000	0.000	0.000	0.000	149.262
• International R&D: *International R&D (SDD/FOD)*	145.664	149.346	4.411		4.411	0.000	0.000	0.000	0.000	0.000	4,947.074
• APAF: BA01: ATA000: *JSF CTOL, PE 207142F, BP10*	3,289.615	3,124.302	3,060.770		3,060.770	3,921.250	5,188.155	5,250.891	5,850.477	150,878.750	189,907.778
• APAF:BA01: ATA000: *JSF CTOL Advance Procurement, PE 207142F, BP10 AP*	228.977	293.400	363.783		363.783	482.795	509.828	578.000	588.404	18,585.140	22,633.855

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 676011: *JSF DUAL CAPABLE AIRCRAFT*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APN: BA01: BP0147: *JSF (CV), PE 204146N*	1,447.097	1,007.632	1,135.444		1,135.444	1,082.046	1,468.775	2,054.690	2,532.068	26,737.969	45,618.677
• APN: BA01: BP0147C: *JSF Advance Procurement (CV), PE 204146N*	109.066	65.180	94.766		94.766	132.063	185.904	846.779	190.141	3,364.677	5,219.579
• APN: BA01: BP0152: *JSF (STOVL), PE 204146M*	1,141.906	1,404.737	1,267.260		1,267.260	1,209.937	1,461.056	2,125.324	2,814.618	29,224.711	41,203.070
• International Production: *JSF International Production*	1,808.640	3,453.903	5,738.517		5,738.517	7,563.725	8,328.889	8,153.307	7,347.293	Continuing	Continuing
• OPAF: BA01: 821800: *Joint Strike Fighter, PE 0207142F*	0.000	0.600	2.200		2.200	2.943	2.471	2.345	2.387	0.000	12.946
• OPN: BA04: BP4265: *JSF Other Procurement, PE 204261N*	5.665	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	5.665
• OPN: BA03: BP4267: *JSF Logistics Information System (ALIS),PE 204261N*	0.000	3.826	4.827		4.827	4.554	4.604	5.729	5.830	43.558	72.928
• APAF: BA06: PE 207142F, BP16: *JSF Initial Spares*	149.556	181.833	103.582		103.582	235.183	271.211	235.251	342.508	Continuing	Continuing
• APN: BA06: PE 204146N, BP0605: *Initial Spares (CV)*	29.902	41.466	42.060		42.060	17.310	32.270	121.283	63.995	Continuing	Continuing
• APN: BA06: PE 204146M, BP0605: *Initial Spares (STOVL)*	23.430	99.006	41.707		41.707	131.216	94.193	66.423	127.264	Continuing	Continuing
• MILCON: BA01: PE 207142F: *JSF Military Construction*	24.250	13.530	41.900		41.900	72.100	65.000	66.170	11.000	1,554.200	2,358.300
• USN MILCON: BA01: *USN JSF MILCON*	144.400	117.600	209.000		209.000	320.500	151.700	48.100	0.000	830.600	2,259.300
• APAF: BA05: PE 20742F, BP11: *JSF Modifications*	0.000	147.995	157.777		157.777	245.462	223.683	252.141	256.680	Continuing	Continuing
• APN: BA05: BP0593: *Modifications (CV),PE 204146N*	0.000	0.000	31.100		31.100	52.900	62.130	98.980	102.456	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 676011: *JSF DUAL CAPABLE AIRCRAFT*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APN: BA05: BP0592: *Modifications (STOVL), PE 204146M*	0.000	0.000	147.130		147.130	291.910	284.360	176.610	181.234	Continuing	Continuing
• RDTE: BA07: PE 207142F: *JSF Follow-on Development (FoD), BPAC 675346*	0.000	8.117	23.000		23.000	104.866	132.174	229.912	300.050	Continuing	Continuing
• RDTE:BA05: PE 0604800F: *JSF Deployability and Suitability Enhancements, BPAC 653832*	0.000	17.800	34.000		34.000	33.000	30.000	0.000	0.000	Continuing	Continuing
• RDTEN: BA05: PE 604800N: *F-35C Follow-on Development (CV),BPAC 3353*	0.000	0.000	11.442		11.442	19.996	60.963	115.057	173.276	Continuing	Continuing
• RDT&EN: BA05: PE 604800N: *F-35C Sustainment/Capability Enhancements (CV), BPAC 3352*	0.000	0.000	14.992		14.992	14.997	14.991	0.000	0.000	0.000	44.980
• RDTE: BA05: PE 604800M: *F-35B Follow-on Development (STOVL), BPAC 3351*	0.000	0.000	14.904		14.904	19.968	60.837	114.965	172.906	Continuing	Continuing
• RDT&EN: BA05: PE 604800M: *F-35B Sustainment/Capability Enhancements (STOVL), BPAC 3350*	0.000	0.000	14.904		14.904	14.976	14.960	0.000	0.000	0.000	44.840

Remarks

This is a joint program with no executive service. Service Acquisition Executive (SAE) authority alternates between the Department of the Navy and the Department of the Air Force and currently resides with the Navy. Program Element 0604800N/0604800M continues USN development efforts budgeted in 0603800N prior to FY2002. The United Kingdom and other International countries are participants in the SDD phase of JSF.

Note: The USAF/USN/USMC PROCUREMENT lines include Aircraft Procurement and Advanced Procurement only. Initial Spares and Repair Parts for all Services are reflected in separate lines. International Partner Funding includes funds provided under the Italy and Netherlands Bilateral agreements.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 676011: *JSF DUAL CAPABLE AIRCRAFT*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost

RELATED RDT&E: Funding prior to JSF SDD (FY94-FY01): USN PE 0603800N $1,950,617; USAF PE 0603800F $1,907,352; DARPA PE 0603800E $118,056; and International Partner contributions of $253.921 for a total of $4,229,896.

D. Acquisition Strategy

The DCA effort will be procured via a cost type contract. It is anticipated that fee provisions will be used to target and motivate the contractor performance. Similar to SDD, BOAs and ID/IQ contracts may be used for trade studies, analyses, and planning activities.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 676011: *JSF DUAL CAPABLE AIRCRAFT*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Lockheed Martin - DCA Integration	SS/CPFF	Lockheed Martin:Ft. Worth, TX	0.000	9.682	Mar 2013	0.000		10.000	Mar 2014	-		10.000	0.000	19.682	19.682
		Subtotal	0.000	9.682		0.000		10.000		0.000		10.000	0.000	19.682	19.682

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	9.682		0.000		10.000		0.000		10.000	0.000	19.682	19.682

Remarks

JSF FoD Includes:
USAF:PE 0207142F BPAC 675346
USN: FY13 PE 0604800N Project Unit 2261
USN: FY14 PE 0604800N Project Unit 3353

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207142F: *F-35 Squadrons*	PROJECT 676011: *JSF DUAL CAPABLE AIRCRAFT*	

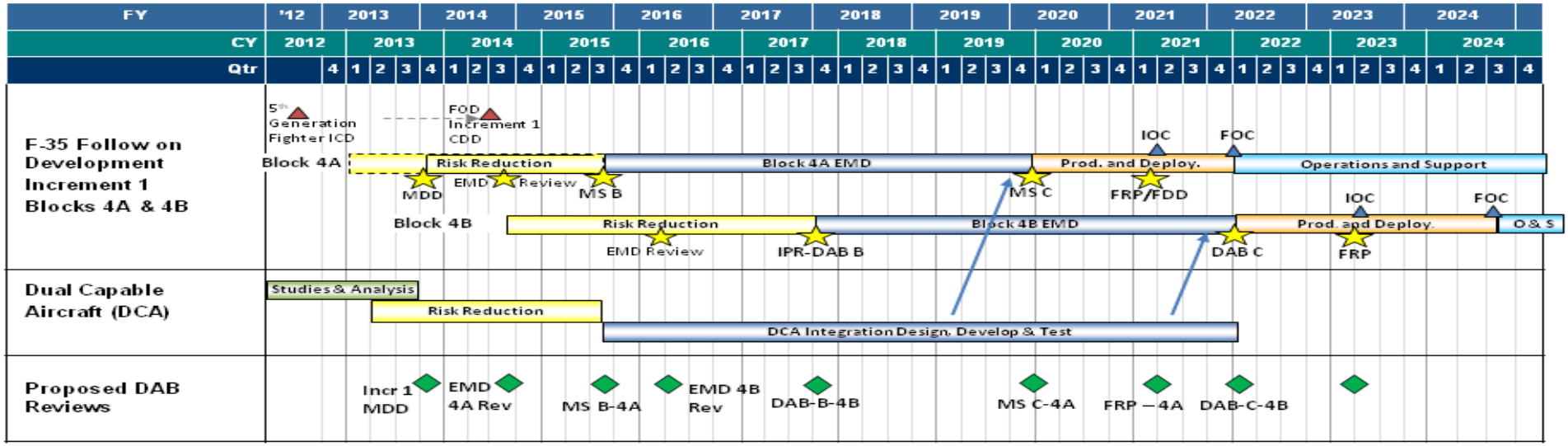
	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract

USMC: FY13 PE 0604800M Project Unit 2262
USMC: FY14 PE 0604800M Project Unit 3351

JSF DCA Includes:
USAF PE 0207142F BPAC 676011
USN N/A
USMC N/A

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207142F: *F-35 Squadrons*	**PROJECT** 676011: *JSF DUAL CAPABLE AIRCRAFT*

FoD Top Level Planning Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207142F: *F-35 Squadrons*	**PROJECT** 676011: *JSF DUAL CAPABLE AIRCRAFT*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
DCA Studies & Analysis	1	2012	3	2013
DCA Risk Reduction	2	2013	3	2015
DCA Integration Design, Development & Test	3	2015	4	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207161F: *Tactical AIM Missiles*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	7.885	8.234	15.460	-	15.460	30.110	22.866	12.983	13.217	Continuing	Continuing
674132: *AIM-9 Product Improvement*	-	7.885	8.234	15.460	-	15.460	30.110	22.866	12.983	13.217	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

MDAP/MAIS Code(s): 442,581

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The AIM-9X Sidewinder short-range air-to-air missile is a long-term evolution of the AIM-9 series of fielded missiles. The AIM-9X 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 with the AIM-9M (fuse, rocket motor, and warhead). Anti-Tamper features have been incorporated to protect improvements inherent in this design. AIM-9X is a Post Milestone III, Acquisition Category 1C (ACAT 1C) joint-service program with Navy lead.

This budget line item will fund the development, test and integration of software updates to the missile, insensitive munitions improvements and aircraft platform integration, to ensure these capabilities perform in accordance with established requirements.

Completion of OT-C1 has been extended from 3rd Qtr FY 2013 to 1st Qtr FY 2014 as a result of the Operational Test Readiness Review (OTRR) held in April 2012. Updated program requirements leading up to the OTRR (including detailed OT Test Plan development) and provided during the OTRR determined the need to extend the OTC1
period. Begin of DT-D1 has slid from 3rd Qtr FY 2012 to 2nd QTR 2014 to allow completion of OT-C1 activity. Beginning of IT-D1 has slid from 4th Qtr FY 2013 to 3rd Qtr 2015 to allow for DT-D1 activity to begin. Beginning of OT-D1 has slid from 2nd QTR FY 2015 to 1st QTR 2017 to allow for completion of DT-D1 activity.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207161F: *Tactical AIM Missiles*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	7.885	8.234	9.675	-	9.675
Current President's Budget	7.885	8.234	15.460	-	15.460
Total Adjustments	0.000	0.000	5.785	-	5.785
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	5.785	-	5.785

Change Summary Explanation

FY 2014 adjustment by $5.785M to fund improvements in the F-15C/D Suite 9 Operational Flight Program to utilize full capability of the AIM-9X Block II missile.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Product Development	6.405	7.000	13.389

Description: Continuation of Primary Hardware Development/Pre-Planned Product Improvement efforts for the AIM-9X fuze. Includes Systems Engineering/Program management, as well as support required to ensure AIM-9X missile integration with threshhold aircraft platforms. Includes efforts to update missile components in order to comply with Insensitive Munitions requirements as established by Joint Requirements Oversight Council memo dated 11 February 2009.

FY 2012 Accomplishments:

Continued refinement of v9.3 Software Algorithm and Code Development in support of the AIM-9X missile testing and integration effort with threshhold aircraft platforms, as well as study IM alternatives and risk reduction methods.

FY 2013 Plans:

Continue support of AIM-9X Block II integration. Study IM alternatives and risk reduction methods. Continue support of Operational Test anomaly resolution. Begin Software Algorithm and Code Development on version 9.4 of missile software.

FY 2014 Plans:

Continue development of v9.4 Software Algorithm and Code Development in support of the AIM-9X missile testing and integration effort with threshhold aircraft platforms. Continue study on insensitive munitions alternatives and risk reduction methods. Continue

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207161F: *Tactical AIM Missiles*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
support of Operational Test anomaly resolution. Initiate improvements in the F-15C/D suite 9 OFP to utilize full capability of the AIM-9X Block II missile.			
Title: Test and Evaluation ***Description:*** Funding required for Test & Evaluation and associated Ggvernmental & contractor support required to ensure the AIM-9X missile integration with threshhold aircraft platforms. ***FY 2012 Accomplishments:*** Complete final phase of Operational Testing of missile software rehosting into new AIM-9X components. Complete Integrated (Development and Operational) Testing and begin Operational Testing of the follow on missile software (v9.3) for the AIM-9X missile integration. ***FY 2013 Plans:*** Continue Operational Testing of the follow on missile software (v9.3). ***FY 2014 Plans:*** Complete Operational Test and await final report in support of Full Rate Production (FRP) and fielding of missile. Determine potential of Verification of Correction of Deficiencies (VCD). Develop T&E requirements for Block II program Capabilities Production Document (CPD). Begin Integrated (Development and Operational) Testing of version 9.4 missile software.	0.958	0.703	1.530
Title: Program Mangement Administrative ***Description:*** Funding required for in house govenrment and contractor support. ***FY 2012 Accomplishments:*** Continue in house government and contarctor support. ***FY 2013 Plans:*** Continue in house government and contarctor support. ***FY 2014 Plans:*** Continue in house government and contarctor support.	0.522	0.531	0.541
Accomplishments/Planned Programs Subtotals	7.885	8.234	15.460

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207161F: *Tactical AIM Missiles*

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• MPAF: BA02: M09HAI: PE 0207161F,...: *Missile Mods, USAF*	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• MPAF: BA02: M09HAI: PE 02071 (1)...: *Sidewinder (AIM-9X)*	88.454	88.020	119.904		119.904	134.456	133.066	136.706	115.266	1,413.484	2,781.650
• MPAF: BA04: 000999: PE 0207161F,...: *Replen Spares, USAF*	7.866	8.854	10.728		10.728	10.838	11.033	11.232	11.434	117.807	220.223
• MPAF: BA04: 000999: PE 02071 (3)...: *Inital Spares, USAF*	1.659	1.651	1.650		1.650	1.736	1.766	1.798	1.830	67.509	117.934
• RDT&E,N: BA07: Tactical AIM...: *Tactical AIM Missile, USN*	8.463	21.107	39.159		39.159	96.557	108.413	112.541	88.570	4.419	833.600
• WPN: BA07: PE 0207162N, Sidewind...: *Sidewinder, USN*	50.198	80.226	117.208		117.208	125.339	124.533	133.108	134.448	858.536	2,048.883

Remarks

Congressional language directed the program to report as a missile procurement, starting in FY2002, and not as a missile modification.

E. Acquisition Strategy

The Low Rate Initial Production (LRIP), LOT 4, Firm-Fixed-Price (FFP) contract was awarded in April 2004. Assistant Secretary of the Navy for (Research Development & Acquisitions) approved the Full-Rate Production (FRP) decision in May 2004. FRP 1, LOT 5 contract was awarded November 2004. FRP 1, LOT 5 through FRP 3 LOT 7 contracts were awarded November 2006. Rewards or penalties are provided depending on Raytheon Missile Systems Performance relative to the Procurement Price Commitment Curve (PPCC) for LOTs 5 through 7 (FY 2005 through FY 2007). FRP 4 LOT 8 (FY 2008) contract was re-negotiated outside of the PPCC, and was awarded in January 2008. The FRP 5 LOT 9 (FY 2009) contract was awarded in June 2009, and incorporated the new electronics unit into the Captive Air Training Missile resolving critical obsolescence issues, as well as a low quantity of test articles to prove out the capability and producibility of the AIM-9X missile. The FRP 6 Lot 10 (FY 2010) contract was awarded in June 2010 to procure Block I All Up Round missiles as well as additional tactical test articles.

Block II: Milestone C decision for LRIP was held on June 24th 2011, and the program has entered into LRIP contracts for Block II in FY 2011 and FY 2012. The program will enter the final LRIP in FY 2013, followed by Block II full rate production (FRP) in FY 2014 and beyond.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207161F: *Tactical AIM Missiles*	PROJECT 674132: *AIM-9 Product Improvement*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
RMS Software/OFP Upgrade	SS/CPFF	RMS:Tucson, AZ	-	4.490	Jan 2012	4.980	Jan 2013	5.699	Jan 2014	-		5.699	Continuing	Continuing	63.486
Munitions Improvement Study (RG)	SS/CPFF	RMS:Tucson, AZ	-	0.000		0.000		1.695	Jan 2014	-		1.695	Continuing	Continuing	17.349
Munitions Improvement Study (USG)	MIPR	NAWC WD:China Lake, CA	-	1.915	Dec 2011	2.020	Dec 2012	1.695	Jan 2014	-		1.695	Continuing	Continuing	13.416
Aircraft Integration	SS/CPFF	Boeing:St. Louis, MO	-	0.000		0.000		4.300	Dec 2013	-		4.300	Continuing	Continuing	17.400
All Prod Dev Costs from program implementation through FY02	Various	Various:,	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	197.699
		Subtotal	0.000	6.405		7.000		13.389		0.000		13.389			309.350

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
In House Support	MIPR	PMA-259:Patuxent River, MD	-	0.522	Jan 2012	0.531	Jan 2013	0.541	Jan 2013	-		0.541	Continuing	Continuing	10.358
		Subtotal	0.000	0.522		0.531		0.541		0.000		0.541			10.358

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DT&E/OT&E for P3I	PO	Various:Various,	-	0.958	Nov 2011	0.703	Mar 2013	1.530	Mar 2014	-		1.530	Continuing	Continuing	58.993
DT&E/OT&E for F-15C/D	PO	Various:Various,	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	5.300
		Subtotal	0.000	0.958		0.703		1.530		0.000		1.530			64.293

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207161F: *Tactical AIM Missiles*	PROJECT 674132: *AIM-9 Product Improvement*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	Not specified.:,	-	0.000		0.000		0.000		-		0.000	0.000	0.000	7.549
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	7.549

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	7.885		8.234		15.460		0.000		15.460			391.550

Remarks

Funding in FY11 and out is for the Block II program only. The AIM-9X Block I program costs for FY11 and prior are $233.583M. The AIM-9X Block II program costs for FY11 and prior are $41,057M.

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		**DATE:** April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207161F: *Tactical AIM Missiles*	**PROJECT** 674132: *AIM-9 Product Improvement*

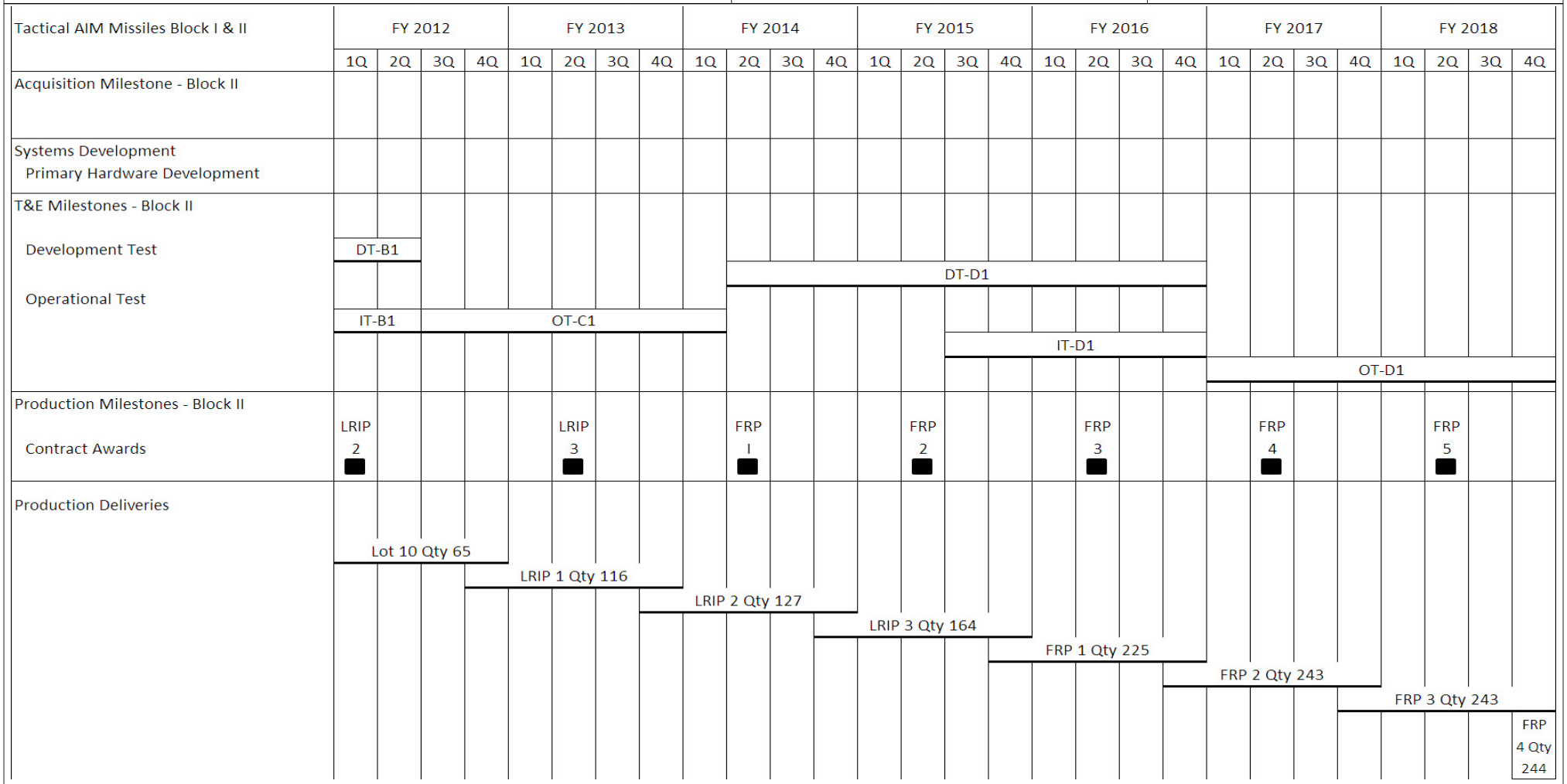


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207161F: *Tactical AIM Missiles*	**PROJECT** 674132: *AIM-9 Product Improvement*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
T&E Milestones: Block II Development Test: v9.3 Development Test (DT-B1)	1	2012	2	2012
T&E Milestones: Block II Development Test: v9.3 Integrated Development/Operational Test (IT-B1)	1	2012	2	2012
T&E Milestones: Block II Development Test: v9.3 Operational Test (OT-C1)	3	2012	1	2014
T&E Milestones: Block II Development Test: v9.4 Development Test (DT-D1)	2	2014	4	2016
T&E Milestones: Block II Development Test: v9.4 Integrated Development/Operational Test (IT-D1)	3	2015	4	2016
T&E Milestones: Block II Development Test v9.4 Operational Test (OT-D1)	1	2017	4	2018
Production: Block II Contract Award: Low Rate Initial Production Lot 12 / LRIP 2	1	2012	1	2012
Production: Block II Contract Award: Low Rate Initial Production Lot 13 / LRIP 3	2	2013	2	2013
Production: Block II Contract Award: Full Rate Production (FRP 1)	2	2014	2	2014
Production: Block II Contract Award: Full Rate Production (FRP 2)	2	2015	2	2015
Production: Block II Contract Award: Full Rate Production (FRP 3)	2	2016	2	2016
Production: Full Rate Production Deliveries Lot 10	1	2012	4	2012
Production: Deliveries: Low Rate Initial Production Lot 11 / LRIP 1	4	2012	4	2014
Production: Deliveries: Low Rate Initial Production Lot 12 / LRIP 2	4	2013	4	2014
Production: Deliveries: Low Rate Initial Production Lot 13 / LRIP 3	4	2014	4	2015
Production: Deliveries: Full Rate Production Lot 14 / FRP 1	4	2015	4	2016
Production: Deliveries: Full Rate Production Lot 15 / FRP 2	4	2016	4	2017
Production: Deliveries: Full Rate Production Lot 16 / FRP 3	4	2017	4	2017
Production: Deliveries: Full Rate Production Lot 17 / FRP 3	4	2018	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207163F: *Advanced Medium Range Air-to-Air Missile (AMRAAM)*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	75.282	87.041	84.172	-	84.172	83.222	42.469	35.305	35.940	Continuing	Continuing
673777: *AMRAAM*	-	75.282	87.041	84.172	-	84.172	83.222	42.469	35.305	35.940	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		
MDAP/MAIS Code(s): 185												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

The Cost to Complete and Total Cost for MDAP projects in this program element are documented in the R3. The Cost to Complete and Total Cost on the R2 are entered as "Continuing" and not reflective of the total cost for MDAP projects since the R2 does not account for prior years funding.

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, and having advanced Electronic Attack (EA) capabilities. The development program also enables AMRAAM to be compatible with advanced fighters, enhances AMRAAM capability and operational flexibility against current and projected threats, incorporates high payoff technology development, performs risk reduction activities and investigates new variants and/or alternate missions which may use AMRAAM attributes. The latest AMRAAM variant, the AIM-120D, delivers improved performance via Global Positioning System (GPS) aided navigation, a two-way datalink capability for enhanced aircrew survivability and improved network compatibility, and incorporates new guidance software which improves kinematic performance and weapon effectiveness. The AIM-120D Operational Test Readiness Review was successfully completed in May 2012 and the program is in dedicated Operational Testing (OT). The aircraft integration program maintains compatibility/performance of the missile with changes occurring on the F/A-18E/F, F-15C/D/E, F-16, F-22A, and F-18 C/D platforms. To keep the existing inventory as effective as possible, the Air Force and Navy also develop, test, and field improvements that are implemented via software upgrades reprogrammed into fielded AMRAAMs (AIM-120As, Bs, and Cs), and/or hardware upgrades inserted into production units. AMRAAM is a joint Air Force/Navy, Acquisition Category IC (ACAT IC) program with Air Force as lead service.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207163F: *Advanced Medium Range Air-to-Air Missile (AMRAAM)*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	77.830	87.041	88.849	-	88.849
Current President's Budget	75.282	87.041	84.172	-	84.172
Total Adjustments	-2.548	0.000	-4.677	-	-4.677
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	-0.225	0.000			
• SBIR/STTR Transfer	-2.323	0.000			
• Other Adjustments	0.000	0.000	-4.677	-	-4.677

Change Summary Explanation

FY 2014 (-$4.677) funding rephased

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: System Improvement Program (SIP)/Software Upgrade Program (SWUP)/Electronic Protection Improvement Program (EPIP)	36.894	46.409	48.629

Description: Provide software upgrades/system improvements/electronic protection improvements (SWUP/SIP/EPIP)

FY 2012 Accomplishments:

1. AIM-120C SWUP: Brought the set of performance candidates to a Preliminary Design Review (PDR) level of maturity. Candidates provided improvements to C-7 tactical software and simulation model upgrades to enhance the fidelity of missile performance predictions.
2. EPIP: Completed development captive flight testing and Formal Qualification Testing (FQT) for all AIM-120C configurations. Released software for the live fire integrated test program (combined Developmental/Operational Test -DT/OT). Conducted PDR and began the implementation effort to address advanced threats in AIM-120C-7 missiles. In addition, started upgrades to China Lake Hardware-in-the-Loop (HWIL) and contractor facility to support the EPIP program.
3. AIM-120D SIP: Continued candidate evaluation and preliminary design activities, including lab and captive flight tests, which provided data necessary to evaluate performance and feasibility of potential upgrades. Completed resolution of AIM-120D issues identified during DT and delivered AIM-120D software to OT. Awarded a contract to implement the SIP 1 increment, conducted PDR, and continued progressing towards Critical Design Review (CDR). Continued study of efficient/effective integration of other system improvements, parts obsolescence issues, and cost reduction initiatives to keep pace with evolving threats.

FY 2013 Plans:

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207163F: *Advanced Medium Range Air-to-Air Missile (AMRAAM)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
1. AIM-120C SWUP: Effort includes maturing new target models and simulation candidates. Effort will also include potential software candidate studies. Candidates will provide improvements to C-7 tactical software and simulation model upgrades to enhance the fidelity of missile performance predictions. 2. EPIP Basic and Advanced: Completes the EPIP Basic integrated live fire test program for all AIM-120C configurations and releases software for dedicated operational testing. Continues implementation effort to address advanced threats in AIM-120C-7 missiles, begins DT for the EPIP Advanced program and conducts CDR for EPIP Advanced software Tape 1. Initiates development efforts for EPIP Advanced software Tape 2, and continues China Lake HWIL upgrades in support of AIM-120C-7 and D software development efforts. 3. AIM-120D SIP: Continues candidate evaluation/selection and preliminary design activities, collects and assesses lab and/or captive flight tests data to evaluate performance and feasibility of potential upgrades. Continues implementation for SIP 1 improvements, conducts SIP 1 CDR, and delivers SIP 1 to OT. Awards SIP 2 contract to mature EPIP algorithms to PDR level for integration on AIM-120D. Planned tasks also include captive flight test missions, completion of SIP 1 CDR and continued study of efficient/effective integration of other system improvements, parts obsolescence issues, and cost reduction initiatives to keep pace with evolving threats. ***FY 2014 Plans:*** 1. AIM-120C SWUP: Continues vulnerability analyses of new target models that AMRAAM (AIM-120Cs and D missiles) will engage. Studies software candidates to provide improvements to C-7 tactical software and upgrades simulation model upgrades to enhance the fidelity of missile performance predictions. 2. EPIP: Continues EPIP Advanced software development of Tapes 1 and 2 as well as simulation improvements to address advanced threats. Completes software development captive flight testing and Formal Qualification Testing (FQT) for Tape 1. Releases software for the live fire integrated test program. Conducts CDR for the EPIP Advanced software Tape 2. Continues China Lake HWIL upgrades in support of AIM-120D software development efforts. 3. AIM-120D SIP: Continues candidate evaluation/selection, and design activities, including lab and/or captive flight tests to provide data necessary to evaluate performance and feasibility of potential upgrades. Completes SIP 1 OT Readiness Review (OTRR) and delivers software to OT. Continues SIP 2 development phase. Planned tasks include captive flight test missions, completion of SIP 1 FCA and SIP 2 PDR, and continued study of efficient/effective integration of other system improvement, parts obsolescence issues, and cost reduction initiatives to keep pace with evolving threats.			
Title: Test and Evaluation ***Description:*** Continue test and evaluation; Provides support to DT/OT. ***FY 2012 Accomplishments:*** Started dedicated AIM-120D OT. Accomplished OT Readiness Review (OTRR), certified the missile ready for dedicated OT, and started dedicated OT captive carry and free flight on F/A-18E/F and F-15C/D. Continued infrastructure investments to support	18.863	17.537	8.266

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207163F: *Advanced Medium Range Air-to-Air Missile (AMRAAM)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
AIM-120D OT, SIP, SWUP and EPIP activities. Began EPIP Basic live fire flight test program. This consists of integrated DT/OT captive missions, pre-flight missions, and missile launches. ***FY 2013 Plans:*** Continues AIM-120D dedicated OT, to include captive carry and free flight. Completes EPIP Basic integrated DT/OT flight test program, consisting of both captive missions and missile launches. Begins EPIP Basic dedicated OT. This will consist of live fire launches and multiple captive missions. Begins EPIP Advanced DT. ***FY 2014 Plans:*** Completes AIM-120D dedicated OT, to include captive carry and free flight. Fields AIM-120D on F/A-18 E/F and F-15 C/D. Begins integrated (DT/OT) live fire testing with EPIP Advanced software Tape 1. Begins developmental captive flight test missions associated with EPIP Tape 2.			
Title: Aircraft Integration ***Description:*** Aircraft Integration - Integrate AIM-120D on multiple aircraft platforms. ***FY 2012 Accomplishments:*** Aircraft Integration - Continued integration and testing of AIM-120D on multiple threshold aircraft platforms. ***FY 2013 Plans:*** Aircraft Integration - Continues integration and testing of AIM-120D on multiple threshold aircraft platforms. ***FY 2014 Plans:*** Aircraft Integration - Continues integration and testing of AIM-120D on multiple threshold aircraft platforms.	17.882	21.590	25.758
Title: PMA ***Description:*** PMA support continues for our Technical and Acquisition Management Support (TAMS) 4 contract. Additionally funds supplies required to support normal program office functions and the travel required for mission accomplishment. ***FY 2012 Accomplishments:*** PMA support continued for our Technical and Acquisition Management Support (TAMS) 4 contract. Additionally funded supplies required to support normal program office functions and the travel required for mission accomplishment. ***FY 2013 Plans:*** PMA support continues for our Technical and Acquisition Management Support (TAMS) 4 contract. Additionally funds supplies required to support normal program office functions and the travel required for mission accomplishment. ***FY 2014 Plans:***	1.643	1.505	1.519

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207163F: *Advanced Medium Range Air-to-Air Missile (AMRAAM)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
PMA support continues for our Technical and Acquisition Management Support (TAMS) 4 contract. Additionally funds supplies required to support normal program office functions and the travel required for mission accomplishment.			
Accomplishments/Planned Programs Subtotals	75.282	87.041	84.172

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• MPAF: BA02: PE 0207163F: *AMRAAM Missile Procurement*	202.176	229.637	340.015		340.015	355.021	373.810	373.772	380.500	2,431.222	12,402.053
• MPAF, BA02: PE 0207163F: *AMRAAM Replen Spares*	0.804	0.805	0.809		0.809	0.808	0.823	0.838	0.853	5.450	0.000
• MPAF: BA04: PE 0207163F: *AMRAAM Initial Spares*	0.082	0.082	0.084		0.084	0.085	0.087	0.089	0.091	0.581	75.681
• MPAF: BA01: PE 0207163F: *MPAF, Modifications*	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	16.704

Remarks

E. Acquisition Strategy

The AIM-120D program entered dedicated Operational Testing (OT) in June 2012. This OT phase will continue into early FY14, with initial fielding by the Air Force and Navy projected in FY14. Post-OT missile improvements are underway as part of the AIM-120D upgrade program. The System Improvement Program, Increment 1 (SIP-1) has begun and is expected to field in late FY14. Additional SIP increments are in the planning phase and will further improve the AIM-120D to meet emerging warfighter requirements.

The Electronic Protection Improvement Program (EPIP) is also underway, with the initial capabilities currently in flight testing. EPIP Basic capabilities will field in FY14. The EPIP effort will keep AIM-120C missiles capable against the growing electronic attack threat environment. Additional capabilities (EPIP Advanced) are in the detail design stage with initial fielding projected for FY15.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207163F: *Advanced Medium Range Air-to-Air Missile (AMRAAM)*	PROJECT 673777: *AMRAAM*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Upgrade Program (SWUP)/System Improvement Program (SIP)/Electronic Protection (EP)	SS/CPFF	Raytheon:Tucson, AZ	-	37.797	Jan 2012	49.378	Mar 2013	50.437	Jan 2014	-		50.437	Continuing	Continuing	TBD
Aircraft Integration	MIPR	Wright-Patterson AFB:Dayton, OH	-	17.882	Mar 2012	23.528	Mar 2013	25.758	Jan 2014	-		25.758	Continuing	Continuing	TBD
		Subtotal	0.000	55.679		72.906		76.195		0.000		76.195			

Remarks

Cost Plus Fixed Fee (CPFF) software development design implementation contracts include incentive events which must be achieved in order to earn full fixed fee amount.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint System Program Office (JSPO) Operations	Various	Eglin AFB:Ft Walton Beach, FL	-	1.643	Jan 2012	1.505	Jan 2013	1.519	Jan 2014	-		1.519	Continuing	Continuing	TBD
		Subtotal	0.000	1.643		1.505		1.519		0.000		1.519			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Test	WR	Various:Various,	-	17.960	Jan 2012	12.630	Jan 2013	6.458	Jan 2014	-		6.458	Continuing	Continuing	TBD
		Subtotal	0.000	17.960		12.630		6.458		0.000		6.458			

Remarks

Various = T&E activities take place at numerous locations across the US. Too many activities and locations to list.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207163F: *Advanced Medium Range Air-to-Air Missile (AMRAAM)*	PROJECT 673777: *AMRAAM*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	75.282		87.041		84.172		0.000		84.172			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207163F: *Advanced Medium Range Air-to-Air Missile (AMRAAM)*	PROJECT 673777: *AMRAAM*

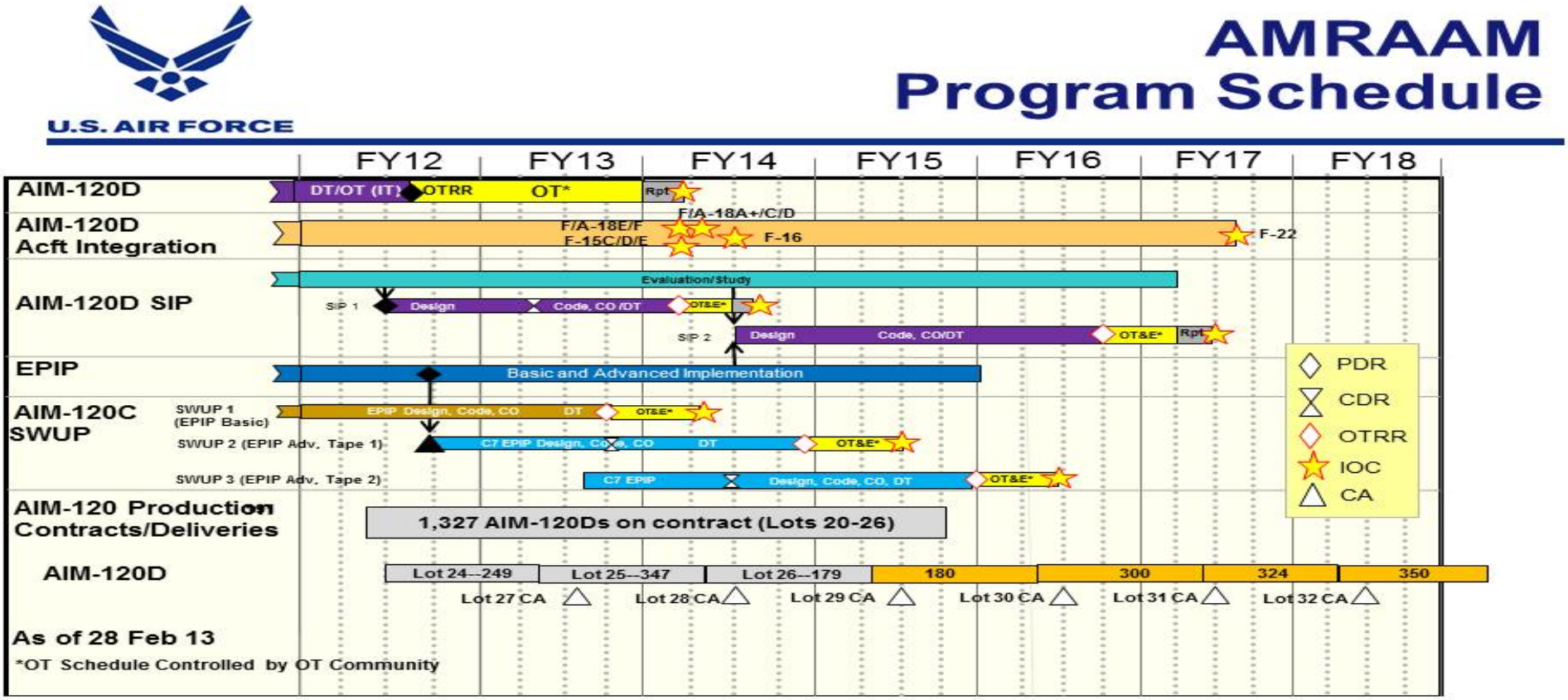


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207163F: *Advanced Medium Range Air-to-Air Missile (AMRAAM)*	**PROJECT** 673777: *AMRAAM*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
AIM-120D SIP 1 PDR	3	2012	3	2012
AIM-120D OT	3	2012	1	2014
AIM-120C SWUP (EPIP Adv Tape 1) contract award	4	2012	4	2012
Lot 27 (FY13) contract award	3	2013	3	2013
AIM-120C SWUP (EPIP Adv Tape 1) CDR	4	2013	4	2013
AIM-120C SWUP (EPIP Basic) OT	4	2013	2	2014
AIM-120D SIP 1 OT	1	2014	3	2014
AIM-120D IOC	1	2014	1	2014
AIM-120D SIP 1 IOC	3	2014	3	2014
AIM-120C SWUP (EPIP Adv Tape 2) CDR	3	2014	3	2014

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force												DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207170F: *Joint Helmet Mounted Cueing System (JHMCS)*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	1.394	1.472	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	2.866
675226: *Joint Helmet Mounted Cueing System*	-	1.394	1.472	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	2.866
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

The Joint Helmet Mounted Cueing System (JHMCS) is transitioning to Warner Robins AFB for sustainment. FY12 and FY13 funding allows for completion of sustainment transition, residual tasks, and any unplanned activities.

A. Mission Description and Budget Item Justification

The Joint Helmet Mounted Cueing System (JHMCS) 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 System (HOBS) weapons such as the AIM-9X.

JHMCS is a Post Milestone C, Acquisition Category III (ACAT-III) joint AF/Navy program with the AF as the lead service. Program is in Full Rate Production (FRP). Continuing activities include deficiency resolution; improvements to tooling and test equipment; Electronic Unit (EU) obsolescence/Diminishing Manufacturing Sources (DMS) redesign; a systems engineering approach for implementing alternate displays; improvements to integrate Night Vision Cueing & Display (NVCD); software updates; platform integration; improvements to Reliability and Maintainability (R&M); system upgrade studies and analysis; other obsolescence upgrades; improved magnetic mapping processes to reduce maintenance manhours/life cycle costs; and efforts to support the transition to depot activation.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207170F: *Joint Helmet Mounted Cueing System (JHMCS)*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	1.436	1.472	0.000	-	0.000
Current President's Budget	1.394	1.472	0.000	-	0.000
Total Adjustments	-0.042	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.042	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

Change Summary Explanation

No significant changes

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Product Development	1.000	1.206	0.000
Description: Continue Pre-Planned Product Improvement (P3I) efforts, software updates, Follow-On Test and Evaluation (FOT&E), and program management/support. ***FY 2012 Accomplishments:*** Accomplished deficiency resolution, reliability improvements, P3I activities, obsolescence upgrades, analysis/studies, some deficiency reporting, alternate displays implementation, and software updates. Accomplished testing and integration of the Night Vision Cueing and Display (NVCD) system into JHMCS. Provided mission support and program management to execute studies, P3I, software development efforts and accomplishment of residual tasks prior to the sustainment phase. ***FY 2013 Plans:*** Complete deficiency resolution, reliability improvements, P3I activities, obsolescence upgrades, analysis/studies, some deficiency reporting, alternate displays implementation, and software updates. Complete testing and integration of the NVCD system into JHMCS. Provide mission support and program management to execute unplanned activities and accomplishment of residual tasks prior to the sustainment phase.			
Title: Management Services	0.394	0.266	0.000
Description: Program Management Support, Travel, and Test & Evaluation			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207170F: *Joint Helmet Mounted Cueing System (JHMCS)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Accomplished Program Management Support, Travel, and Testing activities. ***FY 2013 Plans:*** Continuation of listed activities.			
Accomplishments/Planned Programs Subtotals	1.394	1.472	0.000

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. Acquisition Strategy

JHMCS is an ACAT III joint USAF/USN program with AF as lead service. The development contract was Cost Plus Award Fee (CPAF) through Boeing - St. Louis for development/integration on the F-15 and F/A-18 aircraft. All other aircraft integration will be handled by the respective platform prime contractors.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207170F: *Joint Helmet Mounted Cueing System (JHMCS)*	PROJECT 675226: *Joint Helmet Mounted Cueing System*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Continue deficiency resolution, R&M improvements, P3I activities, obsolescence upgrades, analysis/ studies, alternate displays implementation, various T&E activities,and software updates. Co...	SS/ Various	Various:Various,	-	1.000	Dec 2012	1.206	Dec 2013	0.000		-		0.000	0.000	2.206	TBD
		Subtotal	0.000	1.000		1.206		0.000		0.000		0.000	0.000	2.206	

Remarks

SBIR, withholds, SAF/AQ revisions

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JHMCS Tower Testing	MIPR	Naval Aircraft Warfare Center:Patuxent River, MD	-	0.130		0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.130		0.000		0.000		0.000		0.000			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207170F: *Joint Helmet Mounted Cueing System (JHMCS)*	PROJECT 675226: *Joint Helmet Mounted Cueing System*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management and Administration	Various	Various:Various,	-	0.264	Dec 2012	0.266	Dec 2013	0.000		-		0.000	0.000	0.530	TBD
		Subtotal	0.000	0.264		0.266		0.000		0.000		0.000	0.000	0.530	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	1.394		1.472		0.000		0.000		0.000			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207170F: *Joint Helmet Mounted Cueing System (JHMCS)*	PROJECT 675226: *Joint Helmet Mounted Cueing System*

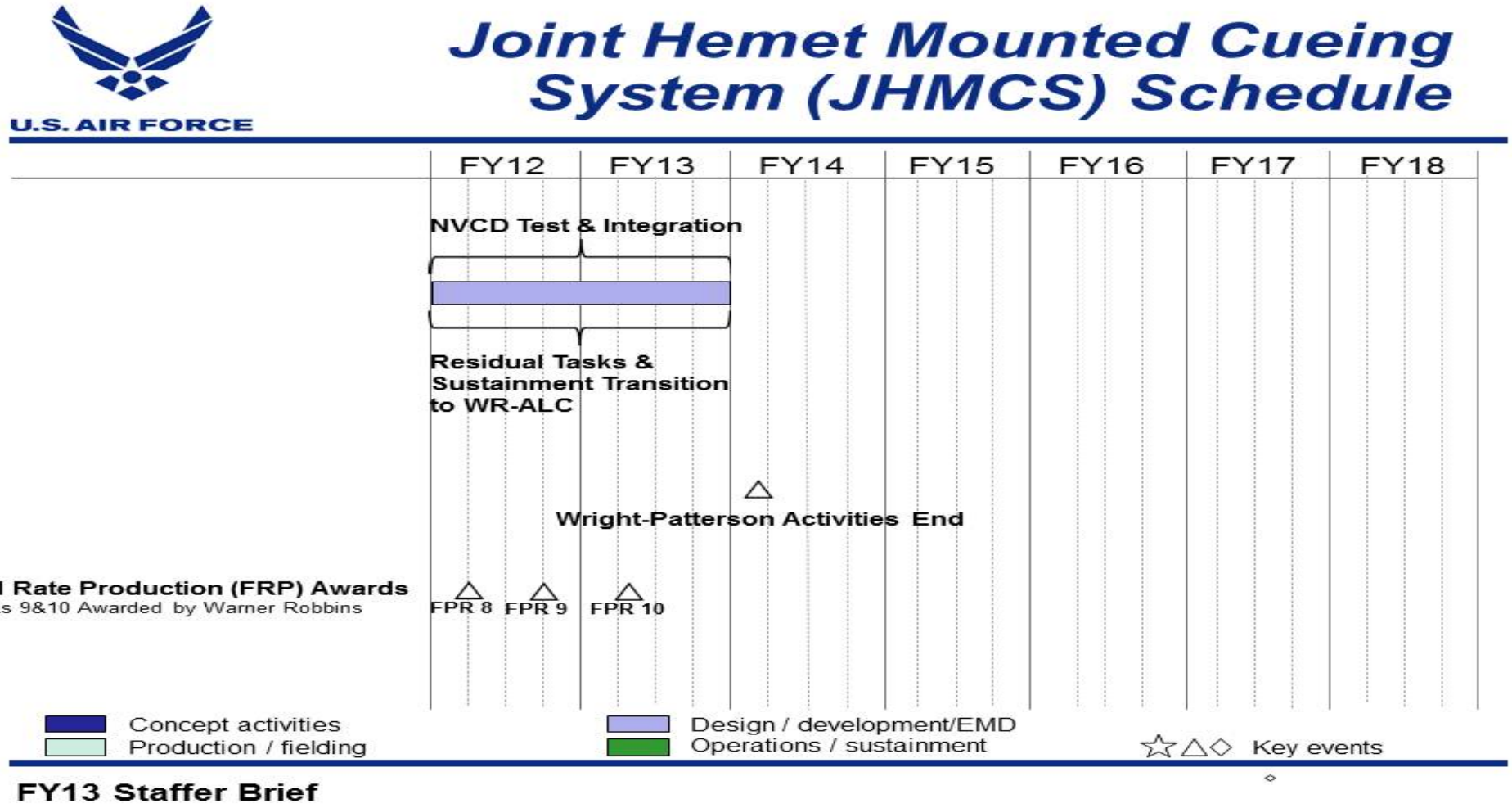


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207170F: *Joint Helmet Mounted Cueing System (JHMCS)*	**PROJECT** 675226: *Joint Helmet Mounted Cueing System*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Residual Tasks and Sustainment Transition	1	2012	4	2013
Pre-planned Product Improvement	1	2014	4	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207224F: *Combat Rescue and Recovery*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	2.292	2.095	2.582	-	2.582	5.159	0.420	0.000	0.000	Continuing	Continuing
676016: *Avionics Development and Integration*	-	2.292	2.095	2.582	-	2.582	5.159	0.420	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

A. Mission Description and Budget Item Justification

The Air Force Rotary Wing Avionics Development and Integration effort is a program to develop a fully integrated avionics upgrade that includes predictive terrain awareness. This program focuses on developing and integrating technologies that will increase the situational awareness of helicopter crews in a degraded visibility environment. This effort was initiated by the Defense Safety Oversight Council.

In FY12, Project Number 657001, Avionics Development and Integration, efforts were transferred from PE 0605229F, CSAR HH-60 Recapitalization, Project Number 657001, Avionics Development and Integration, in order to effectively execute this effort for currently fielded HH-60G helicopters.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	2.292	2.095	3.633	-	3.633
Current President's Budget	2.292	2.095	2.582	-	2.582
Total Adjustments	0.000	0.000	-1.051	-	-1.051
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	-1.051	-	-1.051

Change Summary Explanation

FY14: Reduction due to higher Air Force priorities

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207224F: *Combat Rescue and Recovery*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Avionics Development and Integration	2.292	2.095	2.582
Description: This program focuses on developing and integrating technologies that will increase the situational awareness of helicopter crews in a degraded visibility environment. ***FY 2012 Accomplishments:*** Provided hot bench testing for intitial integration efforts, engineering support, and program management. ***FY 2013 Plans:*** Provided integration contracting support, program management, engineering, simulation, software support, and initial flight test. ***FY 2014 Plans:*** Provides integration contracting support, program management, engineering, simulation, software support, and second flight test.			
Accomplishments/Planned Programs Subtotals	2.292	2.095	2.582

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. Acquisition Strategy

The Air Force is in the process of integrating the Three Dimensional Landing Zone (3D-LZ) technology into an air worthy payload. This payload will be integrated with existing forward looking infrared turrets to minimize additional equipment and weight on the aircraft. Once the payload is tested, the Air Force will finalize its strategy for fleet implementation.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207224F: *Combat Rescue and Recovery*	PROJECT 676016: *Avionics Development and Integration*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering	C/CPFF	Raytheon Space and Airborne Systems:El Segundo, CA	-	1.256	Mar 2012	0.000		1.018	Mar 2013	-		1.018	Continuing	Continuing	
		Subtotal	0.000	1.256		0.000		1.018		0.000		1.018			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Flight Test	MIPR	Aero Flight Dynamics Directorate:Moffett Field, CA	-	0.698		1.320		1.118		-		1.118	Continuing	Continuing	
		Subtotal	0.000	0.698		1.320		1.118		0.000		1.118			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	MIPR	AFRL:Eglin AFB, FL	-	0.338		0.775		0.446		-		0.446	Continuing	Continuing	
		Subtotal	0.000	0.338		0.775		0.446		0.000		0.446			

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	2.292		2.095		2.582		0.000		2.582			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207224F: *Combat Rescue and Recovery*	PROJECT 676016: *Avionics Development and Integration*	

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207224F: *Combat Rescue and Recovery*	**PROJECT** 676016: *Avionics Development and Integration*

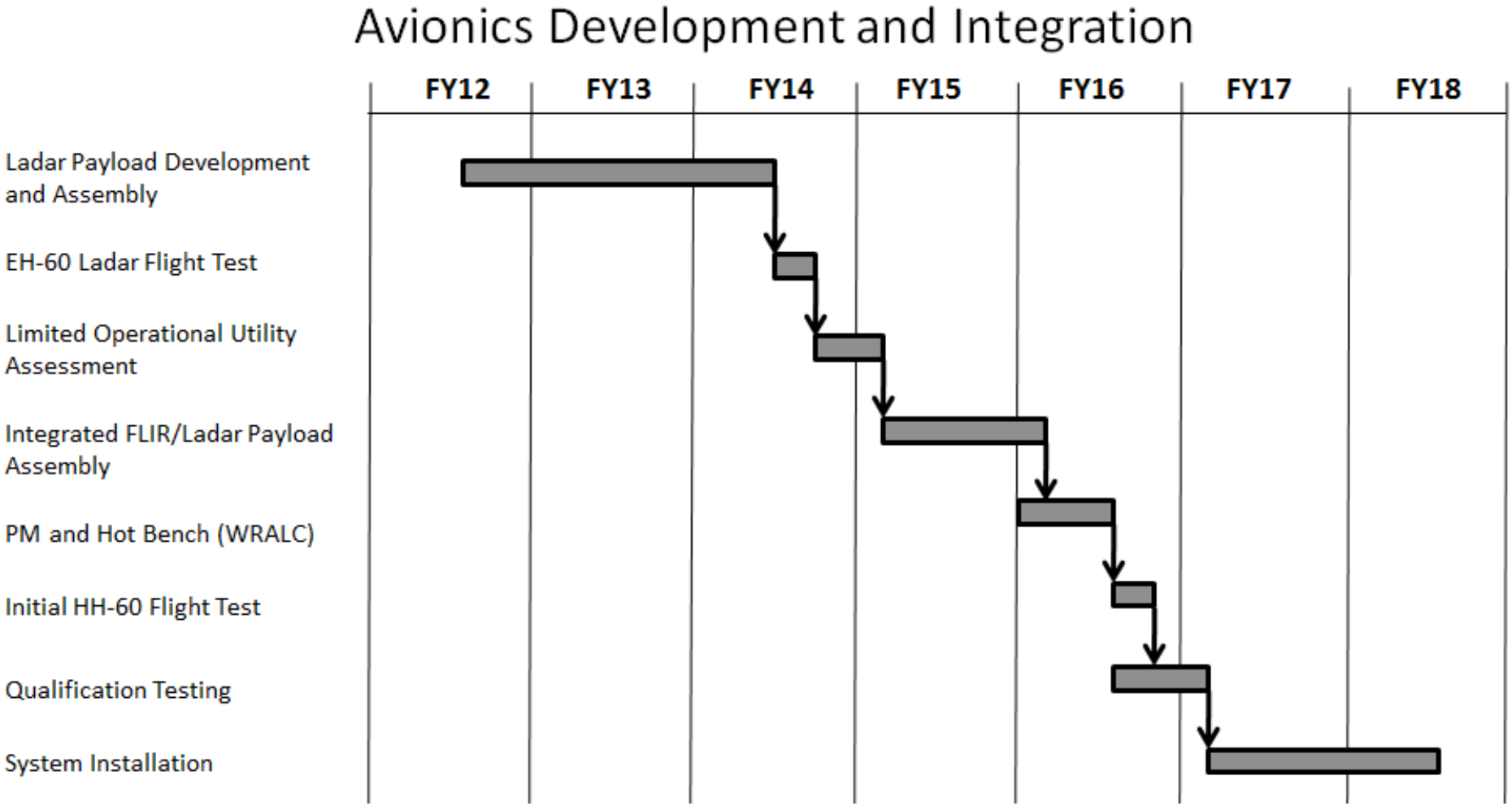


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207224F: *Combat Rescue and Recovery*	**PROJECT** 676016: *Avionics Development and Integration*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Ladar Payload Development and Assembly	2	2012	2	2014
EH-60 Ladar Flight Test	2	2014	3	2014
Limited Operational Utility Assessment	3	2014	1	2015
Integrated FIIR/Ladar Payload Assembly	1	2015	1	2016
PM and Hot Bench (WRALC)	3	2015	3	2016
Inital HH-60 Flight Test	2	2016	4	2016
Qualification Testing	2	2016	4	2016
System Installation	1	2017	2	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207227F: *Combat Rescue - Pararescue*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.914	1.119	0.542	-	0.542	0.894	0.800	0.643	0.655	Continuing	Continuing
675352: *Guardian Angel RDT&E*	-	0.914	1.119	0.542	-	0.542	0.894	0.800	0.643	0.655	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Guardian Angel (GA) is an Air Force non-aircraft weapon system within the overarching Battlefield Airmen Modernization program. GA is a Family of Systems (FoS) based in both human and equipment capabilities formulated to execute Air Force Personnel Recovery (PR) across the full spectrum of military operations. Established by the Air Force Chief of Staff in 2003 and officially captured in AFPD 10-9, the GA FoS is employed by three distinct Air Force specialties: Pararescuemen (PJ), Combat Rescue Officer (CRO), and Survival, Evasion, Resistance, Escape (SERE). The GA FoS is comprised of nine critical mission areas: Precision Aerial Insertion, Information Management, Force Application, Visual Augmentation, Maritime Recovery, Ground Mobility, Technical Rescue, Medical, and SERE. GA focus is on maintaining legacy weapon system capability while modernizing/improving subsystems for better mission effectiveness.

Funds will be used to obtain significant improvements in operational capability and develop items within the GA FoS to include but not limited to: SONAR, Maritime Recovery, Technical Recovery, Integrated Oxygen System, Medical Monitoring, and the Guardian Angel Air Operations Kit. The Guardian Angel weapon system development activities also include studies, analysis, and developmental testing to support both current and future program planning and execution. Funding will deliver enhanced capability for the dismounted Guardian Angel soldier in terms of dramatic weight reduction and increased mission effectiveness across the conflict spectrum.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*			R-1 ITEM NOMENCLATURE PE 0207227F: *Combat Rescue - Pararescue*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	0.927	1.119	0.542	-	0.542
Current President's Budget	0.914	1.119	0.542	-	0.542
Total Adjustments	-0.013	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.013	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: GA FoS	0.914	1.119	0.542

Description: Standardize, modernize and develop additional capability for the Guardian Angel weapon system used by Combat Rescue Officers and Pararescuemen. Development efforts provide enhanced and improved capabilities for execution of Air Force combat search and rescue and personnel recovery. This weapon system is utilized across the full spectrum of PR military operations to include patient treatment, extrication, surface/underwater search and recovery, airborne infill/exfill, and ground recovery operations.

FY 2012 Accomplishments:
Continued exploration and development efforts with NAVSEA on a multi-fuel submersible motor for Maritime Recovery. Delivered motor development assets to government testing. Transitioned Tech Recovery self contained breathing apparatus from combined PATRIOT/ELABS system to a single Self Contained Hybrid Emergency Life Support Device (SHIELD) system reducing operator weight by more than 13 lbs and adding increased oxygen capability and duration. Continued development and government testing activities for the GA Integrated Oxygen System (GAIOS); two of the three systems officially entered government Developmental Testing and will move to Operational Testing in FY13. Completed development of software plug-ins, software updates, and integration for inclusion of Medical 9 Line and CSAR 15 line form templates in GAO Kit software for greater battlefield situational awareness and patient care. In addition, additional training was required to be developed and conducted to support government testing events for the GAO Kit software and equipment. Continued development efforts and studies for Remote Patient Monitoring and Digital Enhanced Vision Devices as tools for use within the GAO Kit.

FY 2013 Plans:

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207227F: *Combat Rescue - Pararescue*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continue execution and development of previous year's acquisition activities. Complete test, study, strategic planning, and development activities for increased capability and address Engineering Change Proposals as needed. Conduct development and system enhancements on existing and future systems through incorporating test feedback and user inputs into subsequent iterations for better capability and mission success. ***FY 2014 Plans:*** Continue execution and development of previous year's acquisition activities. Complete test, study, strategic planning, and development activities for increased capability and address Engineering Change Proposals as needed. Conduct development and system enhancements on existing and future systems through incorporating test feedback and user inputs into subsequent iterations for better capability and mission success.			
Accomplishments/Planned Programs Subtotals	0.914	1.119	0.542

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA04: Line Item # 842990: *Items Less than $5 (Safety)*	12.598	23.435	22.854		22.854	24.389	23.690	21.556	0.000	Continuing	Continuing
• OPAF: BA02: Line Item# 823230: *Security and Tactical Vehicles*	0.000	4.101	3.800		3.800	3.752	3.933	4.004	4.076	Continuing	Continuing

Remarks

E. Acquisition Strategy

The GA program will address the warfighter immediate needs to standardize, modernize, and develop additional capability for the weapon system used by Combat Rescue Officers and Pararescuemen (Phase one). Until this point, GA has not had a formal acquisition process for the weapon system. The program will also address future requirements for the weapon system that will encompass the needs of all three GA career fields (Phase two).

Phase two of the GA program is an incremental evolutionary acquisition effort in which requirements are fullfilled through further sub-system development and integration. These requirements are being identified in an ongoing F-study conducted by HQ ACC. The program has been divided into two phases to more rapidly meet the users immediate need to standardize and modernize the weapon system. All work prior to FY10 was accomplished using 3400 dollars and NGREA 350 funds. NGREA funding is not shown here.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207227F: *Combat Rescue - Pararescue*

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207227F: *Combat Rescue - Pararescue*	PROJECT 675352: *Guardian Angel RDT&E*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
GA Family Of Systems	Various	Various:Various,	-	0.514	Aug 2012	0.561	Mar 2013	0.102	Dec 2013	-		0.102	Continuing	Continuing	TBD
		Subtotal	0.000	0.514		0.561		0.102		0.000		0.102			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Accreditation and Certification	C/Various	413 TS:Nellis AFB, NV	-	0.200	Sep 2012	0.279	Jan 2013	0.115	Dec 2013	-		0.115	Continuing	Continuing	TBD
Test Agency Support	RO	46TS:Eglin AFB, FL	-	0.200	Aug 2012	0.279	Jan 2013	0.325	Mar 2014	-		0.325	Continuing	Continuing	TBD
		Subtotal	0.000	0.400		0.558		0.440		0.000		0.440			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

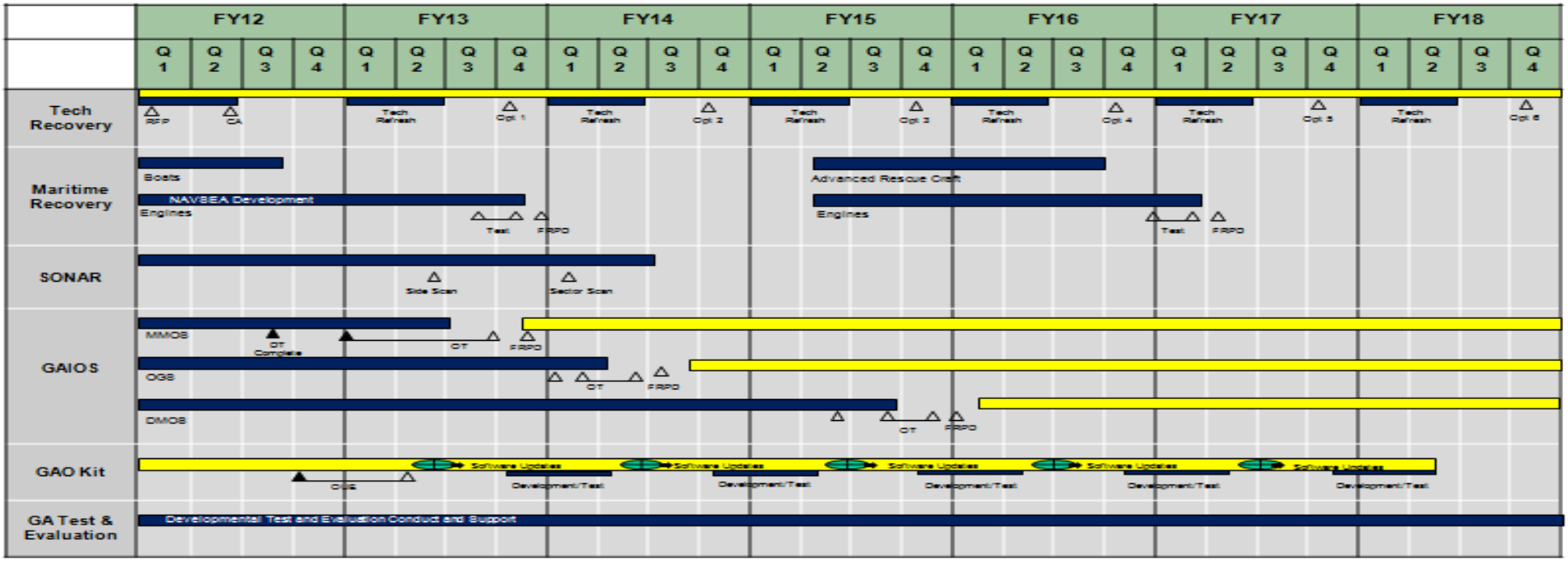
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.914		1.119		0.542		0.000		0.542			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207227F: *Combat Rescue - Pararescue*	PROJECT 675352: *Guardian Angel RDT&E*

U.S. AIR FORCE

GA RDT&E Schedule Profile



OUE: Operational Utility Evaluation
OGS: Oxygen Generation System
DMOS: Dismounted Medical Oxygen System
MMOS: Mounted Medical Oxygen System
OT: Operational Test
DT: Developmental Test
FRPD: Full Rate Production Decision

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207227F: *Combat Rescue - Pararescue*	PROJECT 675352: *Guardian Angel RDT&E*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Technical Recovery	1	2012	4	2018
Maritime Recovery	1	2012	1	2017
SONAR	1	2012	2	2014
GAIOS	1	2012	4	2015
GAO Kit	1	2012	2	2018
Test and Evaluation	1	2012	4	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207247F: *AF TENCAP*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	20.727	63.853	89.816	-	89.816	22.282	22.164	18.074	18.345	Continuing	Continuing
670001: *Air Force TENCAP*	-	20.727	63.853	89.816	-	89.816	22.282	22.164	18.074	18.345	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Air Force TENCAP is executed by the Space Innovation and Development Center (SIDC) 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, AF TENCAP increases warfighter awareness of Space and National capabilities, and promotes cross-domain integration of these systems into military and intelligence, surveillance and reconnaissance (ISR) operations through:
1) Exploiting existing Space, National and global ISR, and Non-Traditional ISR (NTISR) for operational and tactical applications by rapidly prototyping projects and demonstrating resulting capabilities (for example Battlefield Airborne Command Node (BACN) Intra-Flight Data Link System (IFDL) project). Capabilities will be transitioned to warfighters and/or National Intelligence Agencies for operational use, and/or appropriate acquisition organizations for further development.
2) Influencing the design and operation of future Space, National and global ISR, and NTISR systems for tactical users.
3) Providing education and training to warfighters and National Intelligence agencies.

The AF TENCAP Director administers and executes the AF TENCAP program. The Director coordinates and funds AF TENCAP efforts to provide robust capabilities that enhance support of Joint operations at the tactical level.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207247F: *AF TENCAP*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	20.727	63.853	60.995	-	60.995
Current President's Budget	20.727	63.853	89.816	-	89.816
Total Adjustments	0.000	0.000	28.821	-	28.821
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	28.821	-	28.821

Change Summary Explanation

FY14: +$28.821M increase for enhancement to USPACOM's Battlefield Airborne Command Node (BACN) Intra-Flight Subsystem - Multi-Domain Integration (BIS-MDI) efforts to provide increased lethality in a contested environment.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Exploitation Applications	11.077	11.177	11.292

Description: Exploiting existing Space, National, and Global ISR, and NTISR for tactical applications by rapidly prototyping projects and demonstrating resulting capabilities and influencing the design and operation of future Space, National and global ISR, and NTISR systems for tactical users.

FY 2012 Accomplishments:

Rapidly prototyped projects, demonstrated resulting capabilities and influenced the design and operation of future Space, National and global ISR, and NTISR systems; successfully transitioned 12 projects. Supported four Joint Urgent Operational Needs Statements (JUONS) as well as longer term needs across not only the Air Force, but also the joint community. Capitalized on emerging technologies to link multiple, disparate data sources, and produced tailored, mission-specific applications for data fusing analysis and visualization. Served as operational manager for two Joint Concept Technology Demonstrations (JCTDs).

FY 2013 Plans:

Rapidly prototyping projects, demonstrating resulting capabilities and influencing the design and operation of future Space, National and global ISR, and NTISR systems for tactical users.

FY 2014 Plans:

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207247F: *AF TENCAP*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Rapidly prototype projects, demonstrate resulting capabilities and influence the design and operation of future Space, National and global ISR, and NTISR systems for tactical users.			
Title: BACN/IFDL ***Description:*** Support USPACOM counter Digital Radio Frequency Memory (DRFM) tactics development efforts. ***FY 2012 Accomplishments:*** Provided resources to USPACOM counter DRFM tactics development efforts with one BACN Intra-Flight Data Link Subsystem (BIS) equipped aircraft using existing BACN equipment. Supported VALIANT SHIELD exercise to develop Tactics, Techniques and Procedures (TTPs). Successfully demonstrated passing critical Air Force Intelligence data to retarget Navy asset for more effective sortie. ***FY 2013 Plans:*** Provide resources to USPACOM counter DRFM tactics development efforts with one BACN-BIS equipped aircraft using existing BACN equipment ***FY 2014 Plans:*** N/A	9.000	9.000	0.000
Title: BIS-MDI ***Description:*** BACN Intra-Flight Data Link Subsystem-Multi-Domain Integration (BIS-MDI) is a USPACOM effort to provide a means to broadcast multi-source information in a Link 16 compatable format. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** Develop, procure, install, and integrate four BIS-MDI communication pods on F-15s in support of PACOM need. Cost of all ancillary equipment including antennas is included. ***FY 2014 Plans:*** Continue the development, procurement, installation, and integration of four BIS-MDI communication pods on F-15s in support of PACOM need.	0.000	42.000	47.960
Title: Increased Lethality in a Contested Environment ***Description:*** Funds procurement of four advanced sensors and necessary components for integration onto BIS-MDI communication pods on F-15s.	0.000	0.000	28.821

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207247F: *AF TENCAP*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: N/A ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** Develop, procure, install, and integrate four advanced sensor packages onto the BIS-MDI communication pods for the F-15. Explore tactical concepts of operation and inform service programs of record. Cost of all sensor and ancillary equipment in support of PACOM need.			
Title: Program Support ***Description:*** Provide contracted program support to the AFTENCAP program. ***FY 2012 Accomplishments:*** Advised and consulted on proper planning and programming essential to provide the necessary technical, management, and administrative expertise needed for developing projects. Delivered reliable, quantitative solutions that provided a defensible understanding of the costs to execute the mission and real-world insight into the risks associated with their approach. ***FY 2013 Plans:*** Provide contracted management services for the AFTENCAP program. ***FY 2014 Plans:*** Provide contractor program support to the AFTENCAP program.	0.650	0.676	0.703
Title: BIS-MDI Program Support ***Description:*** Provide contracted program support for BIS-MDI. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** Provide contracted management services specifically for the BIS-MDI effort. ***FY 2014 Plans:*** Provide contracted management services specifically for the BIS-MDI effort.	0.000	1.000	1.040
Accomplishments/Planned Programs Subtotals	20.727	63.853	89.816

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207247F: *AF TENCAP*

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• Not applicable: *N/A*	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

E. 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. AF TENCAP projects are approved by the AFTENCAP Director. 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 Agency Announcements. 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.

The Air Force is pursuing a spiral approach to the BIS-MDI segment to rapidly respond to a PACOM Joint Emerging Operational Need (JEON) capability requirements. Spiral Acquisition utilizes a disciplined systems engineering approach along with a build-test-build-test-deliver which focuses on mitigating cost and schedule risk through a lower risk incremental delivery of mature technologies.

Contracts funded in this program element will be awarded using competitive procedures to the maximum extent possible. Program consists of multiple small projects.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207247F: *AF TENCAP*	PROJECT 670001: *Air Force TENCAP*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Exploiting existing systems through rapid-prototyping projects; influencing future systems; educating and training	Various	Various:Various,	-	11.077	Dec 2011	11.177	Dec 2012	11.292	Dec 2013	-		11.292	Continuing	Continuing	TBD
BACN/IFDL	Various	Various:Various,	-	9.000	Jan 2012	9.000	Dec 2012	0.000		-		0.000	0.000	18.000	
BIS-MDI	Various	Various:Various,	-	0.000		42.000	Dec 2012	47.960	Dec 2013	-		47.960	Continuing	Continuing	
Increased Lethality in a Contested Environment	Various	Various:Various,	-	0.000		0.000		28.821	Dec 2013	-		28.821	Continuing	Continuing	
		Subtotal	0.000	20.077		62.177		88.073		0.000		88.073			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Oversight (PMA)	Various	Various:Various,	-	0.650	Dec 2011	0.676	Dec 2012	0.703	Dec 2013	-		0.703	Continuing	Continuing	
Program Support - BIS	Various	Various:Various,	-	0.000		1.000	Dec 2012	1.040	Dec 2013	-		1.040	Continuing	Continuing	TBD
		Subtotal	0.000	0.650		1.676		1.743		0.000		1.743			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207247F: *AF TENCAP*	PROJECT 670001: *Air Force TENCAP*	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	20.727		63.853		89.816		0.000		89.816			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207247F: *AF TENCAP*	PROJECT 670001: *Air Force TENCAP*

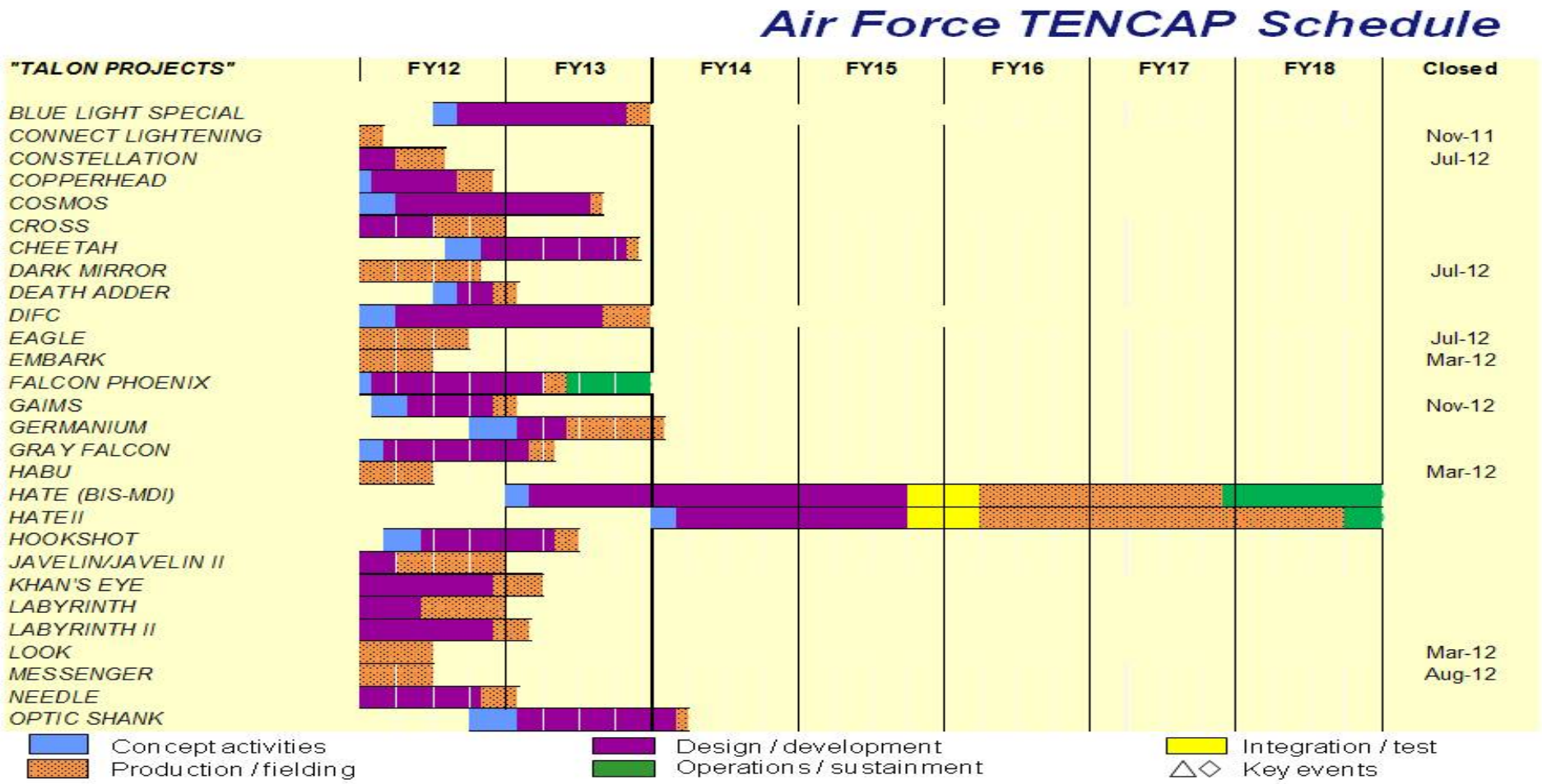


Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207247F: *AF TENCAP*	PROJECT 670001: *Air Force TENCAP*

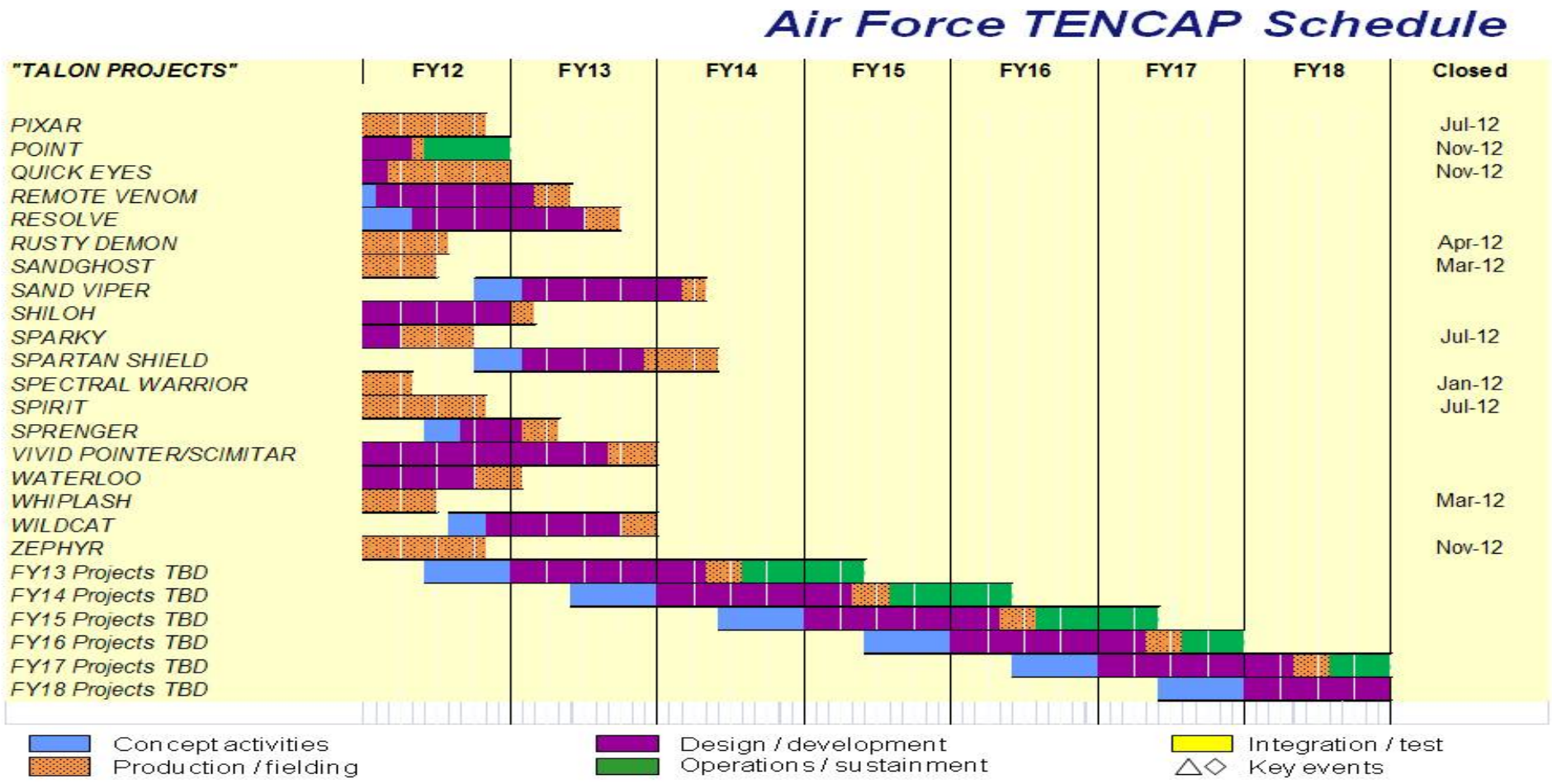


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207247F: *AF TENCAP*	PROJECT 670001: *Air Force TENCAP*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
FY 2012 projects approved for implementation	1	2012	1	2012
FY 2012 projects contracted	1	2012	3	2012
TALON HATE (BIS-MDI)	1	2013	4	2017
FY 2013 project concepts identified and approved	3	2012	4	2012
FY 2013 project contrator proposals requested/reviewed	3	2012	1	2013
FY 2013 projects approved for implementation	1	2013	1	2013
FY 2013 projects contracted	1	2013	3	2013
FY 2014 project concepts identified and approved	3	2013	4	2013
FY 2014 project contractor proposals requested/reviewed	3	2013	1	2014
FY 2014 projects approved for implementation	1	2014	1	2014
TALON HATE II (Increased Lethality in a Contested Environment)	1	2014	4	2018
FY 2014 projects contracted	1	2014	3	2014
FY2015 projects concepts identified and approved	3	2014	4	2014

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207249F: *Precision Attack Systems Procurement*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	3.034	1.063	1.075	-	1.075	1.094	1.125	1.134	1.155	Continuing	Continuing
675347: *Advanced Targeting Pod*	-	3.034	1.063	1.075	-	1.075	1.094	1.125	1.134	1.155	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Advanced Targeting Pods (ATPs) provide long-range target acquisition and expanded weapon delivery envelopes for greater aircraft survivability. ATPs feature an infrared (IR) sensor, charged coupled device television (CCD-TV), laser designator, eye-safe laser, laser spot tracker, infrared marker, and real-time video data link for connectivity with ground forces. As non-developmental items, the majority of improvements to ATPs are the result of investments made by industry Internal Research and Development (IRAD). In addition to operational flight program (OFP) development, this funding provides for the development and integration of capabilities which are either above the capabilities of the industrial base or that require accelerated development timelines in order to meet operational requirements. It also includes program management support, technical analysis, studies and assessments necessary to support the development and integration of future capabilities. Data-linking is one such area where there is an identified gap between industrial capabilities and operational requirements. Additional development efforts will be structured to support the documented ATP requirements as well as urgent operational needs (UONs) as they become known.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*		R-1 ITEM NOMENCLATURE PE 0207249F: *Precision Attack Systems Procurement*			
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	3.128	1.063	1.075	-	1.075
Current President's Budget	3.034	1.063	1.075	-	1.075
Total Adjustments	-0.094	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.094	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Requirements	2.978	1.007	1.015
Description: Technology improvements, requirements definition (studies, analysis and assessments). ***FY 2012 Accomplishments:*** Technology improvements, requirements definition, studies, analysis and assessments. ***FY 2013 Plans:*** Technology improvements,requirements definition, studies, analysis and assessments. ***FY 2014 Plans:*** Technology improvements,requirements definition, studies, analysis and assessments.			
Title: PMA	0.056	0.056	0.060
Description: Program Management Administration ***FY 2012 Accomplishments:*** Program Office/Government Support ***FY 2013 Plans:*** Program Office/Government Support ***FY 2014 Plans:***			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207249F: *Precision Attack Systems Procurement*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Program Office/Government Support			
Accomplishments/Planned Programs Subtotals	3.034	1.063	1.075

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA07: LINE ITEM# OTHACF: *PE 0207249F, Precision Attack Systems*	69.280	35.610	35.951		35.951	20.538	16.467	17.575	17.892	Continuing	Continuing

Remarks

E. Acquisition Strategy

Funds will primarily be executed for studies, analysis and definition for the purpose of identifying improved capability and maintenance mods requirements. Contracting strategy is dependent on market research results. Prior efforts have been accomplished by the prime contractors as well as industry partners.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207249F: *Precision Attack Systems Procurement*	PROJECT 675347: *Advanced Targeting Pod*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technology Improvement, Tech Analysis, Studies & Assessments	C/FFP	Multiple:,	-	2.978		1.007		1.015		-		1.015	Continuing	Continuing	TBD
		Subtotal	0.000	2.978		1.007		1.015		0.000		1.015			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management - Government Costs	Various	Multiple:,	-	0.056		0.056		0.060		-		0.060	Continuing	Continuing	TBD
		Subtotal	0.000	0.056		0.056		0.060		0.000		0.060			

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	3.034		1.063		1.075		0.000		1.075			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207249F: *Precision Attack Systems Procurement*	PROJECT 675347: *Advanced Targeting Pod*

Advanced Targeting Pod Technology Improvement Roadmap

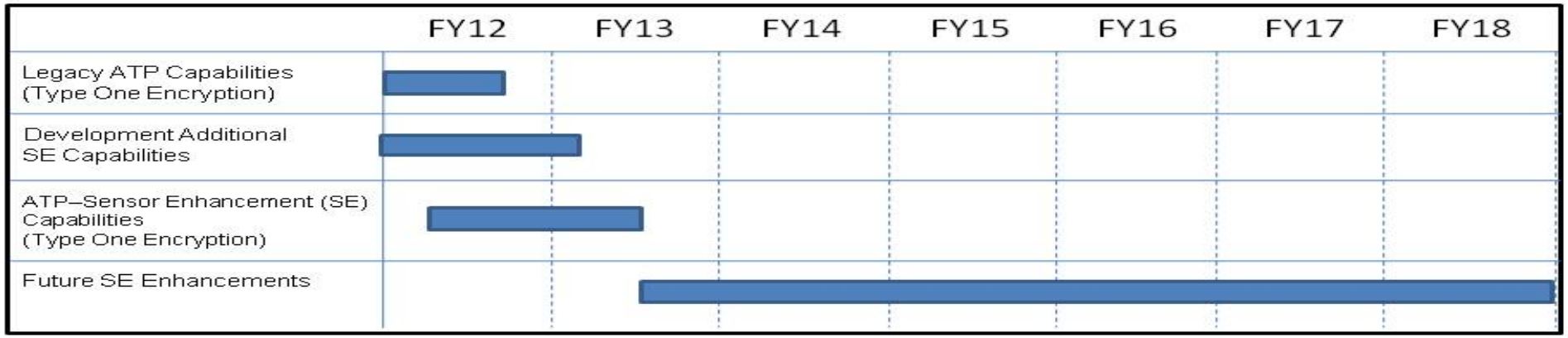


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207249F: *Precision Attack Systems Procurement*	PROJECT 675347: *Advanced Targeting Pod*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Legacy ATP Encryption Study	1	2012	3	2012
ATP-SE Capability Improvement Studies	1	2012	1	2013
ATP-SE Encryption Study	2	2013	3	2013
Future ATP-SE Enhancements	2	2013	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207253F: *Compass Call*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	19.229	12.094	10.782	-	10.782	13.263	13.193	12.831	13.062	Continuing	Continuing
674804: *Compass Call*	-	19.229	12.094	10.782	-	10.782	13.263	13.193	12.831	13.062	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The EC-130H COMPASS CALL is the USAF's wide-area, airborne Command and Control Warfare/Information Operations (C2W/IO) weapon system. The employment of this system interdicts our adversary's use of the electronic battlespace and is a key active component in the information battlespace and prosecution of Overseas Contingency Operations. EC-130H 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 1 configuration. Due to the rapid advances in electronic attack technology, the EC-130H COMPASS CALL was designed to be easily modified and must continue to modernize and evolve to keep pace with adversary tactics and emerging technologies. Continuous system development is required to maintain battlespace superiority.

The EC-130H COMPASS CALL program employs an incremental development and fielding strategy that puts capability into the warfighters hands as soon as practical and ensures each iteration of the weapon system is effective against the highest priority threats. To sustain that process requires a steady stream of system 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), Integrated Modern Communication Receiver, the Human-to-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 evolutions, command and control operations enhancements, and new/emerging sensor developments. Funding in FY 2014 is required to support RDT&E efforts for Baseline 3 (BL3) upgrades to the EC-130H COMPASS CALL fleet. The BL2 and BL3 programmed requirements have advanced significantly over the two previously fielded baselines. BL2 and BL3 upgrades will help cover the electronic attack shortfall in the coming years. Obsolescence and diminishing manufacturing sources (DMS) are addressed with each baseline upgrade as well as annually as part of the sustainment responsibilities.

Activities also include studies and analysis to support both current and future program planning and execution.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207253F: *Compass Call*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	18.509	12.094	12.222	-	12.222
Current President's Budget	19.229	12.094	10.782	-	10.782
Total Adjustments	0.720	0.000	-1.440	-	-1.440
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.720	0.000	-1.440	-	-1.440

Change Summary Explanation

FY 2012 additional funding ($0.720M) provided to the Rand Corporation for the EC-130H Capabilities Based Assessment/Study. FY 2014 reduction in funding (-$1.440M) assessed for higher priority Air Force needs.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Baseline Upgrade Development	18.509	12.094	10.782

Description: Supports Baseline 2 development, integration and test, plus SPEAR Generation 3 for Baseline 2, and Baseline 3 non-recurring engineering (NRE) leading into development.

FY 2012 Accomplishments:

Supported Baseline 2 development, integration, and test of SPEAR classified techniques and electronic attack infrastructure, Network Centric Operations and Reachback Connectivity Capability, Digital Signal Acquisition and Analysis Subsystem and Digital Exciter Subsystem. Initiate Baseline 3 development of Modern Communications Receiver technologies, Human to Machine Interface, Commercial Band Phased Array New Target Development, Advanced Commercial and Military Communications, Counter Radar and Counter Satellite Navigation Techniques, and Target Development.

FY 2013 Plans:

Continues Baseline 2 integration, and test of SPEAR classified techniques and electronic attack infrastructure, Network Centric Operations and Reachback Connectivity Capability, Digital Signal Acquisition and Analysis Subsystem and Digital Exciter Subsystem. Continue Baseline 3 development of Modern communications receiver technologies, Human Machine Interface,

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207253F: *Compass Call*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Commercial Band Phased Array New Target Development, Advanced Commercial and Military Communications, Counter Radar and Counter Satellite Navigation Techniques, and Target Development. ***FY 2014 Plans:*** Will continue Baseline 3 development of Modern communications receiver technologies, Human Machine Interface, Commercial Band Phased Array New Target Development, Advanced Commercial and Military Communications, Counter Radar and Counter Satellite Navigation Techniques, and Target Development.			
Title: EC-130H Study ***Description:*** RAND Corporation Study ***FY 2012 Accomplishments:*** EC-130H Capabilities Based Assessment (CBA)	0.720	0.000	0.000
Accomplishments/Planned Programs Subtotals	19.229	12.094	10.782

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: CALL00: *Compass Call*	302.154	50.024	34.494		34.494	66.262	63.967	56.562	57.580	Continuing	Continuing
• APAF: BA06: CALL00: *Compass Call*	71.883	28.663	11.890		11.890	20.967	19.596	17.652	17.970	Continuing	Continuing

Remarks

E. Acquisition Strategy

EC-130H COMPASS CALL capability is maintained with incremental upgrades per the baseline acquisition strategy plus any quick reaction capabilities (QRC) developments acquired through the 645th Aeronautical Systems Group (BIG SAFARI Program Office) in accordance with the BIG SAFARI Program Management Directive (PMD) and the BIG SAFARI Class Justification and Approval (J&A) document for acquisition of supplies and services using other than full and open competition criteria. The procured supplies and services are supported by the BIG SAFARI Life Cycle Management Plan (LCMP) across the full spectrum of system life cycle management from developmental engineering to system retirement ("cradle to grave" support). Due to the rapidly changing threat environment encountered during our prolonged commitment to Overseas Contingency Operations (OCO), the acquisition program manager has the authority to redirect funding as necessary to meet current stated and emerging Combatant Commander requirements.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207253F: *Compass Call*

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207253F: *Compass Call*	PROJECT 674804: *Compass Call*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Mission Equipment	SS/CPFF	BAE Sytems:Nashua, NH	-	18.509	Nov 2011	12.094	Nov 2012	10.782	Nov 2013	-		10.782	Continuing	Continuing	TBD
		Subtotal	0.000	18.509		12.094		10.782		0.000		10.782			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
EC-130H Studies	C/T&M	RAND:Santa Monica, CA	-	0.720		0.000	Oct 2012	0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.720		0.000		0.000		0.000		0.000			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	19.229		12.094		10.782		0.000		10.782			

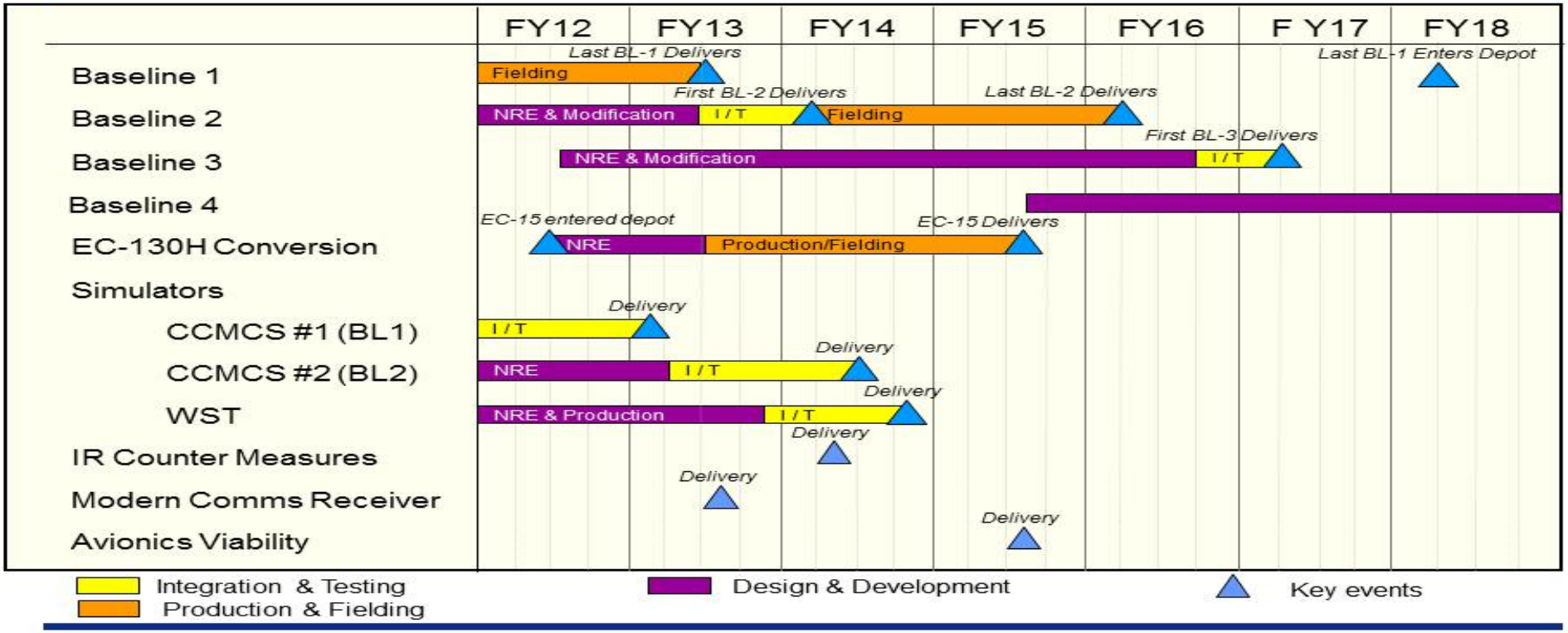
Remarks

EC-130H Program Manager has determined that PMA will be funded with Compass Call's APAF appropriation and included in the P-Doc, Mod 1001.

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207253F: *Compass Call*	PROJECT 674804: *Compass Call*

U.S. AIR FORCE

COMPASS CALL Schedule



FY14 Staffer Brief

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207253F: *Compass Call*	PROJECT 674804: *Compass Call*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Baseline 1	1	2012	3	2013
Baseline 2	1	2012	1	2014
Baseline 3	3	2012	2	2017
Baseline 4	3	2015	4	2018
EC-130H Conversion	2	2012	3	2015
Simulators: CCMCS #1 (BL1)	1	2012	1	2013
Simulators: CCMCS #2 (BL2)	1	2012	3	2014
Simulators: WST	1	2012	4	2014
IR Countermeasures	2	2014	2	2014
Modern Comms Receiver	3	2013	3	2013
Avionics Viability	3	2015	3	2015

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207268F: *Aircraft Engine Component Improvement Program*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	168.390	187.984	139.369	-	139.369	139.810	141.866	144.402	146.856	Continuing	Continuing
671012: *Aircraft Engine Component Improvement Program*	-	136.516	156.236	107.837	-	107.837	108.450	109.953	111.946	113.816	Continuing	Continuing
675365: *F-35*	-	31.874	31.748	31.532	-	31.532	31.360	31.913	32.456	33.040	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

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 government acceptance of the first procurement-funded engine 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, identifies 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, 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. Without Engine CIP, out year support funding would have to be significantly increased.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*			R-1 ITEM NOMENCLATURE PE 0207268F: *Aircraft Engine Component Improvement Program*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	172.967	187.984	114.369	-	114.369
Current President's Budget	168.390	187.984	139.369	-	139.369
Total Adjustments	-4.577	0.000	25.000	-	25.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-4.577	0.000			
• Other Adjustments	0.000	0.000	25.000	-	25.000

Change Summary Explanation

FY2014 increase of $25M for Engine CIP efforts

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207268F: *Aircraft Engine Component Improvement Program*	PROJECT 671012: *Aircraft Engine Component Improvement Program*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
671012: *Aircraft Engine Component Improvement Program*	-	136.516	156.236	107.837	-	107.837	108.450	109.953	111.946	113.816	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

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 government acceptance of the first procurement-funded engine 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, identifies 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, 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. Without Engine CIP, out year support funding would have to be significantly increased.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Aircraft Engine Component Improvement Program	134.963	154.611	106.098
Description: Aircraft Engine Component Improvement Program (CIP) provides critical sustaining engineering support for approximately 20,300 engines (including FMS) to maintain flight safety (highest priority), to address parts obsolescence, 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.			
FY 2012 Accomplishments: Funding enables Engine CIP to execute 200+ tasks across 13+ engine			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207268F: *Aircraft Engine Component Improvement Program*	PROJECT 671012: *Aircraft Engine Component Improvement Program*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
types. Majority of the budget addresses engine issues associated with the A-10, B-1, B-2, C-130, F-15, F-16, and F-22 aircraft. Engine CIP work effort addresses safety of flight, engine component redesign, repair/rework procedures, engine maturation and life limit/mission analysis. In addition to engine maturation, ground and flight engine testing is used to validate redesigned parts and new repair procedures. Engine CIP maintains engine flight safety, addresses obsolescence deficiencies, improves system operational readiness (OR) and reliability & maintainability (R&M), reduces engine life cycle costs (LCC), and sustains engines throughout their service life. ***FY 2013 Plans:*** Funding enables Engine CIP to execute 200+ tasks across 13+ engine types. Majority of the budget addresses engine issues associated with the A-10, B-1, B-2, C-130, F-15, F-16, and F-22 aircraft. Engine CIP work effort addresses safety of flight, engine component redesign, repair/rework procedures, engine maturation and life limit/mission analysis. In addition to engine maturation, ground and flight engine testing is used to validate redesigned parts and new repair procedures. Engine CIP maintains engine flight safety, addresses obsolescence deficiencies, improves system operational readiness (OR) and reliability & maintainability (R&M), reduces engine life cycle costs (LCC), and sustains engines throughout their service life. ***FY 2014 Plans:*** Funding enables Engine CIP to execute 200+ tasks across 13+ engine types. Majority of the budget addresses engine issues associated with the A-10, B-1, B-2, C-130, F-15, F-16, and F-22 aircraft. Engine CIP work effort addresses safety of flight, engine component redesign, repair/rework procedures, engine maturation and life limit/mission analysis. In addition to engine maturation, ground and flight engine testing is used to validate redesigned parts and new repair procedures. Engine CIP maintains engine flight safety, addresses obsolescence deficiencies, improves system operational readiness (OR) and reliability & maintainability (R&M), reduces engine life cycle costs (LCC), and sustains engines throughout their service life.			
Title: PMA ***Description:*** Program Management support, travel and A&AS. ***FY 2012 Accomplishments:*** Funding for Program Management support, travel and A&AS. ***FY 2013 Plans:*** Funding for Program Management support, travel and A&AS. ***FY 2014 Plans:***	1.553	1.625	1.739

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207268F: *Aircraft Engine Component Improvement Program*	PROJECT 671012: *Aircraft Engine Component Improvement Program*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Funding for Program Management support, travel and A&AS.			
Accomplishments/Planned Programs Subtotals	136.516	156.236	107.837

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• None: *N/A*	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

Other APPN
RELATED ACTIVITIES
(U) - PEs #0604268A and #0604268N, Army/Navy Aircraft Engine CIPs, prior to FY1996
(U) - PEs #0203752A and #0205633N, Army/Navy Aircraft Engine CIPs, FY1996-present

D. Acquisition Strategy

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

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207268F: *Aircraft Engine Component Improvement Program*	PROJECT 671012: *Aircraft Engine Component Improvement Program*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Develop General Electric aircraft engine improvements	SS/CPIF	GE:Evendale, OH	-	29.390	Jan 2012	26.603	Jan 2013	18.362	Jan 2014	-		18.362	Continuing	Continuing	
Develop Pratt & Whitney aircraft engine improvements	SS/CPIF	Pratt & Whitney:Hartford, CT	-	69.617	Jan 2012	68.477	Jan 2013	46.647	Jan 2014	-		46.647	Continuing	Continuing	
Develop GE aircraft engine improvements	SS/CPFF	GE:Lynn, MA	-	10.251	Jan 2012	8.031	Jan 2013	5.543	Jan 2014	-		5.543	Continuing	Continuing	
Develop Rolls Royce aircraft engine improvements	SS/CPFF	Rolls Royce:Indianapolis, IN	-	6.352	Jan 2012	2.600	Jan 2013	1.795	Jan 2014	-		1.795	Continuing	Continuing	
Develop aircraft auxiliary power unit improvements	SS/CPFF	Honeywell:Phoenix, AZ	-	0.251	Jan 2012	2.381	Jan 2013	1.643	Jan 2014	-		1.643	Continuing	Continuing	
		Subtotal	0.000	115.861		108.092		73.990		0.000		73.990			

Remarks

CY12 contracts for GE-Evendale (F110/F101/F118) and Pratt & Whitney (F119/F100) are CPIF.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Non-OEM CIP Tasks	Various	Various:Various,	-	4.399	Oct 2011	6.252	Oct 2012	4.315	Oct 2013	-		4.315	Continuing	Continuing	
		Subtotal	0.000	4.399		6.252		4.315		0.000		4.315			

Remarks

Non-OEM CIP Tasks refer to work in support of Engine CIP.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207268F: *Aircraft Engine Component Improvement Program*	PROJECT 671012: *Aircraft Engine Component Improvement Program*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Ground test and validate engine improvements	PO	AEDC:Arnold AFB, TN	-	10.522	Oct 2011	38.853	Oct 2012	26.817	Oct 2013	-		26.817	Continuing	Continuing	
Fuel	RO	Various:Various,	-	3.601	Oct 2011	0.781	Oct 2012	0.539	Oct 2013	-		0.539	Continuing	Continuing	
		Subtotal	0.000	14.123		39.634		27.356		0.000		27.356			

Remarks

Fuel cost includes only government-procured fuel for Test and Evaluation (T&E). Additional fuel costs for contractor-performed T&E are included in the applicable contract.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA	Various	Various:Various,	-	1.553	Oct 2011	1.625	Oct 2012	1.739	Oct 2013	-		1.739	Continuing	Continuing	
In House Support/Misc	Various	Various:Various,	-	0.580	Oct 2011	0.633	Oct 2012	0.437	Oct 2013	-		0.437	Continuing	Continuing	
		Subtotal	0.000	2.133		2.258		2.176		0.000		2.176			

Remarks

PMA Description: Program Management support, travel, and A&AS.

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	136.516		156.236		107.837		0.000		107.837			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207268F: *Aircraft Engine Component Improvement Program*	PROJECT 671012: *Aircraft Engine Component Improvement Program*

Not applicable. Engine CIP is a continuing sustaining engineering support program that annually funds 200+ separate tasks.

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207268F: *Aircraft Engine Component Improvement Program*	PROJECT 671012: *Aircraft Engine Component Improvement Program*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Engine CIP activities	1	2012	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207268F: *Aircraft Engine Component Improvement Program*	PROJECT 675365: *F-35*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675365: *F-35*	-	31.874	31.748	31.532	-	31.532	31.360	31.913	32.456	33.040	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The F135 Aircraft Engine Component Improvement Program (CIP) supports F-35 propulsion systems. It provides the only source of critical sustaining engineering support for in-service Air Force propulsion systems. Engine CIP maintains flight safety (highest priority), to correct service revealed deficiencies, to improve system Operational Readiness (OR) and Reliability & Maintainability (R&M), to reduce propulsion system Life Cycle Cost (LCC), and sustain the propulsion systems throughout the service life. Historically, aircraft systems change missions, tactics, and environment (including new fuels) and meet changing threats throughout their lives. New technical problems can develop in the propulsion system through actual use and the Engine CIP provides the means to develop fixes for these field problems. Engine CIP funding is driven by field events and type/maturity of the propulsion systems, not by the total quantity. The program starts with government acceptance of the first procurement-funded engine and continues over the propulsion system's life, gradually decreasing to a minimum level (safety/depot repairs) sufficient to keep older inventory propulsion systems operational. Engine CIP, through "Lead the Fleet" operational use and accelerated mission testing, identifies and fixes propulsion-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 propulsion systems. Engine CIP ensures continued improvements in R&M, which reduce out year support costs. Historically, R&M related Engine CIP efforts significantly reduce out year O&M and spares costs. Without Engine CIP, out year support funding would have to be significantly increased.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Aircraft Engine Component Improvement Program (F135)	31.874	31.486	31.130
Description: The Aircraft Engine Component Improvement Program (CIP) provides the only source of critical sustaining engineering support for F-35 propulsion systems 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.			
FY 2012 Accomplishments: Funding facilitates the procurement of 2 CTOL test engines to begin planning for engine maturation testing. JSF CIP will advance engine maturity 2X hours ahead of the fleet to identify any major safety or reliability issues before they can affect the field. In			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207268F: *Aircraft Engine Component Improvement Program*	PROJECT 675365: *F-35*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
addition accelerated maturation testing, several reliability degraders will also be addressed, including sensors, seals, disk life, and other component deficiencies. Funding 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. ***FY 2013 Plans:*** Funding enables JSF Engine CIP to execute approximately 25 tasks supporting initial flying operations on F135. Engine CIP work effort addresses safety of flight, engine component redesign, repair/rework procedures, accelerated maturation testing and life limit/mission analysis. In addition, ground and flight engine testing will be used to validate redesigned parts and new repair procedures. Funding will enable JSF CIP to maintain/improve engine flight safety, address parts obsolescence, improve system operational readiness and reliability & maintainability, reduce engine life cycle cost, and sustain engines throughout their service life. ***FY 2014 Plans:*** Funding enables JSF Engine CIP to execute approximately 25 tasks supporting initial flying operations on F135. Engine CIP work effort addresses safety of flight, engine component redesign, repair/rework procedures, accelerated maturation testing and life limit/mission analysis. In addition, ground and flight engine testing will be used to validate redesigned parts and new repair procedures. Funding will enable JSF CIP to maintain/improve engine flight safety, address parts obsolescence, improve system operational readiness and reliability & maintainability, reduce engine life cycle cost, and sustain engines throughout their service life.			
Title: PMA ***Description:*** Program Management support, travel and A&AS. ***FY 2012 Accomplishments:*** Funding for Program Management support, travel and A&AS. ***FY 2013 Plans:*** Funding for Program Management support, travel and A&AS. ***FY 2014 Plans:*** Funding for Program Management support, travel and A&AS.	0.000	0.262	0.402
Accomplishments/Planned Programs Subtotals	31.874	31.748	31.532

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207268F: *Aircraft Engine Component Improvement Program*	PROJECT 675365: *F-35*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• None: *N/A*	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

Program Element 0205633N provides US Navy funding support for F-35 propulsion system

D. Acquisition Strategy

Contracts within this Program Element are projected to be awarded sole source to engine manufacturer. F-35 Engine CIP tasks are generally assigned to the original engine manufacturer based on available funding and prioritization of candidates.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207268F: *Aircraft Engine Component Improvement Program*	PROJECT 675365: *F-35*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Develop Pratt & Whitney F135 engine improvements	SS/ Various	Pratt & Whitney:Hartford, CT	-	31.874	Aug 2012	31.103	Jan 2013	26.130	Jan 2014	-		26.130	Continuing	Continuing	
		Subtotal	0.000	31.874		31.103		26.130		0.000		26.130			

Remarks

CY12 Delivery Order for two test engines will be FFP; CY13 and out Delivery Order tasks will be CPIF contracts.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Ground test and validate engine improvements	PO	AEDC:Arnold AFB, TN	-	0.000	Oct 2011	0.383	Oct 2012	5.000	Oct 2013	-		5.000	Continuing	Continuing	
Fuel	RO	Various:Various,	-	0.000	Oct 2011	0.000	Oct 2012	0.000	Oct 2013	-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.000		0.383		5.000		0.000		5.000			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA	Various	Various:Various,	-	0.000	Oct 2011	0.262	Oct 2012	0.402	Oct 2013	-		0.402	Continuing	Continuing	
		Subtotal	0.000	0.000		0.262		0.402		0.000		0.402			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207268F: *Aircraft Engine Component Improvement Program*	PROJECT 675365: *F-35*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Remarks															
PMA Description: Program Management support, travel, and A&AS.															

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	31.874		31.748		31.532		0.000		31.532			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207268F: *Aircraft Engine Component Improvement Program*	PROJECT 675365: *F-35*

Not applicable. F-35 Engine CIP is a continuing sustaining engineering support program that will fund approximately 25 tasks annually beginning in FY13.

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207268F: *Aircraft Engine Component Improvement Program*	**PROJECT** 675365: *F-35*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
F-35 Engine CIP Tasks	2	2012	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207277F: *ISR Innovations*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	16.199	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
675373: *ISR Innovations Program*	-	16.199	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

The $16.199M in FY12 reflects an incorrect database. Actual funding was $0.

A. Mission Description and Budget Item Justification

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

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	50.000	0.000	0.000	-	0.000
Current President's Budget	16.199	0.000	0.000	-	0.000
Total Adjustments	-33.801	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	-33.801	0.000	0.000	-	0.000

Change Summary Explanation

The $50M in FY 2012 submitted in the previous president's budget and $16.199M in FY 2012 shown for the current president's budget reflects an incorrect database. Actual funding was $0.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207277F: *ISR Innovations*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: ISR Innovation	16.199	0.000	0.000
Description: ISR Innovation ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** N/A			
Accomplishments/Planned Programs Subtotals	16.199	0.000	0.000

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. Acquisition Strategy

N/A

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207277F: *ISR Innovations*	PROJECT 675373: *ISR Innovations Program*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ISR Innovation	TBD	Not specified.:,	-	16.199	Sep 2013	0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	16.199		0.000		0.000		0.000		0.000			

Remarks

Funding in FY 2012 reflects an incorrect database. Actual funding was $0.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	16.199		0.000		0.000		0.000		0.000			

Remarks

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force												DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	1,119.838	5.654	7.950	6.373	-	6.373	17.579	13.979	4.371	4.450	44.776	1,224.970
674515: *Joint Air-to-Surface Standoff Missile (JASSM)*	926.371	0.000	3.935	3.132	-	3.132	5.083	4.135	4.205	4.281	44.776	995.918
675356: *JASSM Extended Range (JASSM-ER)*	193.467	5.654	4.015	3.241	-	3.241	12.496	9.844	0.166	0.169	0.000	229.052
MDAP/MAIS Code(s): 555												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Totals include funding for PRCP Program Number, 555, JASSM

A. Mission Description and Budget Item Justification

The Joint Air-to-Surface Standoff Missile (JASSM) 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. There are two variants of the JASSM missile; JASSM baseline and JASSM-Extended Range (JASSM-ER). Both have improved reliability, separate milestone decision points and separate projects within a single program element. Aircraft integration of baseline JASSM is complete on the B-52H, F-16 (Block 50), B-1, B-2 and F-15E. Objective aircraft include the F-16 (Block 40) and F-35. Aircraft integration for JASSM-ER is the B-1B. Objective aircraft is the B-52H, F16C/D (Block 50/52), B-2, F-16C/D(Block25-42), F-15E, and F-35.

This program is in Budget Activity 7, Operational System Development because it includes development efforts to upgrade systems that have been developed.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*			R-1 ITEM NOMENCLATURE PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	5.796	7.950	8.776	-	8.776
Current President's Budget	5.654	7.950	6.373	-	6.373
Total Adjustments	-0.142	0.000	-2.403	-	-2.403
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.142	0.000			
• Other Adjustments	0.000	0.000	-2.403	-	-2.403

Change Summary Explanation

Reduced FY14 by $2.4M for higher Air Force priorities.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*	PROJECT 674515: *Joint Air-to-Surface Standoff Missile (JASSM)*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
674515: *Joint Air-to-Surface Standoff Missile (JASSM)*	926.371	0.000	3.935	3.132	-	3.132	5.083	4.135	4.205	4.281	44.776	995.918
Quantity of RDT&E Articles	81	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Joint Air-to-Surface Standoff Missile (JASSM) 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. This project develops the baseline JASSM missile. Aircraft integration of the baseline JASSM is complete on the B-52H, F-16 (Block 50), B-1, B-2, and F-15E. Objective aircraft include the F-16 (Block 40), and F-35. The government is buying the JASSM system based on a contractor-developed, government-approved System Performance Specification (SPS), this SPS is on contract. The contractor assumes total system performance responsibility (TSPR) for Lots 1-6 as defined in the SPS; for Lot 7 and beyond, the Government has approval authority of Class I configuration changes. This project also develops improvements to the JASSM and JASSM-ER fuze, including the development of the Electronic Safe and Arm Fuze (ESAF). The program is evaluating Diminishing Manufacturing Sources Material Shortages (DMSMS) and several obsolescence issues.

BA7- This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Electronic Safe and Arm Fuze (ESAF)	0.000	3.098	2.364
Description: ESAF will resolve obsolescence issues, increase reliability and replace the current fuze. ESAF will be implemented in both JASSM baseline and JASSM-ER missiles.			
FY 2012 Accomplishments: N/A			
FY 2013 Plans: Electronic Safe and Arm Fuze (ESAF) development protptype contract. Initial design work, sled instrumentation kit (SLIK) development, and conduct critical design review.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*	PROJECT 674515: *Joint Air-to-Surface Standoff Missile (JASSM)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Electronic Safe and Arm Fuze (ESAF) development contract. Design work, pre-production material, qualification work, sled instrumentation kit (SLIK) development.			
Title: Other development ***Description:*** Efforts focusing on other development, Diminishing Manufacturing Sources Material Shortages (DMSMS), and Obsolescence issues. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** Other development/evaluations that address JASSMs obsolescence plan directed activities and detremine parts/components that will need replacement/upgrading (Inertial Measurement Unit, Missile control Unit, anti-jam/anti-spoofing system).	0.000	0.000	0.290
Title: Test Support ***Description:*** Government Test Support. Includes flight test equipment, targets, Test Wing and Range support, and other ground/ flight test support. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** ESAF cannon test and other prototype test support to include test equipment, targets, range support, and other ground test support. ***FY 2014 Plans:*** ESAF Sled test , cannon test and other development flight test support to include test equipment, targets, range support, and other ground test support.	0.000	0.837	0.478
Accomplishments/Planned Programs Subtotals	0.000	3.935	3.132

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*	PROJECT 674515: *Joint Air-to-Surface Standoff Missile (JASSM)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• MPAF: BA02: Line Item # 654515: *JASSM Baseline Missile, JASSM: PE 0207325F, JASSM Missile Procurement*	181.041	155.156	143.195		143.195	142.442	120.327	0.000	0.000	0.000	1,862.933

Remarks

D. Acquisition Strategy

All major contracts within this project have been awarded through full and open competition. The EMD phase option for JASSM baseline was completed using Cost Plus Award Fee (CPAF).

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*	PROJECT 674515: *Joint Air-to-Surface Standoff Missile (JASSM)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
-Follow on Development, Reliability, Component Upgrades, and Electronic Safe and Arm Fuze (ESAF) development	C/CPFF	Lockheed Martin:Orlando, Fl	0.000	0.000		3.098	Dec 2012	2.364	Nov 2013	-		2.364	2.323	7.785	7.785
-Efforts focusing on other Development, Diminishing Manufacturing Sources Material Shortages (DMSMS), and Obsolescence issues.	C/FFP	Lockheed Martin:Orlando, Fl	714.589	0.000		0.000		0.290	Jan 2014	-		0.290	49.725	764.604	764.604
		Subtotal	714.589	0.000		3.098		2.654		0.000		2.654	52.048	772.389	772.389

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
96 TW test support, flight test	Various	Test Wing:Eglin, FL	149.552	0.000		0.837	Apr 2013	0.478	Jan 2014	-		0.478	9.872	160.739	160.739
		Subtotal	149.552	0.000		0.837		0.478		0.000		0.478	9.872	160.739	160.739

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*	PROJECT 674515: *Joint Air-to-Surface Standoff Missile (JASSM)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration (PMA). Program office/mission support. Provide	C/Various	PMA:Eglin AFB, FL	62.230	0.000		0.000		0.000		-		0.000	0.560	62.790	62.790
		Subtotal	62.230	0.000		0.000		0.000		0.000		0.000	0.560	62.790	62.790

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	926.371	0.000		3.935		3.132		0.000		3.132	62.480	995.918	995.918

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*	PROJECT 674515: *Joint Air-to-Surface Standoff Missile (JASSM)*

JASSM / JASSM-ER Top Level Schedule

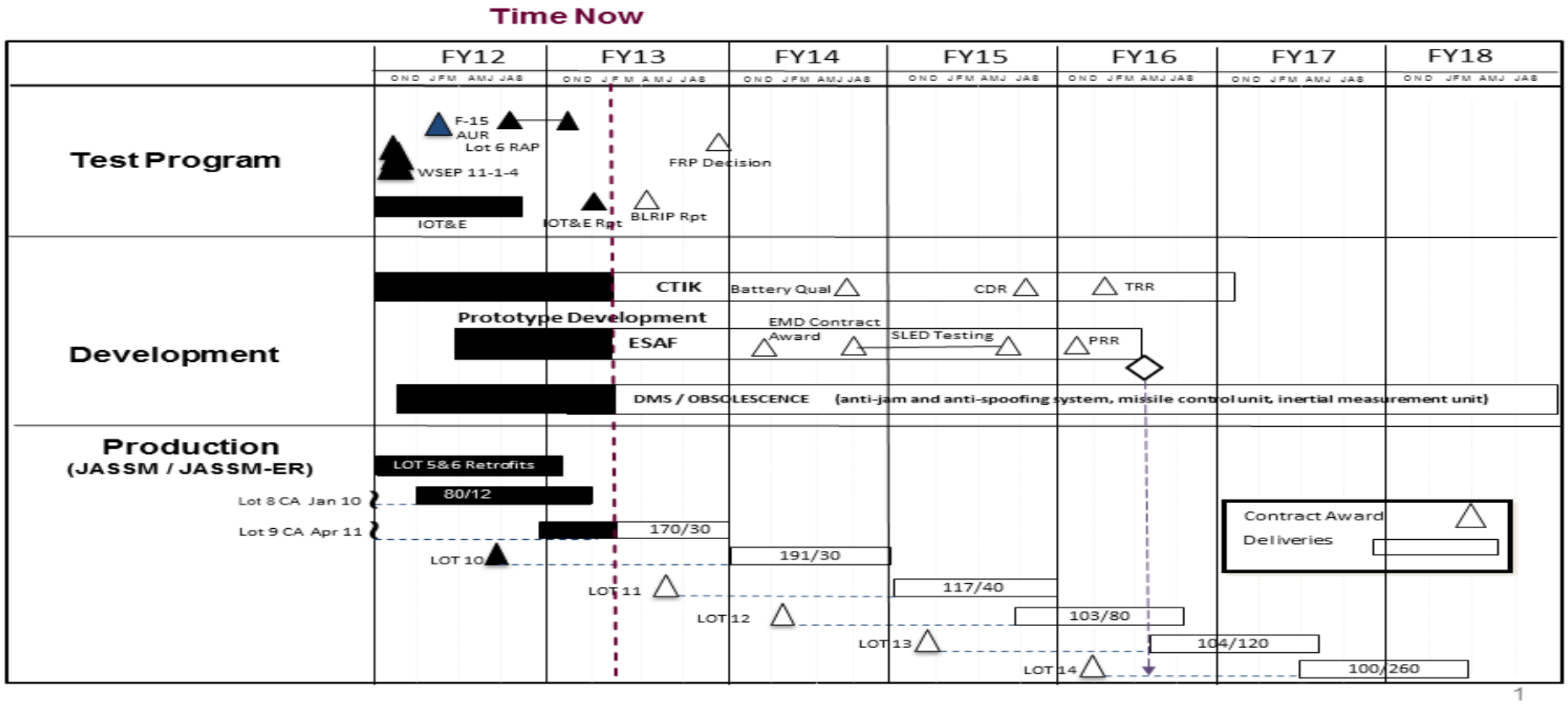


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*	PROJECT 674515: *Joint Air-to-Surface Standoff Missile (JASSM)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
ESAF Protyping Contract Award	1	2013	4	2013
ESAF Cannon Testing	1	2013	2	2014
ESAF EMD Contract Award	1	2014	1	2014
ESAF Interim Design Review (IDR)	1	2014	1	2014
ESAF Critical Design Review (CDR)	3	2014	3	2014
ESAF Cannon and Sled Testing	1	2014	3	2015
ESAF Qualification Testing	3	2015	4	2015
ESAF Flight Testing	4	2015	1	2016
ESAF Production Cut-In (Lot 14)	2	2016	2	2016

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*	PROJECT 675356: *JASSM Extended Range (JASSM-ER)*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675356: *JASSM Extended Range (JASSM-ER)*	193.467	5.654	4.015	3.241	-	3.241	12.496	9.844	0.166	0.169	0.000	229.052
Quantity of RDT&E Articles	31	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project provides a long range (over twice the range of baseline JASSM), conventional air-to-surface, autonomous, precision-guided, low observable, standoff cruise missile compatible with fighter and bomber aircraft. This project develops the extended range version of the JASSM missile (JASSM-ER). The threshold integration platform for JASSM-ER is the B-1B. Objective aircraft is the B-52H, F16C/D (Block 50/52), B-2, F-16C/D Block25-42), F-15E, and F-35. JASSM-ER provides the capability to attack a variety of high value fixed or relocatable targets with precision, through preplanned missions or target-of-opportunity, deeper into enemy territory than JASSM Baseline while minimizing the threat to launch aircraft. The Air Force is developing JASSM-ER based on a contractor-developed, government-approved System Performance Specification (SPS) Rev B dated February 28, 2007, which was updated under JASSM-ER development Phase II System Development and Demonstration in FY07, and Milestone (MS-C) in January 2011. The 16 JASSM-ER OT flights were successfully completed in the 4th quarter of FY12. JASSM-ER performed at 100% (16/16). This project develops a Common Telemetry Instrumentation Kit (C-TIK) which will be used during flight testing and will be common to both JASSM Baseline and JASSM-ER. The ESAF Fuze is partially executed under this project as it is common to JASSM baseline and JASSM-ER. The JASSM program is evaluating Diminishing Sources Material Shortages (DMSMS) and several obsolescence issues.

BA7- This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Common Telemetry Instrumentation Kit (C-TIK)	2.349	1.071	0.389
Description: Common Telemetry Instrumentation Kit (C-TIK) replaces current TIK used during flight testing and will be common to JASSM and JASSM-ER.			
FY 2012 Accomplishments: Common Test Instrumentation Kit (C-TIK) development contract. Design work for the C-TIK.			
FY 2013 Plans: Common Test Instrumentation Kit (C-TIK) development contract. Design work: Battery prototype and destruct charge.			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*	PROJECT 675356: *JASSM Extended Range (JASSM-ER)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Common Test Instrumentation Kit (C-TIK) development contract. Design work: Continue destruch charge development and do battery qualification testing.			
Title: Electronic Safe and Armed Fuze ***Description:*** Electronic Safe and Fuze (ESAF) will resolve obsolescence issues and replace the current fuze. ESAF will be implemented in both JASSM Baseline and JASSM-ER. ***FY 2012 Accomplishments:*** Electronic Safe and Arm Fuze (ESAF) prototype contract. Initial design work, sled instrumentation kit (SLIK) development. ***FY 2013 Plans:*** Electronic Safe and Arm Fuze (ESAF) prototyping. Initial design work, complete prototype development, sled instrumentation kit (SLIK) development. ***FY 2014 Plans:*** Electronic Safe and Arm Fuze (ESAF) development contract. Design work, pre-production material, qualification work, sled instrumentation kit (SLIK) development.	1.550	2.494	2.403
Title: Other Development and Testing ***Description:*** Other Development and testing to support upgrades to improve missile reliability address hardware obsolescence; also provide support for any ground and flight test activity required to verify upgraded hardware before cutting into production. ***FY 2012 Accomplishments:*** Test support: Final test support for the JASSM-ER IOT&E, test equipment, and other ground test support for Production Upgrade Verification (PUV) testing. ***FY 2013 Plans:*** Other Development/upgrades address hardware obsolescence; also provide support for any ground and flight test activity required to verify upgraded hardware before cutting into production. ***FY 2014 Plans:*** Other Development/upgrades address hardware obsolescence; also provide support for any ground and flight test activity required to verify upgraded hardware before cutting into production.	1.130	0.270	0.181
Title: Test Support ***Description:*** Government Test Support for ESAF and C-TIK. Includes flight test equipment, targets, Test Wing and Range support, and other ground/flight test support.	0.546	0.100	0.188

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*	PROJECT 675356: *JASSM Extended Range (JASSM-ER)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Electronic Safe and Fuze (ESAF) test planning, the acquisition of 27 targets to support ESAF testing, and other test support to include test equipment, targets, range support, and other ground test support. ***FY 2013 Plans:*** CTIK, ESAF, and other flight test support to include test equipment, targets, range support, and other ground test support. ***FY 2014 Plans:*** CTIK, ESAF, and other development flight test support to include test equipment, targets, range support, and other ground test support.			
Title: Program Management Administration (PMA) ***Description:*** Continue program office/mission support. Provide oversight of JASSM development/upgrade activities. ***FY 2012 Accomplishments:*** Continue Program Management Administration (PMA). Provides program office oversight of development and upgrade activities. ***FY 2013 Plans:*** Continue Program Management Administration (PMA). Provides program office oversight of development and upgrade activities. ***FY 2014 Plans:*** Continue Program Management Administration (PMA). Provides program office oversight of development and upgrade activities.	0.079	0.080	0.080
Accomplishments/Planned Programs Subtotals	5.654	4.015	3.241

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• MPAF: BA02: Line Item #654515: *JASSM-ER Missile, JASSM-ER: PE 0207325F, JASSM Missile Procurement*	55.152	85.243	147.956		147.956	198.703	329.445	444.153	452.147	2,403.173	4,174.964

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*	PROJECT 675356: *JASSM Extended Range (JASSM-ER)*

D. Acquisition Strategy

JASSM-ER is the extended range version of the JASSM baseline missile (currently in full rate production). The initial JASSM-ER development contract, awarded in 2004, was Cost-Plus-Award-Fee. In 2008, the program office awarded a Cost-Plus-Incentive-Fee (CPIF) contract with performance incentives to complete the development effort.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*	PROJECT 675356: *JASSM Extended Range (JASSM-ER)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JASSM-ER Phase I	SS/CPFF	Lockheed Martin:Orlando, FL	9.600	0.000		0.000		0.000		-		0.000	0.000	9.600	9.600
JASSM-ER Phase II	SS/CPFF	Lockheed Martin:Orlando, FL	94.513	0.000		0.000		0.000		-		0.000	0.000	94.513	94.513
C-TIK	SS/FFP	Lockheed Martin:Orlando, FL	0.000	2.349	May 2012	1.071	Jan 2013	0.389	May 2014	-		0.389	15.767	19.576	19.746
-Other Development: Test Missile Procurement (for DT/IT) and Test Support, parts upgrade, software updates, product improvements, efficiency upgrades and obsolescence.	Various	Lockheed Martin:Orlando, FL	25.579	1.130	Apr 2012	0.270	Jan 2013	0.181	May 2014	-		0.181	1.170	28.330	28.160
ESAF	SS/CPFF	Lockheed Martin:Orlando, FL	0.000	1.550	Feb 2013	2.494	Dec 2012	2.403		-		2.403	2.319	8.766	8.766
		Subtotal	129.692	5.029		3.835		2.973		0.000		2.973	19.256	160.785	160.785

Remarks

Common Test Instrumentation Kits (C-TIK)
Electronic Safe and Arm Fuze (ESAF)

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*	PROJECT 675356: *JASSM Extended Range (JASSM-ER)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Test Support. Includes flight test equipment, targets, 96th Test Wing and Range support, and other ground/ flight test support as necessary.	Various	96 TW:Eglin AFB, FL	19.718	0.546	Jan 2012	0.100	Jan 2013	0.188	May 2014	-		0.188	3.258	23.810	23.810
6 IT/6 OT assets	C/CPAF	Lockheed Martin:Orlando, FL	12.605	0.000		0.000		0.000		-		0.000	0.000	12.605	12.605
12 Operational Test (OT) assets	C/FFP	Lockheed Martin:Orlando, FL	30.392	0.000		0.000		0.000		-		0.000	0.000	30.392	30.392
		Subtotal	62.715	0.546		0.100		0.188		0.000		0.188	3.258	66.807	66.807

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration (PMA). Provides program office oversight of development and upgrade activities.	Various	PMA:Eglin AFB, FL	1.060	0.079	May 2012	0.080		0.080		-		0.080	0.161	1.460	1.460
		Subtotal	1.060	0.079		0.080		0.080		0.000		0.080	0.161	1.460	1.460

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	193.467	5.654		4.015		3.241		0.000		3.241	22.675	229.052	229.052

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*	**PROJECT** 675356: *JASSM Extended Range (JASSM-ER)*

JASSM / JASSM-ER Top Level Schedule

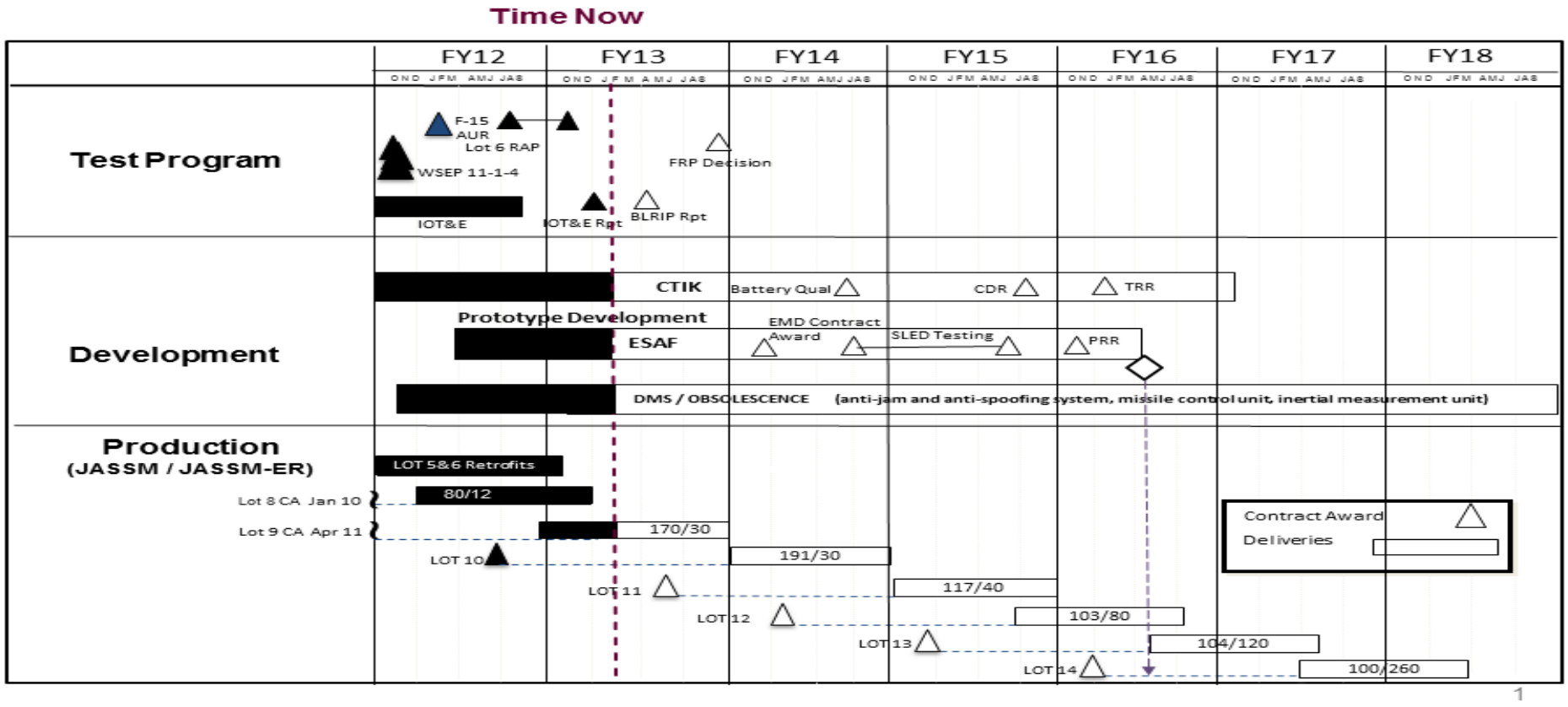


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207325F: *Joint Air-to-Surface Standoff Missile (JASSM)*	**PROJECT** 675356: *JASSM Extended Range (JASSM-ER)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JASSM-ER Operational Test & Evaluation	1	2012	1	2013
Beyond LRIP Report	2	2013	2	2013
C-TIK Design	1	2012	4	2012
C-TIK Battery Development and Qualification	4	2012	3	2014
C-TIK Destruct Charge Development and Qualifuication	2	2013	3	2014
C-TIK integration with JASSM and Test Equipment Development	4	2013	2	2016
C-TIK Flight Testing	2	2016	1	2017

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force												DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	116.858	76.315	22.820	-	22.820	41.578	21.580	17.912	18.235	Continuing	Continuing
675117: *Integration Development*	-	78.641	50.674	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	129.315
675218: *Applications Development*	-	31.398	18.547	15.106	-	15.106	29.919	11.722	7.571	7.708	Continuing	Continuing
675220: *Unit Level*	-	6.819	7.094	5.518	-	5.518	9.213	7.396	7.882	8.024	Continuing	Continuing
675221: *Personnel Recovery Command and Control (PRC2)*	-	0.000	0.000	2.196	-	2.196	2.446	2.462	2.459	2.503	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY 2014, project number 675117, Integration Development, AOC Increment 10.2 efforts transferred to PE 0604458F, AOC Increment 10.2, project number 644945, AOC Increment 10.2, in order to improve transparency for this major program.

AOC Inc 10.2 is PRCP Program Number (PNO) N42.

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 four funded projects within the AOC WS program element:

Integration Development supports the 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 Combined/Joint Force Air Component Commander (C/JFACC) for planning, executing and assessing theater-wide air and space operations. In FY 2014, project number 675117, Integration Development, AOC Increment 10.2 efforts transferred to PE 0604458F, AOC Increment 10.2, project number 644945, AOC Increment 10.2, in order to improve transparency for this major program.

Applications Development provides worldwide operational level C2 capabilities, which include: air battle planning, management, and execution; operational level C2 of Integrated Air and Missile Defense (IAMD); as well as personnel recovery C2 in support of DoD, Coalition Partners, and other government agencies. In FY 2014, the Personnel Recovery Command and Control (PRC2) efforts transferred from project number 675218, Applications Development, to project number 675221, Personnel Recovery Command and Control (PRC2), in order to improve transparency for this Joint use application.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207410F: *Air & Space Operations Center (AOC)*

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

Personnel Recovery Command and Control (PRC2): Provides an adaptive, networked, decentralized and situationally-appropriate personnel recovery command and control system which supports personnel accountability and recovery missions worldwide. PRC2 delivers a globally accessible, collaborative, interoperable and integrated system to prevent, prepare for and respond to isolating events across the Range of Military Operation in the joint/coalition operating environment. The system collects, stores and delivers personnel/identity biometric data, emergency locator beacon registrations, isolated personnel reports, evasion plans of action, incident reports and other information management capabilities for predictive, preventive and personnel vulnerability analysis/assessment in support of Personnel Recovery across Department of Defense and other national and international entities.

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

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	120.670	76.315	82.727	-	82.727
Current President's Budget	116.858	76.315	22.820	-	22.820
Total Adjustments	-3.812	0.000	-59.907	-	-59.907
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	-0.953	0.000			
• SBIR/STTR Transfer	-2.859	0.000			
• Other Adjustments	0.000	0.000	-59.907	-	-59.907

Change Summary Explanation

FY 2014: Project number 675117, Integration Development, AOC Increment 10.2 efforts transferred to PE 0604458F, AOC Increment 10.2, project number 644945, AOC Increment 10.2, in order to improve transparency for this major program.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675117: *Integration Development*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675117: *Integration Development*	-	78.641	50.674	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	129.315
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY 2014, project number 675117, Integration Development, AOC Increment 10.2 efforts were transferred to PE 0604458F, AOC Increment 10.2, project number 644945, AOC Increment 10.2, in order to improve transparency for this major program.

A. Mission Description and Budget Item Justification

The Air Operations Center Weapons 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, space and cyber 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, space and cyber operations; and provides rapid reaction to immediate situations by exercising positive control of friendly forces.

The AOC Integration Development program keeps the AOC interoperable, certified, supportable, and compliant through the integration, testing and fielding of new capabilities and sustainment upgrades to the AOC WS baseline. The program supports mission requirements at Geographic and Functional AOCs, as well as Support and Manpower Augmentation units. To keep the AOC current and interoperable with the COCOMs, cyber requirements, and fifth generation weapon system/weapons, the AOC WS program plans to evolve the AOC through the integration and test of progressively improving capabilities. These activities ensure a system of systems engineering perspective for the AOC WS, and include weapon system standardization activities as defined by AOC WS requirements documents. Integrated Air and Missile Defense (IAMD) establishes critical IAMD improvements in the AOC WS to maximize the allocation, planning, and execution of IAMD. The Modernization contractor, which was awarded the Modernization contract on 25 October 2011, has commenced with AOC 10.2 pre-Engineering and Manufacturing Development (EMD) activities, including a Systems Requirements Review (SRR), an Interim Design Review (IDR), and a delta-Preliminary Design Review (delta-PDR). In accordance with AOC 10.2 Milestone Decision Authority (MDA) direction (23 Jun 2010), the AOC 10.2 Modernization program will conduct prototyping and Limited Early Install (LEI) activities through an iterative build methodology prior to Milestone B (MS B) to reduce integration risk and improve user feedback in the acquisition process. AOC 10.2 EMD activities include the design (i.e., Critical Design Review), development, integration of 3rd party capabilities, testing (Contractor in-plant system testing, DT&E, OT&E, Operational Assessment, Test Readiness Review, etc.) of the AOC 10.2 baseline, as well as build-up and fielding of the Help Desk (HD), Formal Training Unit (FTU) and Combined Air Operations Center-eXperimental (CAOC-X) suite.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675117: *Integration Development*

Activities also include studies and analysis to support both current program planning and execution, as well as future program planning.

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

AOC 10.2 is PRCP Program Number (PNO) N42.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: AOC 10.1	3.396	0.000	0.000
Description: AOC 10.1 continues development of currently fielded system to improve capabilities provided to C/JFACC. Improves interoperability with sister services and C/JFC, provides virtualization of systems and improves tasking order processing/ dissemination. ***FY 2012 Accomplishments:*** AOC 10.1 baseline support included weapon system standardization activities as defined by the AOC WS requirements documents, as well as system integration/test and Certification & Accreditation (C&A) activities. Efforts consisted of updating and adding capabilities, including virtualization used in the transition to 10.2 (completion of integration and testing of RE-11, and fielding of RE-11); and conducting 10.1 baseline Sustainment Transition Planning from the Government to the AOC WS Modernization Contractor. ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** N/A			
Title: Integrated Air and Missile Defense (IAMD)	1.490	0.000	0.000
Description: C2 of IAMD improvements include dynamic planning/replanning and cross-Area of Responsibility (AOR) collaboration and coordination in the AOC WS to maximize the allocation, planning, and execution of IAMD. ***FY 2012 Accomplishments:*** Established critical C2 of IAMD improvements including dynamic planning/replanning and cross-AOR collaboration and coordination in the AOC WS to maximize the allocation, planning, and execution of IAMD. Enhanced interoperability and collaboration with Missile Defense Agency Command and Control Battle Management and Communications (C2BMC) and related			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675117: *Integration Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
BMD assets. Improved IAMD visualization capabilities and threat assessment. Provided enhanced airspace management and deconfliction capabilities across the full spectrum of AOC operations and improve airspace data sharing. ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** N/A			
Title: AOC 10.2 ***Description:*** AOC 10.2 infrastructure modernization and mission capability integration. Development of a robust, open, Net-Centric infrastructure with a Services Oriented Architecture. ***FY 2012 Accomplishments:*** Performed pre-EMD contract activities in accordance with MDA direction, including a) System Requirement Review (SRR), b) Interim Design Review (IDR), c) contractor Integration and Test Lab (ITL) activities for vertical/horizontal integration to support in-house risk reduction, and d) design, prototyping, and Limited Early Install (LEI) activities in conjunction with the CAOC-X to further support risk reduction and operational feedback. Continued risk mitigation and prototype planning/execution activities to support MS B decision in FY13. These prototyping efforts focused on refining and demonstrating key AOC WS modernization design concepts to ensure their technical feasibility and operational employment. Participated in joint service investments to support the overall AOC modernization design. ***FY 2013 Plans:*** In process of accomplishing pre-EMD activities on the Modernization contract to obtain MDA approved MS B, including prototyping, LEI activities, and Delta Preliminary Design Review (PDR) to support risk reduction and operational feedback. EMD contract activities (upon achievement of MS B), including the following: a) Critical Design Review, establishing the AOC 10.2 baseline, b) AOC 10.2 development, systems analysis, and corresponding documentation, c) capability provider engagement and integration, d) build-up and field the Help Desk (HD), e) Integration and Test Lab (ITL) operation and management, and f) continued planning and coordination for Contractor System Testing / Developmental Test and Evaluation / Operational Test and Evaluation. Risk mitigation and development/test execution activities to support upcoming MS C decision in FY15. Participate in joint service investments to support the overall AOC modernization design and development. ***FY 2014 Plans:*** N/A	58.363	38.823	0.000
Title: Prototyping	3.282	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675117: *Integration Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Prototyping to support Modernization effort to reduce integration risk ***FY 2012 Accomplishments:*** In support of the Modernization effort to reduce integration risk, multiple prototyping activities have been performed. ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** N/A			
Title: Training AOC 10.1 ***Description:*** Training ***FY 2012 Accomplishments:*** Conducted training to include, but not limited to: Type 1, Part Task Trainer, Distributed Mission Operations, Logistics Management Support and Conversion of Courseware to Computer Based Training. ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** N/A	0.463	0.000	0.000
Title: Test and Evaluation AOC 10.1 ***Description:*** Test and Evaluation ***FY 2012 Accomplishments:*** Planned and implemented comprehensive AOC WS modernization test strategy and corresponding documentation to support risk reduction DT and DT regression testing on the AOC 10.1 RE11 baseline. ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** N/A	0.225	0.000	0.000
Title: Test and Evaluation AOC 10.2	0.300	0.500	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675117: *Integration Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Test and Evaluation ***FY 2012 Accomplishments:*** Planned and implemented comprehensive Modernization contractor testing (in-plant integration and test, functional testing, security testing, etc.), Developmental Test and Evaluation (DT&E), and Operational Test and Evaluation (OT&E) on the AOC 10.2 baseline, to include test planning, conduct, and documentation review. ***FY 2013 Plans:*** Plan and implement comprehensive Modernization contractor testing (in-plant integration and test, functional testing, security testing, etc.), Developmental Test and Evaluation (DT&E), and Operational Test and Evaluation (OT&E) on the AOC 10.2 baseline, to include test planning, conduct, and documentation review. ***FY 2014 Plans:*** N/A			
Title: Systems Engineering ***Description:*** Systems Engineering ***FY 2012 Accomplishments:*** System engineering activities included requirements analyses, C2 integration and architecture studies, risk reduction assessments, review of technical documentation (frame architectures, system/subsystem design documents, etc.), prototyping activities and feedback assessments (to include LEI), system design/development, integration & test, performance evaluation (10.2 System Requirements Review, 10.2 Intermediate Design Review, etc.), and technical expertise to support MS B. This effort ensured collaboration between the new modernization contractor and multiple AF, DoD, and commercial providers to allow for successful integration and out-year sustainment. ***FY 2013 Plans:*** System engineering activities include requirements analyses, C2 integration and architecture studies, risk reduction assessments, review of technical documentation, prototyping activities and feedback assessments (both at the contractor's ITL and the CAOC-X), system development, integration & test (System Test and Evaluation, etc.), performance evaluation (10.2 Critical Design Review, etc.), buildup and fielding of the help desk, and technical expertise to support MS C. This effort ensures continued collaboration between the new Modernization contractor and multiple AF, DoD, and commercial providers to allow for successful development, integration, test and out-year sustainment. ***FY 2014 Plans:***	4.491	4.800	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675117: *Integration Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
N/A			
Title: Program Management Administration	6.631	6.551	0.000
Description: Program Support Administration costs support management with engineering and technical support for development and implementation. ***FY 2012 Accomplishments:*** Program Support: Provided government contract oversight, technical expertise and program management office support associated with AOC WS activities. ***FY 2013 Plans:*** Program Support: Provide government contract oversight, technical expertise and program management office support associated with AOC WS activities. ***FY 2014 Plans:*** N/A			
Accomplishments/Planned Programs Subtotals	78.641	50.674	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• RDTE: BA04: PE 0604458F: *AOC Increment 10.2*	0.000	0.000	58.861		58.861	58.909	0.000	0.000	0.000	0.000	117.770
• OPAF: BA03: Line Item # 834530: *Air & Space Operations Ctr - WPN SYS*	18.431	33.907	25.129		25.129	20.996	16.470	12.450	7.136	Continuing	Continuing

Remarks

D. Acquisition Strategy

The acquisition strategy builds on existing capabilities using evolutionary acquisition to standardize, modernize and sustain the AOC. The AOC Modernization Contract was competitively awarded on 25 October 2011, but due to contract protests and associated delays, the actual start date was 20 December 2011. The Modernization contractor is using a system of systems perspective, and is following systems engineering rigor, to evolve AOC to a Net-Centric environment, compliant with DoD Services Oriented Architecture (SOA) standards.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675117: *Integration Development*

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675117: *Integration Development*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
10.1 Integration & Version Upgrades	C/CPAF	Lockheed Martin-WSI:Colorado Springs, CO	-	0.000		0.000		0.000		-		0.000	0.000	0.000	67.823
10.1 Integration & Version Upgrades (Organic)	Various	Various:Various,	-	3.396	Jan 2012	0.000		0.000		-		0.000	0.000	3.396	3.343
IAMD	TBD	TBD:TBD,	-	1.490	Jun 2013	0.000		0.000		-		0.000	0.000	1.490	17.762
10.2 Modernization	Various	Various:Various,	-	0.000		0.000		0.000		-		0.000	0.000	0.000	0.000
10.2 Modernization Contract	C/Various	Northrop Grumman:Herndon, VA	-	58.363	Mar 2012	38.823	Dec 2012	0.000		-		0.000	0.000	97.186	119.000
Training	C/Various	Various:Various,	-	0.463	Nov 2011	0.000		0.000		-		0.000	0.000	0.463	0.000
Prototyping	C/CPFF	Jacobs:Hanscom AFB, MA	-	3.282	Jan 2012	0.000		0.000		-		0.000	0.000	3.282	7.000
		Subtotal	0.000	66.994		38.823		0.000		0.000		0.000	0.000	105.817	214.928

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test 10.1 Integration and Version Upgrades	Various	Various:Various,	-	0.225	Oct 2011	0.000	Nov 2012	0.000		-		0.000	0.000	0.225	0.000
Test 10.2 Modernization	Various	Various:Various,	-	0.300	Oct 2011	0.500	Oct 2012	0.000		-		0.000	0.000	0.800	0.000
		Subtotal	0.000	0.525		0.500		0.000		0.000		0.000	0.000	1.025	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675117: *Integration Development*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	SS/ Various	MITRE:Bedford, MA	-	4.491	Oct 2011	4.800	Oct 2012	0.000		-		0.000	0.000	9.291	0.000
Program Management Administration (PMA)	Various	Various:Hanscom AFB, MA	-	6.631	Oct 2011	6.551	Oct 2012	0.000		-		0.000	0.000	13.182	0.000
		Subtotal	0.000	11.122		11.351		0.000		0.000		0.000	0.000	22.473	0.000

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	78.641		50.674		0.000		0.000		0.000	0.000	129.315	214.928

Remarks

In FY 2014, project number 675117, Integration Development, AOC Increment 10.2 efforts transferred to PE 0604458F, project number 644945, AOC Increment 10.2, in order to improve transparency for this major program.

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675117: *Integration Development*

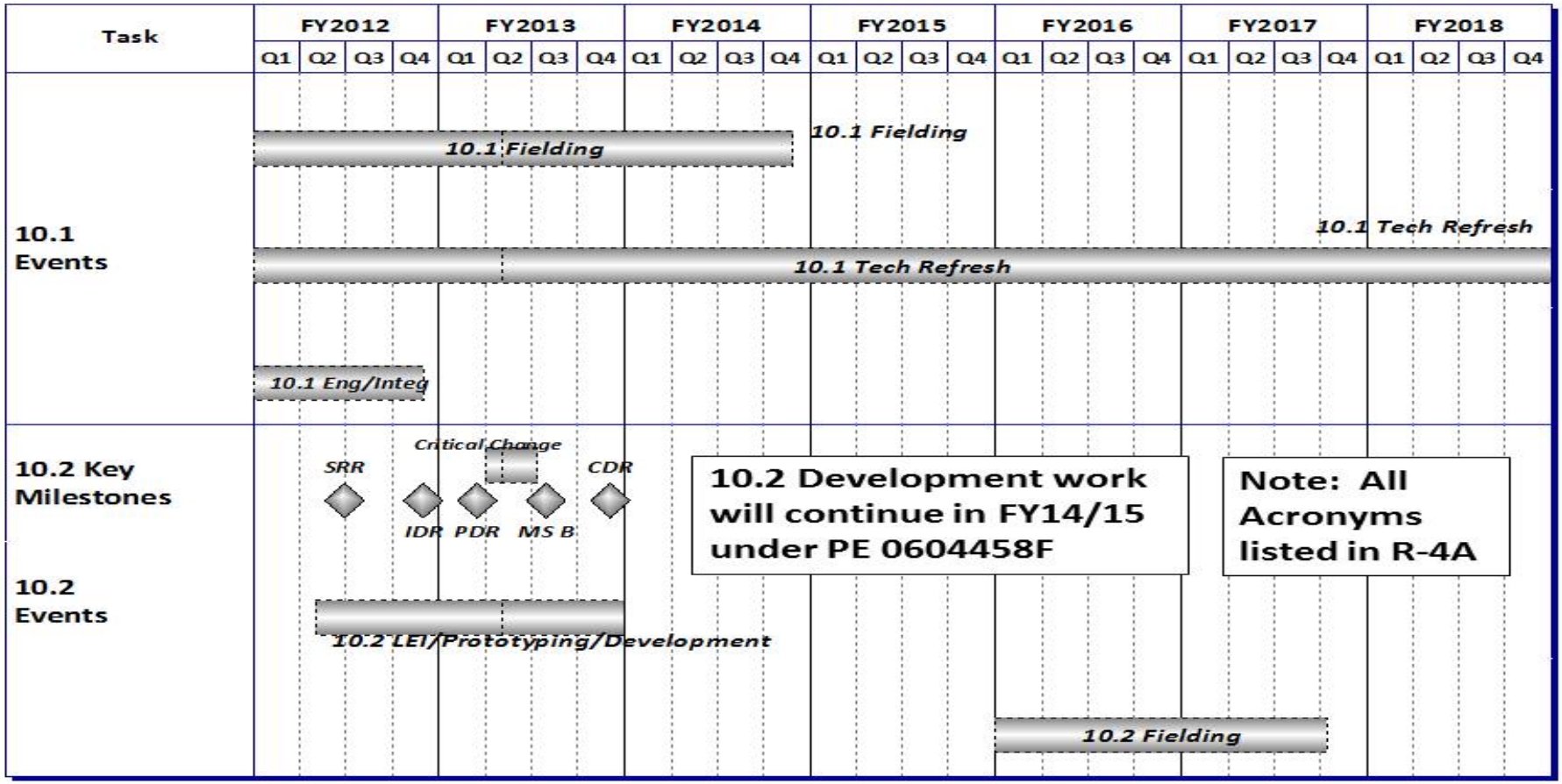


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207410F: *Air & Space Operations Center (AOC)*	**PROJECT** 675117: *Integration Development*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Increment 10.1 Fielding	1	2012	4	2014
Increment 10.1 Tech Refresh	1	2012	4	2018
Increment 10.1 Engineering / Integration	1	2012	4	2012
Increment 10.2 Critical Change	2	2013	3	2013
Increment 10.2 System Requirement Review (SRR)	2	2012	2	2012
Increment 10.2 Initial Design Review (IDR)	4	2012	4	2012
Increment 10.2 Preliminary Design Review (PDR)	1	2013	1	2013
Increment 10.2 Milestone B (MS B)	3	2013	3	2013
Increment 10.2 Critical Design Review (CDR)	4	2013	4	2013
Increment 10.2 Limited Early Installation (LEI) / Prototyping / Development	2	2012	4	2013
Increment 10.2 Fielding	1	2016	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675218: *Applications Development*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675218: *Applications Development*	-	31.398	18.547	15.106	-	15.106	29.919	11.722	7.571	7.708	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY 2014, the Personnel Recovery Command and Control (PRC2) efforts transferred from project number 675218, Applications Development, to project number 675221, Personnel Recovery Command and Control (PRC2), in order to improve transparency for this Joint use application.

A. Mission Description and Budget Item Justification

This budget activity funds operational development necessary to acquire, modify, and sustain segments of Air Force's Command and Control (C2) capabilities and services. Applications Development provides worldwide operational capabilities for AF C2 in support of DoD, Coalition Partners, and other government agencies. These efforts focus on, but are not limited to, support of the Combined/Joint Force Air Component Commander (C/JFACC) that provides air, space and cyber support as presented to the Air Operations Center (AOC) and to other C2 systems. Applications Development activities include but are not limited to the following: 1) Command and Control Air Operations Suite-Command and Control Information Services Increment I (C2AOS-C2IS Inc I) creates web-enabled information services to expose air operations data using standardized schemas, such as those developed by the Air Operations Community of Interest (AO COI). C2AOS-C2IS Inc I also develops, matures, fields, and maintains modular net-centric C2 applications for air battle planning, execution, and management functions; 2) Command and Control Air Operations Suite-Command and Control Information Services Increment II (C2AOS-C2IS Inc II) will focus on but not be limited to, the remainder of Theater Battle Management Core Systems-Force Level (TBMCS-FL) functionality not addressed in C2AOS-C2IS Inc I requirements as well as providing new C2 capabilities for planning and execution of 4th & 5th Generation Fighter Platforms, Network Enabled Weapons (NEW), interoperability with other evolving Global Command & Control System Family of Systems (GCCS FoS) and other Service programs, and for Force Level data migration; and 3) Personnel Recovery Command and Control (PRC2) program which develops and delivers tools and services for collaborating, planning and managing search and rescue efforts, and disseminating related information

Core activities for Applications Development include but are not limited to the following: 1) developing capabilities to support planning and replanning of the Air Battle Plan; generation and dissemination of the Air Tasking Order; defense planning and execution; targeting; weaponeering; personnel recovery tasks; other applications and services supporting C2 in the joint environment; 2) providing support to and participating in the AO COI to improve air operations information interoperability among all joint and coalition systems within the AO domain; 3) developing and assessing C2 air, space, intelligence, surveillance, reconnaissance, and cyber technologies that will improve joint and coalition warfighter interoperability, including participation in North Atlantic Treaty Organization (NATO) and Coalition interoperability exercises, demonstrations, trials, and activities; 4) transitioning existing C2 capabilities to a net-centric environment; and 5) improving operational level C2 of Integrated Air and Missile Defense (IAMD). Applications Development efforts include evaluation and maturation of future air, space, and cyber C2 concepts identified through research, risk reduction, prototyping, current operations, exercises, and demonstrations.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675218: *Applications Development*

Activities also include studies and analysis to support both current program planning and execution, as well as future program planning.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: NATO ***Description:*** North Atlantic Treaty Organization (NATO) and International Cooperation Research and Development. Efforts to develop air, space, intelligence, surveillance, reconnaissance and cyber Information Exchange Requirements and capabilities between U.S. and NATO / Coalition systems to promote interoperability. ***FY 2012 Accomplishments:*** Developed technologies to improve joint and coalition warfighter capability. ***FY 2013 Plans:*** Development of technologies to improve joint and coalition warfighter capability. ***FY 2014 Plans:*** Continue development of technologies that improve joint and coalition warfighter capability.	0.500	0.300	0.300
Title: C2AOS-C2IS Inc I ***Description:*** Command and Control Air Operations Suite - Command and Control Information Services Increment I (C2AOS-C2IS Inc I) develops modular net-centric C2 applications for air battle planning, execution and management functions and creates web-enabled information services to expose air operations data in TBMCS applications and systems using standardized schemas including Capability Packages (CP) 1 and 2. - CP 1 Air Tasking Order Management System (ATOMS)and Request Information Services for Command and Control (RISC2) - CP 2 Integrated Air and Missile Defense (IAMD) Planner and Airspace Management Application/Airspace Information Service (ASMA/ASIS). ***FY 2012 Accomplishments:*** Continued development/testing of Airspace prototype; worked towards limited fielding in FY13. Competed contract for Theater Air Planner/Execution Management and Replanning/Master Air Attack Planning-Toolkit capabilities to include but not limited to dynamic planning and replanning, planning for network enabled weapons, and C2 of Integrated Air & Missile Defense (C2 of IAMD), Request Information Services for C2 (RISC2). ***FY 2013 Plans:***	23.958	11.316	7.748

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675218: *Applications Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Awarded Fixed Price Incentive Firm contract 21 Dec 2012 for ATOMS and Cost Plus Incentive Fee contract for 20 Dec 2012 Request Information Services for C2 (RISC2) capabilities. Working towards competing and awarding follow-on contract(s) for but not limited to the development of Air Space Management Application / Air Space Information Service (ASMA/ASIS) and C2 of IAMD capabilities. ***FY 2014 Plans:*** Continuing development on but not limited to ATOMS, RISC2, ASMA/ASIS and C2 of IAMD capabilities. Beginning testing and fielding of ATOMS.			
Title: PRC2 ***Description:*** Personnel Recovery Command and Control (PRC2) develops and delivers tools and services for collaborating, planning and managing search and rescue efforts, and disseminating related information. The system collects, stores and delivers personnel/identity biometric data, emergency locator beacon registrations, isolated personnel reports, evasion plans of action, incident reports and other information management capabilities for predictive, preventive and personnel vulnerability analysis/assessment in support of Personnel Recovery across Department of Defense and other national and international entities. ***FY 2012 Accomplishments:*** Continued refinement and coordination of Personnel Recovery Mission Software (PRMS) Mission Manager v1.0 requirements which provided mission management capabilities, captured data regarding events, and automated collection of information for incident reports. Validated joint requirements received from lead command. Preparation for Material decision is underway for Mission Manager v1.0 increments. Capability to be fielded in increments. ***FY 2013 Plans:*** Planning testing of, and supporting the fielding decision for PRMS Mission Manager v1.0 which provides mission management capabilities, captures data regarding events, collaborates and automates event information collection for incident reports. Refining requirements for multiple increments of Mission Manager with a Joint Working Group to identify Air Force other Services capability needs/priorities. ***FY 2014 Plans:*** PRC2 efforts transferred to project number 675221 (PRC2) in order to improve transparency for this Joint use application.	1.000	0.699	0.000
Title: C2AOS-C2IS Inc II ***Description:*** Command and Control Air Operations Suite - Command and Control Information Services Increment II (C2AOS-C2IS Inc II) develops modular net-centric C2 applications for air battle planning, execution and management functions and creates web-enabled information services to expose air operations data in TBMCS applications and systems using standardized schemas.	0.000	0.298	1.192

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675218: *Applications Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
As well as, providing new C2 capabilities for planning and execution of 4th & 5th Generation Fighter Platforms, Network Enabled Weapons (NEW), interoperability with other evolving Global Command & Control System Family of Systems (GCCS FoS) and other Service programs, and for Force Level data migration. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** Planning for the development of the remainder of Theater Battle Management Core Systems-Force Level (TBMCS-FL) functionality not addressed in C2AOS-C2IS Inc I requirements, and new C2 capabilities for planning and execution of 4th & 5th Generation Fighter Platforms, Network Enabled Weapons (NEW), interoperability with other evolving Global Command & Control System Family of Systems (GCCS FoS) and other Service programs, and Force Level data migration. ***FY 2014 Plans:*** Continue to plan for the development of the remainder of TBMCS-FL functionality as well as 4th & 5th Generation Fighter Platforms, Network Enabled Weapons (NEW), interoperability with other evolving Global Command & Control System Family of Systems (GCCS FoS) and other Service programs, and for Force Level data migration. Potential opportunities to conduct protyping to allow for better requirements refinement.			
Title: Program Management Administration ***Description:*** Program Support Administration costs support management with engineering and technical support for development and implementation. ***FY 2012 Accomplishments:*** Program Support: Provided government contract oversight, technical expertise and program management office support associated with AOC WS activities. ***FY 2013 Plans:*** Program Support: Provide government contract oversight, technical expertise and program management office support associated with AOC WS activities. ***FY 2014 Plans:*** Program Support: Continue to provide government contract oversight, technical expertise and program management office support associated with AOC WS activities.	3.831	3.005	2.716
Title: Test and Evaluation	0.493	1.126	1.600

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675218: *Applications Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Test and Evaluation ***FY 2012 Accomplishments:*** Test and Evaluation focused on Developmental Test and Evaluation (DT&E), and Operational Test and Evaluation (OT&E), to include test planning, conduct and documentation review. ***FY 2013 Plans:*** Test and Evaluation will focus on Developmental Test and Evaluation (DT&E), and Operational Test and Evaluation (OT&E), to include test planning, conduct and documentation review. ***FY 2014 Plans:*** Test and Evaluation will continue to focus on Developmental Test and Evaluation (DT&E), and Operational Test and Evaluation (OT&E), to include test planning, conduct and documentation review.			
Title: System Engineering ***Description:*** System Engineering ***FY 2012 Accomplishments:*** System engineering activities included requirements analysis, C2 system integration and architecture assessments, risk reduction studies and preparation of technical documentation. ***FY 2013 Plans:*** System engineering activities include requirements analysis, C2 system integration and architecture assessments, risk reduction studies and preparation of technical documentation. ***FY 2014 Plans:*** System engineering activities continue to include requirements analysis, C2 system integration and architecture assessments, risk reduction studies and preparation of technical documentation.	1.616	1.803	1.550
Accomplishments/Planned Programs Subtotals	31.398	18.547	15.106

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA03: Line Item # 834520: *Theater Battle Management C2 System*	1.113	1.206	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675218: *Applications Development*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost

Remarks

D. Acquisition Strategy

Projects will be awarded following full and open competition and will use an evolutionary acquisition strategy based on incremental development leveraging the C2 Applications and Information Services Development (C2AD) Indefinite Delivery/Indefinite Quantity (ID/IQ) contract.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675218: *Applications Development*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Tasking Order Management System (ATOMS)	C/Various	Lockheed Martin:Colorado Springs, CO	-	11.116	Dec 2012	0.700	Dec 2012	0.000		-		0.000	0.000	11.816	
Request Information Services for Command and Control (RISC2)	C/Various	Science Applications International Corporation:McLean, VA	-	1.074	Dec 2012	0.000		0.000		-		0.000	0.000	1.074	
Air Space Management Application/Air Space Information Service (ASMA/ASIS)	C/Various	TBD:TBD,	-	4.000	Jun 2013	8.110	Jun 2013	3.115	Jun 2013	-		3.115	Continuing	Continuing	
Command and Control of Integrated Air and Missile Defense (C2 of IAMD)	C/TBD	TBD:TBD,	-	8.000	May 2013	3.044	May 2013	6.125	Jun 2014	-		6.125	0.000	17.169	
PRC2 Follow on Development	PO	Ogden ALC:Hill AFB, UT	-	1.000	Mar 2012	0.699	Jun 2013	0.000		-		0.000	0.000	1.699	TBD
C2AOS Air Space Development	C/CPFF	Northrop Grumman:Bethpage, NY	-	0.268	Nov 2012	0.060	Mar 2013	0.000		-		0.000	0.000	0.328	4.600
		Subtotal	0.000	25.458		12.613		9.240		0.000		9.240			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675218: *Applications Development*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation.	PO	46th Test Squadron:Eglin AFB, FL	-	0.493	Oct 2011	1.126	Nov 2012	1.600	Nov 2013	-		1.600	Continuing	Continuing	TBD
		Subtotal	0.000	0.493		1.126		1.600		0.000		1.600			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	SS/ Various	MITRE:Bedford, MA	-	1.616	Oct 2011	1.803	Oct 2012	1.550	Oct 2013	-		1.550	Continuing	Continuing	TBD
Program Management Administration	C/Various	Various:Hanscom AFB, MA	-	3.831	Oct 2011	3.005	Oct 2012	2.716	Oct 2013	-		2.716	Continuing	Continuing	TBD
		Subtotal	0.000	5.447		4.808		4.266		0.000		4.266			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	31.398		18.547		15.106		0.000		15.106			

Remarks

In FY 2014, the Personnel Recovery Command and Control (PRC2) efforts transferred from project number 675218, Applications Development, to project number 675221, Personnel Recovery Command and Control (PRC2), in order to improve transparency for this Joint use application.

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675218: *Applications Development*

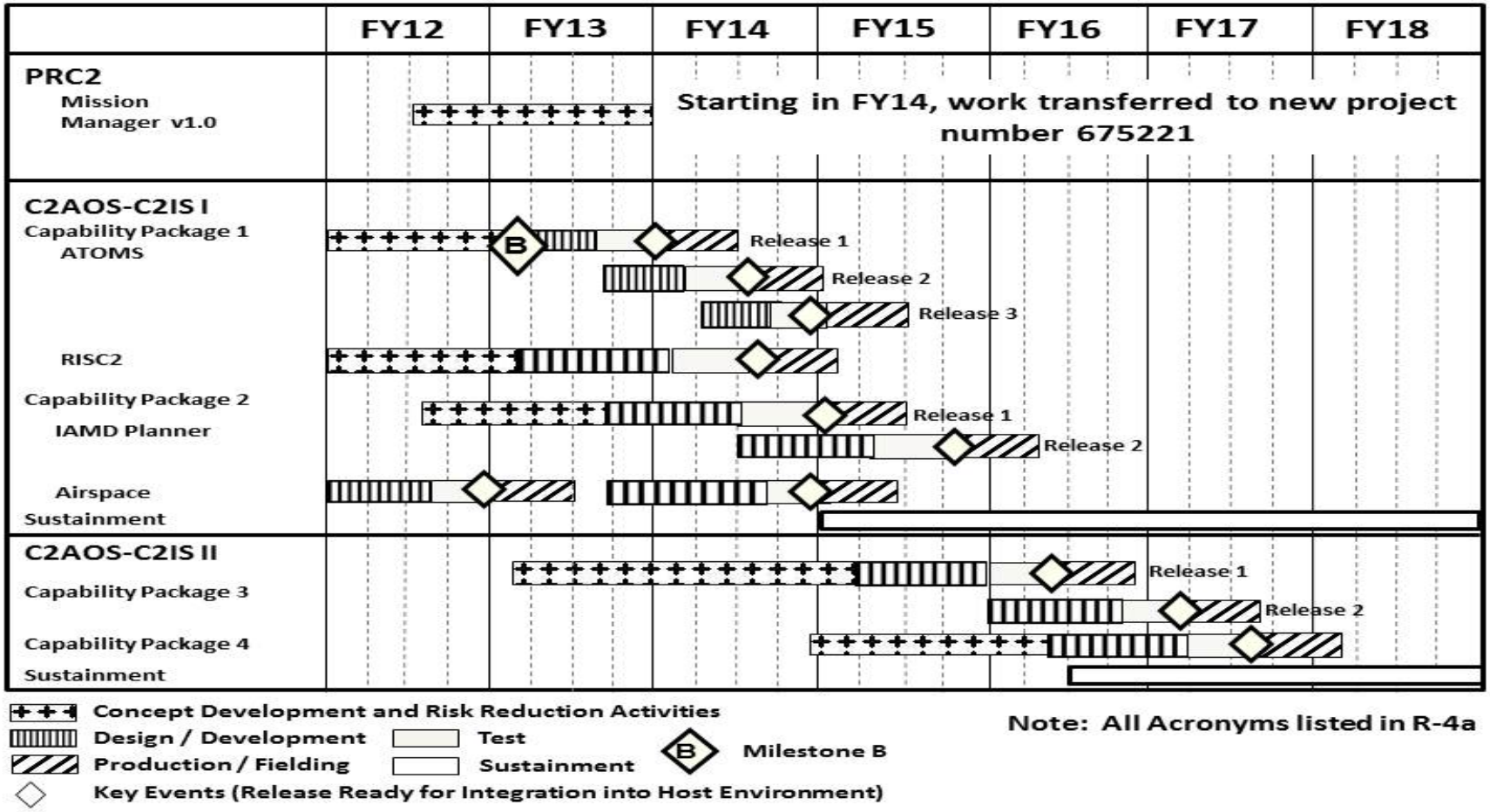


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675218: *Applications Development*

Schedule Details

	Start		End	
Events	Quarter	Year	Quarter	Year
Personnel Recovery C2 (PRC2) Mission Manager 1.0 Concept Development and Risk Reduction Activities	3	2012	4	2013
C2 Air Operations Suite-C2 Information Services (C2AOS-C2IS) Milestone B	1	2013	1	2013
Air Tasking Order Management System (ATOMS) Capability Package (CP) 1 Release (Rel) 1 Development	1	2013	3	2013
ATOMS CP 1 Rel 1 Testing	3	2013	4	2013
ATOMS CP 1 Rel 1 Fielding	1	2014	2	2014
ATOMS CP 1 Rel 2 Development	3	2013	1	2014
ATOMS CP 1 Rel 2 Testing	1	2014	3	2014
ATOMS CP 1 Rel 2 Fielding	3	2014	1	2015
ATOMS CP 1 Rel 3 Development	2	2014	3	2014
ATOMS CP 1 Rel 3 Testing	3	2014	1	2015
ATOMS CP 1 Rel 3 Fielding	1	2015	3	2015
Request Information Services for C2 (RISC2) CP 1 Development	1	2013	1	2014
RISC2 CP 1 Testing	1	2014	3	2014
RISC2 CP 1 Fielding	3	2014	1	2015
Integrated Air and Missile Defense (IAMD) Planner CP 2 Rel 1 Development	3	2013	3	2014
IAMD Planner CP 2 Rel 1 Testing	3	2014	1	2015
IAMD Planner CP 2 Rel 1 Fielding	1	2015	2	2015
IAMD Planner CP 2 Rel 2 Development	3	2014	2	2015
IAMD Planner CP 2 Rel 2 Testing	2	2015	4	2015
IAMD Planner CP 2 Rel 2 Fielding	4	2015	2	2016
Air Space Management Application (ASMA) Development	1	2012	3	2012

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675218: *Applications Development*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
ASMA Testing	3	2012	4	2012
ASMA Fielding	1	2013	2	2013
ASMA / Air Space Information Services (ASIS) Development	3	2013	3	2014
ASMA / ASIS Testing	3	2014	4	2014
ASMA / ASIS Fielding	1	2015	2	2015
CP 3 Rel 1 Development	2	2015	4	2015
CP 3 Rel 1 Testing	1	2016	2	2016
CP 3 Rel 1 Fielding	2	2016	4	2016
CP 3 Rel 2 Development	1	2016	4	2016
CP 3 Rel 2 Testing	4	2016	1	2017
CP 3 Rel 2 Fielding	1	2017	3	2017
CP 4 Development	2	2016	1	2017
CP 4 Testing	2	2017	3	2017
CP 4 Fielding	3	2017	1	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675220: *Unit Level*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675220: *Unit Level*	-	6.819	7.094	5.518	-	5.518	9.213	7.396	7.882	8.024	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

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

Activities also include studies and analysis to support both current program planning and execution, as well as future program planning.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Software Development	4.238	3.889	2.939
Description: UL/UC2 operations and intelligence capabilities development/integration.			
FY 2012 Accomplishments: Completed development and started testing of UL/UC2 Ops Increment 2. Planning UC2 Version 1.0 which provides migration of UL/UC2 into a service oriented infrastructure capable of meeting the Net-Ready key performance parameter; implements elements of the Installation Control Center (ICC) Enabling Concept, combining unit level intelligence, operations and other functional areas into a single installation wide C2 capability; and continues to add external interfaces to eliminate duplicate data entry.			
FY 2013 Plans: Completing testing of UL/UC2 Ops Increment 2. Continuing planning activities for UC2 Version 1.0 which will provide migration of UL/UC2 into a service oriented infrastructure capable of meeting the Net-Ready key performance parameter, implementing			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675220: *Unit Level*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
elements of the Installation Control Center (ICC) Enabling Concept. Writing the UC2 Version 1.0 System Requirements Document and program office cost estimate. ***FY 2014 Plans:*** Plan and award the contract for UL/UC2 Modernization Release 1 (MR1). UL/UC2 MR1 will provide service oriented infrastructure capable of meeting the Net-Ready key performance parameter, and begin the transition to virtualizing UL/UC2 software.			
Title: Testing and Test Support ***Description:*** Testing and test support activities. ***FY 2012 Accomplishments:*** Provided testing and test support activities for UL/UC2 Ops Increment 2. ***FY 2013 Plans:*** Completing testing and test support activities for UL/UC2 Ops Increment 2. ***FY 2014 Plans:*** Initial testing and evaluation involved in UL/UC2 MR1.	0.776	0.790	0.531
Title: System Engineering ***Description:*** System Engineering. ***FY 2012 Accomplishments:*** Provided system engineering and technical support, including requirements analysis, for UL/UC2 Ops Increment 2 ***FY 2013 Plans:*** Performing system engineering and technical support, including requirements analysis, for UC2 Version 1.0. ***FY 2014 Plans:*** Will continue to perform system engineering and technical support, including requirements analysis for UL/UC2 MR1, MR2, and UC2 Version 1.0.	0.710	1.067	0.825
Title: Program Management Administration ***Description:*** Program Support Administration costs support management with engineering and technical support for development and implementation. ***FY 2012 Accomplishments:***	1.095	1.348	1.223

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675220: *Unit Level*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Program Support: Provided government contract oversight, technical expertise and program management office support associated with UL/UC2 Ops and UC2 activities. ***FY 2013 Plans:*** Program Support: Provide government contract oversight, technical expertise and program management office support associated with UL/UC2 Ops and UC2 activities. ***FY 2014 Plans:*** Program Support: Continue to provide government contract oversight, technical expertise and program management office support associated with UL/UC2 Ops and UC2 activities.			
Accomplishments/Planned Programs Subtotals	6.819	7.094	5.518

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA03: Line Item # 834520: *Theater Battle Management C2 System*	1.906	3.878	3.874		3.874	3.860	3.972	4.183	4.258	Continuing	Continuing

Remarks

D. Acquisition Strategy

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

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675220: *Unit Level*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Increment Development	C/CPIF	Lockheed Martin:Hampton, VA	-	2.652	Jan 2012	0.000		0.000		-		0.000	0.000	2.652	13.861
Arch Study/Transition Planning	Various	Various:Various,	-	1.086	Mar 2012	0.000		0.000		-		0.000	0.000	1.086	TBD
Increment 2 Service Pack	C/CPFF	Lockheed Martin:Hampton, VA	-	0.000		2.889	Jan 2013	0.000		-		0.000	0.000	2.889	TBD
Third Party Integration	Various	Various:Various,	-	0.500	Mar 2012	1.000	Mar 2013	0.954	Dec 2013	-		0.954	Continuing	Continuing	TBD
UL/UC2 Modernization Release (MR1)	C/CPFF	TBD:TBD,	-	0.000		0.000		1.985	Mar 2014	-		1.985	Continuing	Continuing	10.530
		Subtotal	0.000	4.238		3.889		2.939		0.000		2.939			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Support	PO	46TS:Eglin AFB, FL	-	0.776	Oct 2011	0.790	Oct 2012	0.531	Oct 2013	-		0.531	Continuing	Continuing	TBD
		Subtotal	0.000	0.776		0.790		0.531		0.000		0.531			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	C/CPAF	MITRE:Bedford, MA	-	0.710	Oct 2011	1.067	Oct 2012	0.825	Oct 2013	-		0.825	Continuing	Continuing	TBD

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675220: *Unit Level*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration	C/Various	Various:Hanscom AFB, MA	-	1.095	Oct 2011	1.348	Oct 2012	1.223	Oct 2013	-		1.223	Continuing	Continuing	TBD
		Subtotal	0.000	1.805		2.415		2.048		0.000		2.048			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	6.819		7.094		5.518		0.000		5.518			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675220: *Unit Level*

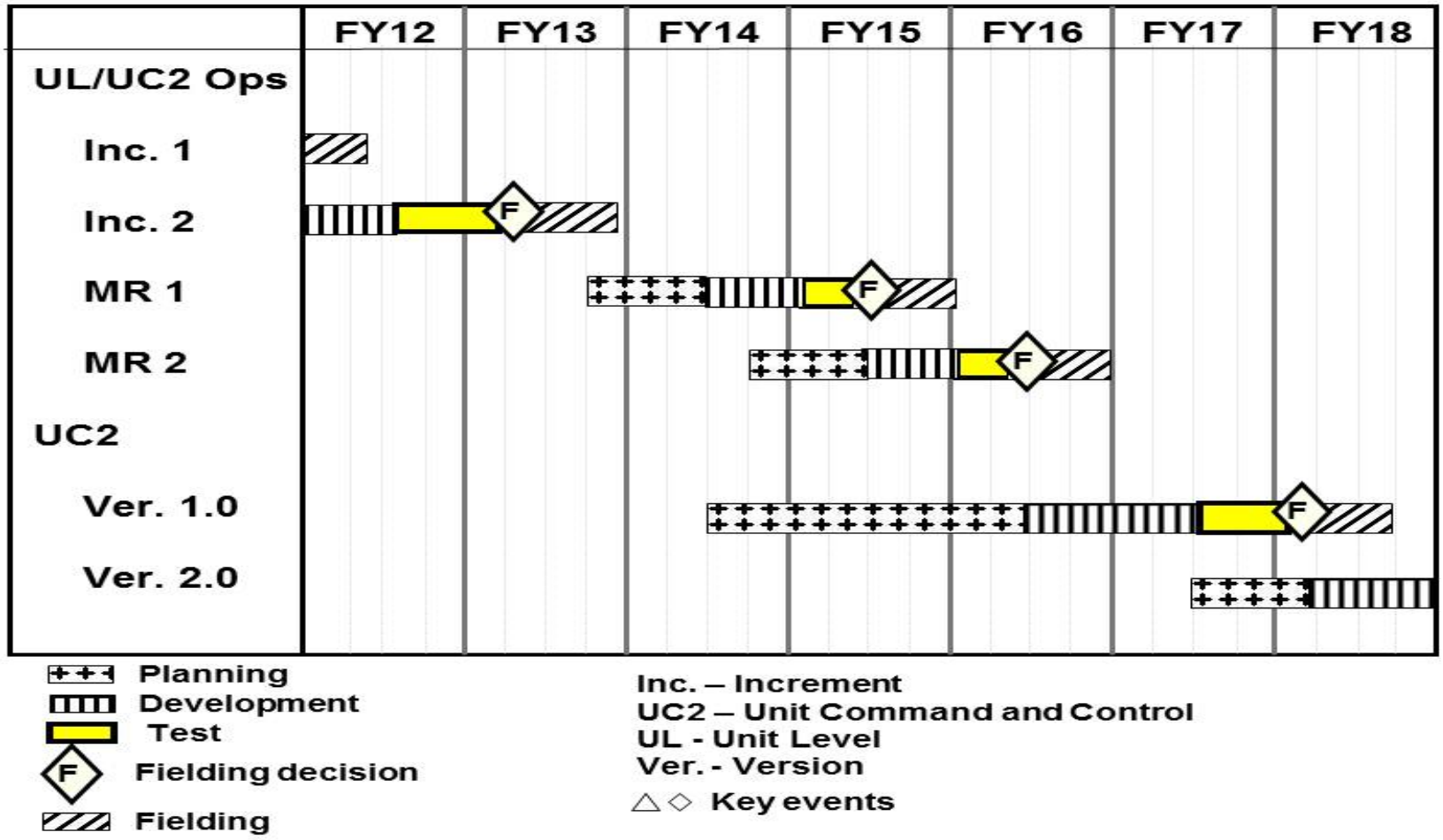


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207410F: *Air & Space Operations Center (AOC)*	**PROJECT** 675220: *Unit Level*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Unit Level / Unit C2 (UL/UC2) Ops Increment 1 Fielding	1	2012	2	2012
UL/UC2 Ops Increment 2 Development	1	2012	3	2012
UL/UC2 Ops Increment 2 Testing	3	2012	1	2013
UL/UC2 Ops Increment 2 Fielding Decision	2	2013	2	2013
UL/UC2 Ops Increment 2 Fielding	2	2013	4	2013
UL/UC2 Modernization Release (MR) 1 Development	3	2014	1	2015
UL/UC2 MR 1 Testing	1	2015	2	2015
UL/UC2 MR 1 Fielding Decision	2	2015	2	2015
UL/UC2 MR 1 Fielding	2	2015	1	2016
UL/UC2 MR 2 Development	3	2015	1	2016
UL/UC2 MR 2 Testing	1	2016	2	2016
UL/UC2 MR 2 Fielding Decision	3	2016	3	2016
UL/UC2 MR 2 Fielding	3	2016	4	2016
UC2 Version 1.0 Development	3	2016	2	2017
UC2 Version 1.0 Testing	3	2017	1	2018
UC2 Version 1.0 Fielding Decision	1	2018	1	2018
UC2 Version 1.0 Fielding	1	2018	3	2018
UC2 Version 2.0 Development	1	2018	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675221: *Personnel Recovery Command and Control (PRC2)*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675221: *Personnel Recovery Command and Control (PRC2)*	-	0.000	0.000	2.196	-	2.196	2.446	2.462	2.459	2.503	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY 2014, project number 675221, Personnel Recovery Command and Control (PRC2) efforts were transferred from project number 675218, Applications Development, in order to improve transparency for this Joint use application.

A. Mission Description and Budget Item Justification

This budget activity funds operational development necessary to acquire, modify, and sustain a segment of Air Force's Command and Control (C2) capabilities and services associated with Personnel Recovery. The Personnel Recovery Command and Control (PRC2) program develops and delivers tools and services for planning, collaborating and managing search and rescue efforts, and disseminating related information. PRC2 provides an adaptive, networked, decentralized and situationally-appropriate personnel recovery command and control system which supports personnel accountability and recovery missions worldwide. PRC2 delivers a globally accessible, collaborative, interoperable and integrated system to prevent, prepare for and respond to isolating events across the Range of Military Operation in the joint/coalition operating environment. The system collects, stores and delivers personnel/identity biometric data, emergency locator beacon registrations, isolated personnel reports, evasion plans of action, incident reports and other information management capabilities for predictive, preventive and personnel vulnerability analysis/assessment in support of Personnel Recovery across Department of Defense and other national and international entities. Future capabilities and upgrades will incorporate several mission threads capable of sharing important data to Recovery Coordinators located in the Air Operations Center (AOC) as well as Area of Responsibility (AoR) which will expedite initial recovery planning processes.

Activities also include studies and analysis to support both current program planning and execution, as well as future program planning.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: PRC2	0.000	0.000	0.896
Description: Personnel Recovery Command and Control (PRC2) develops and delivers tools and services for planning and managing search and rescue efforts, and disseminating related information.			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675221: *Personnel Recovery Command and Control (PRC2)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: N/A ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** Refining Mission Manager 1.0 requirements. Working with the Joint Requirements Working Group to clarify and refine approved JROC ICD requirements.			
Title: Test and Evaluation ***Description:*** Test and Evaluation ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** Test and Evaluation will focus on test activities to determine if the prototype is sufficient for fielding in FY14. Follow on activities will focus on refining test documentation to support the development and fielding of Mission Manager in the Joint environment.	0.000	0.000	0.100
Title: Systems Engineering ***Description:*** Systems Engineering ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** Will continue to perform system engineering and technical support, including requirements analysis for PRC2 activities.	0.000	0.000	0.236
Title: Program Management Administration	0.000	0.000	0.964

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675221: *Personnel Recovery Command and Control (PRC2)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Program Support Administration costs support management with engineering and technical support for development and implementation. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** Program Support: Continue to provide government contract oversight, technical expertise and program management office support associated with PRC2 activities.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	2.196

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA03: Line Item # 834520: *Theater Battle Management C2 System*	0.000	0.000	1.240		1.240	1.261	1.270	1.279	1.302	Continuing	Continuing

Remarks

D. Acquisition Strategy

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

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675221: *Personnel Recovery Command and Control (PRC2)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PRC2 Follow on Development	PO	Ogden ALC:Hill AFB, UT	-	0.000		0.000		0.896	Mar 2014	-		0.896	Continuing	Continuing	TBD
		Subtotal	0.000	0.000		0.000		0.896		0.000		0.896			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation.	PO	46th Test Squardon:Eglin AFB, FL	-	0.000		0.000		0.100	Oct 2013	-		0.100	Continuing	Continuing	TBD
		Subtotal	0.000	0.000		0.000		0.100		0.000		0.100			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	SS/ Various	MITRE:Bedford, MA	-	0.000		0.000		0.236	Oct 2013	-		0.236	Continuing	Continuing	TBD
Program Management Administration	C/Various	Various:Hanscom AFB, MA	-	0.000		0.000		0.964	Oct 2013	-		0.964	Continuing	Continuing	TBD
		Subtotal	0.000	0.000		0.000		1.200		0.000		1.200			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675221: *Personnel Recovery Command and Control (PRC2)*	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		0.000		2.196		0.000		2.196			

Remarks

In FY 2014, project number 675221, Personnel Recovery Command and Control (PRC2), efforts were transferred from project number 675218, Applications Development, Personnel Recovery Command and Control (PRC2) in order to improve transparency for this Joint use application.

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207410F: *Air & Space Operations Center (AOC)*	PROJECT 675221: *Personnel Recovery Command and Control (PRC2)*

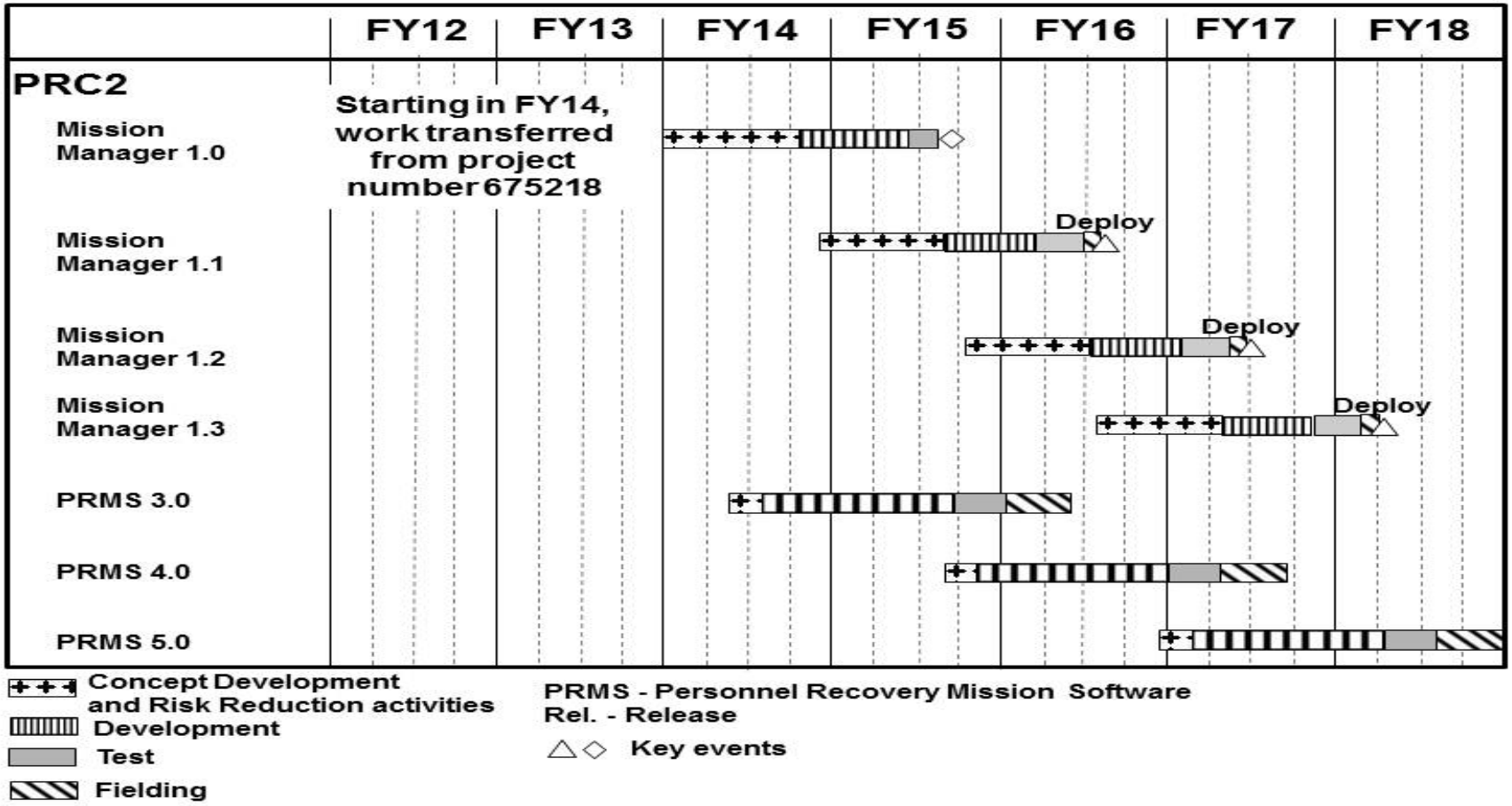


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207410F: *Air & Space Operations Center (AOC)*	**PROJECT** 675221: *Personnel Recovery Command and Control (PRC2)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Mission Manager 1.0 Development	4	2014	2	2015
Mission Manager 1.0 Testing	2	2015	3	2015
Mission Manager 1.0 Fielding	3	2015	3	2015
Mission Manager 1.1 Development	3	2015	1	2016
Mission Manager 1.1 Testing	1	2016	2	2016
Mission Manager 1.1 Fielding	3	2016	3	2016
Mission Manager 1.2 Development	2	2016	1	2017
Mission Manager 1.2 Testing	1	2017	2	2017
Mission Manager 1.2 Fielding	2	2017	2	2017
Mission Manager 1.3 Development	2	2017	4	2017
Mission Manager 1.3 Testing	4	2017	1	2018
Mission Manager 1.3 Fielding	1	2018	2	2018
Personnel Recovery Management System (PRMS) 3.0 Development	3	2014	3	2015
PRMS 3.0 Testing	3	2015	1	2016
PRMS 3.0 Fielding	1	2016	2	2016
PRMS 4.0 Development	4	2015	4	2016
PRMS 4.0 Testing	1	2017	2	2017
PRMS 4.0 Fielding	2	2017	3	2017
PRMS 5.0 Development	1	2017	2	2018
PRMS 5.0 Testing	2	2018	3	2018
PRMS 5.0 Fielding	3	2018	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207412F: *Control and Reporting Center (CRC)*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	3.288	8.653	7.029	-	7.029	0.559	0.569	0.579	0.589	Continuing	Continuing
67485L: *Theater Air Control System Imp (TACSI)*	-	3.288	8.653	7.029	-	7.029	0.559	0.569	0.579	0.589	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

MDAP/MAIS Code(s): 393

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

A. Mission Description and Budget Item Justification

The Control and Reporting Center (CRC) program element provides development and modernization of mobile ground-based capabilities. The CRC is a ground-based theater air control system (TACS) surveillance and battle management command and control (BMC2) element. It consists of facilities, equipment, and people. It is a tailorable, modular, transportable, sustainable, and persistent weapon system employed at the tactical level to support air and surface operations. The CRC projects include development of Theater Air Control Systems Improvement (TACSI) capabilities. Currently USAF CRCs are fully employed in Operations ENDURING FREEDOM, and NOBLE EAGLE. The TACSI project develops and modernizes software and hardware to ensure the CRC remains a robust BMC2 element. These efforts include, but are not limited to, the development and modernization of the AN/TYQ-23 Operations Module (OM) and the AN/TRC-215 Remote Radio Secure Voice System (RRSVS).

AN/TYQ-23 OM is a low source/high demand (LS/HD) rapidly deployable ground-based C2 asset. This automated, computer-based information system provides operators the real-time battlespace picture necessary to plan, direct, and control tactical air operations and airspace management tasks. AN/TRC-215 RRSVS is a mobile, vehicle-mounted voice radio and OM-interface unit. The RRSVS allows real-time, secure voice communication between aircraft operating in the battlespace and ground-based battle management C2 operators located in the OM of the CRC. Activities to include: studies and analysis supporting current and future program planning/future development open system architecture requirements.

OMs and RRSVS units are currently deployed world-wide in support of ongoing operations.

Activities also include studies and analysis supporting current and future program planning and future development of open system architecture requirements.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207412F: *Control and Reporting Center (CRC)*	

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	3.387	8.653	7.029	-	7.029
Current President's Budget	3.288	8.653	7.029	-	7.029
Total Adjustments	-0.099	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.099	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Modernization Efforts to CRC	0.887	6.408	5.553
Description: Modernization efforts to CRC to include: advanced planning, Modular Control System (MCS) upgrades, enhanced radio/radar/data link remoting, integrating upgrades into CRC, AN/TYQ-23 OM Modification, and other future BMC2 modernization efforts exploring open a architecture applications and capabilities.			
FY 2012 Accomplishments: Performed development & testing of software upgrades to RRSVS; and initial development and risk mitigation analysis of AN/TYQ-23 OM Modification.			
FY 2013 Plans: Continuing and will complete development & testing of software upgrades to RRSVS and continuing development, testing & risk mitigation analysis of AN/TYQ-23 OM Modification.			
FY 2014 Plans: Will complete development and begin integration/testing of AN/TYQ-23 OM Modification.			
Title: Test Planning	0.405	0.629	0.955
Description: Continue test and evaluation support			
FY 2012 Accomplishments:			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207412F: *Control and Reporting Center (CRC)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Performed test and evaluation to include, but not limited to: testing changes of software, hardware and transport technology upgrades, and integration and mobility testing for RRSVS; test activities for radio interface with TYQ-23, and AN/TYQ-23 OM Modernization. ***FY 2013 Plans:*** Performing test and evaluation to include, but not limited to: prototype and feasibility testing and developmental testing of changes associated with software, hardware and transport technology upgrades for RRSVS; and test planning for AN/TYQ-23 OM Modification. ***FY 2014 Plans:*** Will perform test, integration and evaluation to include, but not limited to, prototype and feasibility testing of changes associated with software, hardware and transport technology upgrades for AN/TYQ-23 OM Modification with CRC legacy systems.			
Title: Sys Eng/Tech Support ***Description:*** Continue Systems Engineering/Technical Support ***FY 2012 Accomplishments:*** Performed Systems Engineering/Technical Support. ***FY 2013 Plans:*** Performing Systems Engineering/Technical Support. ***FY 2014 Plans:*** Will perform Systems Engineering/Technical Support.	0.668	0.630	0.321
Title: Program Management and Administration ***Description:*** Continue Management Services ***FY 2012 Accomplishments:*** Continued Management Services ***FY 2013 Plans:*** Continuing Management Services ***FY 2014 Plans:*** Will continue Management Services	1.328	0.986	0.200
Accomplishments/Planned Programs Subtotals	3.288	8.653	7.029

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207412F: *Control and Reporting Center (CRC)*

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA07: Line Item # 833040: *Control and Reporting Center*	22.740	23.483	19.292		19.292	39.852	21.562	10.325	2.510	Continuing	Continuing

Remarks

E. Acquisition Strategy

The CRC program is utilizing evolutionary development to modernize and further advance current and future battlespace awareness and tactical BMC2 capabilities. A variety of contract types will be utilized depending on type of effort. Contracting strategy will include but is not limited to open competition, sole source contracts, and interdepartmental purchase requests.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207412F: *Control and Reporting Center (CRC)*	PROJECT 67485L: *Theater Air Control System Imp (TACSI)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Remote Radio Spiral 3	MIPR	AFRL:Rome, NY	-	0.450	Dec 2011	0.000		0.000		-		0.000	0.000	0.450	1.550
Remote Radio Spiral 3.2	MIPR	SPAWARSYSCEN Atlantic:North Charleston, SC	-	0.246	Oct 2012	0.400	Dec 2012	0.000		-		0.000	0.000	0.646	4.402
C2 Engine Upgrade	MIPR	SMDC:REDSTONE ARSENAL, AL	-	0.191	Mar 2013	6.008	Mar 2013	5.553	Oct 2013	-		5.553	Continuing	Continuing	
		Subtotal	0.000	0.887		6.408		5.553		0.000		5.553			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Support	Various	Various:Various,	-	0.668	Oct 2011	0.630	Oct 2012	0.321	Oct 2012	-		0.321	Continuing	Continuing	TBD
		Subtotal	0.000	0.668		0.630		0.321		0.000		0.321			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
46th Test Wing/Other Test Activity	Various	Various:Various,	-	0.405	Dec 2011	0.629	Dec 2012	0.955	Dec 2013	-		0.955	Continuing	Continuing	TBD
		Subtotal	0.000	0.405		0.629		0.955		0.000		0.955			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management & Administration	Various	Various:Various,	-	1.328	Oct 2011	0.986	Oct 2012	0.200	Oct 2013	-		0.200	Continuing	Continuing	TBD
		Subtotal	0.000	1.328		0.986		0.200		0.000		0.200			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207412F: *Control and Reporting Center (CRC)*	PROJECT 67485L: *Theater Air Control System Imp (TACSI)*	

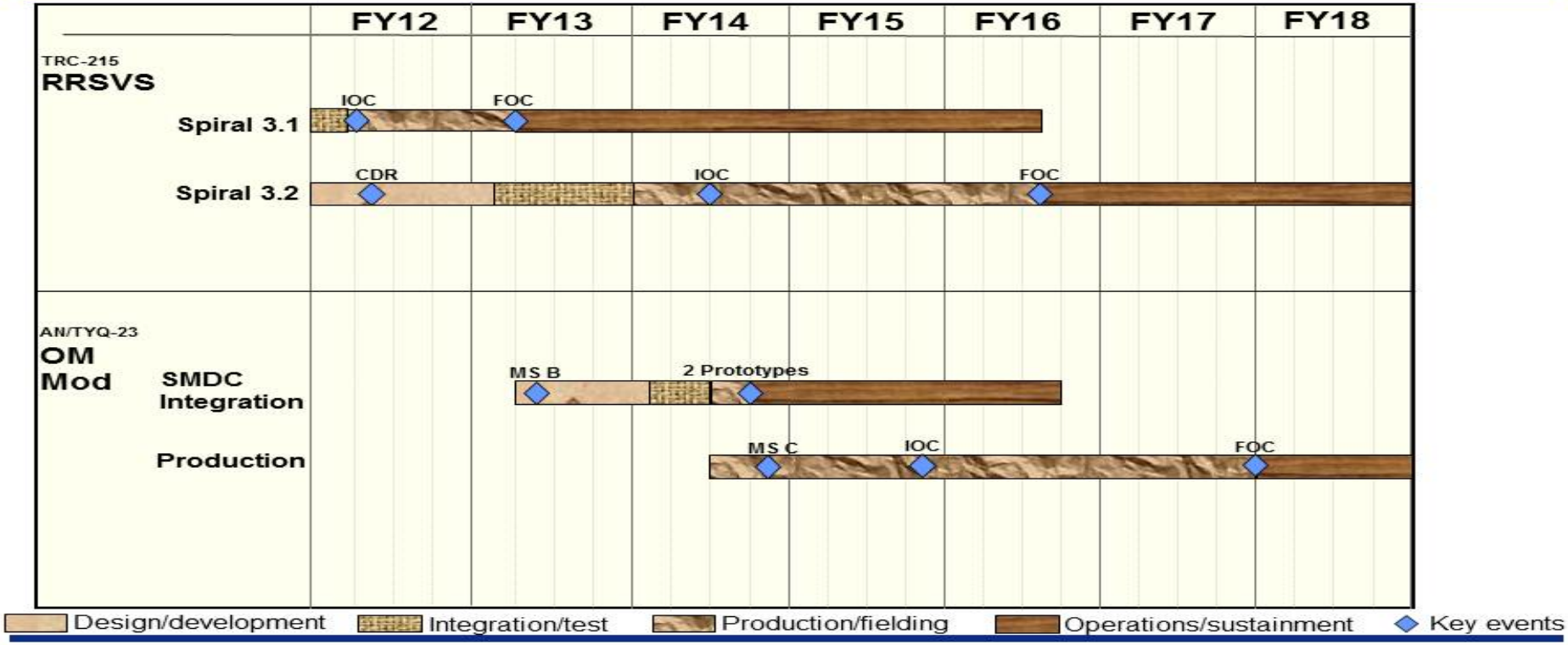
	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	3.288	8.653	7.029	0.000	7.029			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207412F: *Control and Reporting Center (CRC)*	PROJECT 67485L: *Theater Air Control System Imp (TACSI)*

U.S. AIR FORCE

CRC Schedule



1

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207412F: *Control and Reporting Center (CRC)*	**PROJECT** 67485L: *Theater Air Control System Imp (TACSI)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Remote Radio Secure Voice System (RRSVS) 3.1	1	2012	3	2016
RRSVS 3.1 IOC	2	2012	2	2012
RRSVS 3.1 FOC	2	2013	2	2013
RRSVS 3.2	1	2012	4	2018
RRSVS 3.2 Critical Design Review	2	2012	2	2012
RRSVS 3.2 IOC	3	2014	3	2014
RRSVS 3.2 FOC	3	2016	3	2016
Command & Control Operations Module (C2 OM) Modification SMDC Integration	2	2013	3	2016
C2 OM Modification Milestone B	2	2013	2	2013
C2 OM Modification SMDC Integration 2 Prototypes	4	2014	4	2014
C2 OM Modification Production	3	2014	4	2018
C2 OM Modificaton Milestone C	4	2014	4	2014
C2 OM Modification IOC	4	2015	4	2015
C2 OM Modification FOC	1	2018	1	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207417F: *Airborne Warning and Control System (AWACS)*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	111.779	65.200	186.256	-	186.256	161.657	61.769	27.354	27.866	Continuing	Continuing
67411L: *Airborne Warning & Control System (AWACS)*	-	111.779	65.200	186.256	-	186.256	161.657	61.769	27.354	27.866	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Mission: AWACS is the premier airborne platform providing command and control (C2)/battle management (BM) for Commander In Chief and combatant commander tasking in joint, allied, and coalition operations, humanitarian relief, and homeland defense. AWACS provides a real-time picture of friendly, neutral, and hostile air activity. Its capabilities include all-altitude/all-weather surveillance of the battle space; early warning of enemy actions; a real-time ability to find, fix, track, and assess airborne or maritime threats; and detection, location, and identification of electronic emitters.

This program element funds four areas in support of the AWACS program: 1. AWACS Modernization, 2. AWACS Infrastructure and Support Systems, 3. Material Solutions Development and Analysis, and 4. Program Management and Administration (PMA). The first three areas include studies and analysis to support both current planning and execution, as well as future program planning.

1. AWACS Modernization (RDT&E, AF):

a. 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 integration, quality and timeliness of sensor data to the shooter, improve Combat Identification (CID), improve AWACS contribution to Time Critical Targeting via Data Link Infrastructure (DLI), improve electronic support measures processing and enable more effective, faster upgrades via an open-system, Ethernet-based architecture. The upgrade will also update the ground support infrastructure including training systems.

b. The Next Generation Identification Friend or Foe (NGIFF) Program provides AWACS with enhanced IFF interrogator operation to add a more secure Mode 5 capability. NSA declared IFF Mode 4 unsecure and obsolete on 5 Nov 2003. Joint Requirements Oversight Council Memo 047-07 requires IFF Mode 5 interrogation capability by FY14. The new Mode 5 interrogation capability extends the effective range of the AWACS interrogator, while helping discriminate against closely spaced cooperative targets. NGIFF developed and integrated a basic Mode 5 capability on Block 30/35 starting in FY09 and began developing a full Mode 5 capability on Block 40/45 in FY11. Hardware will be common between the Block 30/35 and Block 40/45 platforms. NGIFF will also integrate Mode S, a civilian air traffic control capability residing in the NGIFF hardware, as funding allows.

c. DMS Replacement of Avionics for Global Operations and Navigation (DRAGON) completes the FAA/International Civil Aviation Organization (ICAO)/ EUROCONTROL air traffic control mandated safety of flight capabilities. This program will provide the E-3 fleet with the flight instruments and other avionics for the Required Navigation Performance (RNP), and the surveillance and communication capabilities necessary to maintain continued critical unrestricted access to global airspace. Non-compliance will result in airspace restrictions and denials that will impact AWACS ability to support worldwide responses to situations requiring immediate on-scene C2 BM. The DRAGON modifications replace the existing DMS Global Positioning System (GPS) Integrated Navigation System (GINS) with a modern Flight Management System (FMS) that will accommodate new capabilities including Mode 5 IFF and Joint Mission Planning System (JMPS). Also included as part of the modification is the addition of data link communications, voice and data link digital radios, and improved visual displays. Emphasis on employment of Commercial-Off-The-Shelf (COTS) avionics is expected to lower cost, reduce the tech refresh cycle, and enhance life cycle management. Replacement of critical avionics subsystems that became unsustainable beginning in 2010 is included in the DRAGON program. The Engineering and Manufacturing Development (EMD) phase of DRAGON is being executed as a Cooperative Program between the US and NATO.

d. The Flight Performance Software (FPS) program automates calculations currently performed manually by the pilot and flight engineer in accordance with the E-3B and C flight manual. Phase I, automates the Takeoff and Landing Data (TOLD) calculations; Phase II automates the high speed calculation. Automated calculations, using the original source data used to create the flight manual charts increases safety, improves on time departure/arrival, improves crew efficiency, and reduces tanker support.

e. Electronic Protection (EP): The EP program funds acquisition and retrofit of the E-3 AWACS radar processing capability. EP will provide improved radar processing in a specific flight environment to meet a classified requirement. Processing will initially address radar modes comprising 90% of actual operational AWACS radar usage. EP will install an adjunct processor that works in parallel with the current Radar System Improvement Program (RSIP) system. The EP-processed radar picture will appear on the operator screen in place of the current RSIP output when the EP radar modes are selected. The EP program plans for multi-year advanced buys of COTS equipment due to the short life-cycles in high tech components starting in FY17. The program will buy FY17 and FY18 COTS equipment in FY17 including initial spares. Equipment non-recurring Group B includes efforts for Tech Refresh, Active DMS and Software Releases.

2. AWACS Infrastructure and Support Systems (RDT&E, AF): These efforts synchronize modernization requirements and infrastructure support across the entire weapon system from depot and field test equipment, to maintenance trainers and integration labs.

a. Training, Support, and Infrastructure (TSI) provides continuing system engineering and management support for AWACS modernization and enhancement. These activities include managing the AWACS developmental infrastructure, AWACS Development Integration Test Support (ADITS), support for equipment concurrency, modernization planning/analysis, trainer/simulator integration and concurrency, as well as the Avionics Integration Laboratory (AIL). The contractor maintained and operated E-3 Radar Systems Integration Lab/Software Development Facility (SIL/SDF) provides US, FMS, and international customers with a functioning E-3 radar configuration to support radar development, production, and sustainment programs. TSI efforts allow new support equipment technologies and test strategies to be analyzed to ensure concurrent capability to sustain existing, modified, and upgraded E-3 equipment. TSI supports trainer/simulator concurrency analysis and requirements definition to ensure trainers and simulators are kept current with the AWACS baseline. The overall DT&E test infrastructure supports both development and sustainment projects, and maintains facilities to support AWACS aircraft during system and sub-system testing at Boeing Field, WA. The TSI assets also support

multiple international Airborne Early Warning and Control (AEW&C) projects on a maintenance fee basis, including projects for France, Saudi Arabia, United Kingdom, Japan, and NATO AEW&C efforts.

3. Material Solutions Development & Analysis (RDT&E, AF): These efforts look toward the future by investigating enhanced capabilities and exploring new mission areas through C2ISR System Development, while advancing the capabilities of the current weapon system through the Support The War Fighter (STWF) effort.

a. C2ISR system improvements investigate and develop future capabilities of the AWACS weapon system, or next C2ISR platform. These efforts also include investigation, analysis and development to ensure that AWACS successfully integrates with joint and coalition forces in a net-centric environment. C2ISR primarily supports pre-systems acquisition in the areas of material solution analysis and technology development. This is accomplished by prototyping and demonstrating capabilities required by the warfighter but also includes developing an E-3 Modernization & Sustainment Roadmap that projects user capability needs, as well as material solutions for the user needs.

b. Internet Protocol Enabled Communication (IPEC): IPEC will provide the Block 40/45 E-3 with a wideband communications capability to connect to the Global Information Grid and will support net-centric operations/warfare. The E-3 lacks an IP-enabled communication capability. As a result, the E-3 is not able to support a shortened digitized kill-chain of time sensitive targets. IPEC will provide a roll-on/roll-off IP-enabled communications package supporting warfighter identified requirements for higher bandwidth SIPRNet and multi-domain networks.

4. Program Management and Administration (PMA)(RDT&E, AF): This effort is PMA support for all AWACS Modernizations, AWACS Infrastructure and Support Systems, and Material Solutions Development and Analysis.

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

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	117.880	65.200	192.562	-	192.562
Current President's Budget	111.779	65.200	186.256	-	186.256
Total Adjustments	-6.101	0.000	-6.306	-	-6.306
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	-2.511	0.000			
• SBIR/STTR Transfer	-3.590	0.000			
• Other Adjustments	0.000	0.000	-6.306	-	-6.306

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207417F: *Airborne Warning and Control System (AWACS)*

Change Summary Explanation

1. The increase from FY2013 to FY2014 is primarily due to the use of NATO and US funding on the DRAGON cooperative EMD program. Under the terms of the co-operative agreement, the US-NATO cost share for the program remains the same but NATO is paying for the majority of 2013 common requirements and the US is paying for the majority of FY14 common requirements.
2. The increase between the Previous President's Budget and the Current President's Budget in FY14 is due to re-phasing of funds in prior years to better align for the current execution plan ($20M) and a decrease in material solution development and analysis efforts (-$14.123M).

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: AWACS Modernization	81.508	48.121	164.850
Description: Focuses on development activities associated with modification efforts. ***FY 2012 Accomplishments:*** Block 40/45: Continued development of Mission Crew Training Set (MCTS) (to include beginning development of the Airborne Training Set (ATS) portion of the MCTS), Avionics Integration Support Facility (AISF) upgrade and Mission Computing Maintenance Trainer (MCMT). Continued the development of DLI improvements for seamless transition from Block 30/35. Continued to administer DMS and COTS hardware tech refresh for future aircraft buys. Commenced development of Secure Iridium Chat (SIC). SIC is a satellite based communications system which provides Beyond Line of Sight (BLOS) Internet Protocol (IP) connectivity enabling E-3 participation in Area of Responsibility (AOR) Tactical Chat. This capability is a follow on to the Transitional Networking Capability (TNC) which is currently in use on the AWACS Block 30/35 aircraft. NGIFF: Closed all hardware and CAT 1 deficiencies for IFF 30/35. Ensured IFF 30/35 time compliance tech orders (TCTOs) and Technical Orders (TO) were available. Conducted production design decision and began manufacturing plans. For IFF 40/45, certified software functionality and completed system verification on mission computing Block 1.0 SW. Began software system integration in lab environment. Reviewed requirements, interfaces, manufacturing plans, and conducted Final Design and Manufacturing Review (FDMR). Completed final Human User Working Group (HUWG). DRAGON: Completed major subcontractors' System Requirements Review, Preliminary Design Review and Critical Design Review. Completed Prime Contractor's System Requirements Review, Integrated Baseline Review and Preliminary Design Review. Purchased EMD Kit. Developed familiarization training course. FPS: Accomplished DT and OT&E, completed development, and released FPS Phase 1 software. Continued development of FPS Phase 2 software. ***FY 2013 Plans:***			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207417F: *Airborne Warning and Control System (AWACS)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Block 40/45: Block 40/45: Complete development of MCTS and SIC. Continue to develop the ATS and MCMT. Complete initial AISF Upgrade and commence development of AISF spiral 2. Continue development of DLI improvements for seamless transition from Block 30/35. NGIFF: Continue resolving IFF 30/35 CAT 2 software deficiencies. Continue Block 40/45 EMD effort. DRAGON: Submit PDR Assessment Review to the Milestone Decision Authority. Conduct Critical Design Reviews (CDR). Complete detailed drawings. Perform Handover Testing of NATO development test aircraft (N-1), transfer aircraft to Boeing (via DD Form 1149) and begin the aircraft modification. Coordinate availability of major subcontractors' hardware (Group B)and installation readiness. Complete development labs I&CO and begin lab testing of software. FPS: Complete development and accomplish DT and OT&E testing of FPS Phase 2 software. EP: Begin development of classified technology solutions to mitigate issues/concerns identified under the Radar Modernization Program (RMP) study. ***FY 2014 Plans:*** Block 40/45: Will finish development of the ATS and MCMT. Will complete AISF Spiral 2 development. Will continue development of DLI improvements for seamless transition from Block 30/35. NGIFF: Will complete final system verification review for IFF 40/45. Will conduct data analysis for IFF 40/45 flight test. Will release IFF 40/45 Build 3.0 software. Will complete verification of Technical Requirements Document (TRD) for IFF 40/45. Will complete final TCTO's and TO's for IFF 40/45. DRAGON: Will perform Handover Test of US development test aircraft (D-1), transfer aircraft to Boeing (via DD Form 1149) and will begin the aircraft modification. Will coordinate availability of N-1 and D-1 parts to support modification efforts. Will complete lab software testing. Will complete N-1 modification and ground testing and will initiate the N-1 flight test program. Will complete D-1 modification and will begin the ground test. Will complete system training for both N-1 and D-1. Will initiate N-1 draft flight manual review. EP: Will continue development of classified technology solutions to mitigate issues/concerns identified under the RMP study.			
Title: AWACS Infrastructure and Systems Support	13.494	5.277	9.543

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207417F: *Airborne Warning and Control System (AWACS)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Continuing systems engineering to synchronize all modernization requirements and infrastructure support across the entire weapon system-- from depot and field test equipment, to maintenance trainers, to simulators, to integration labs, to test aircraft development and support. ***FY 2012 Accomplishments:*** TSI: Supported Network Enabled Enclave (NEE) lab integration efforts. Continued to mature emerging technologies, net-centric operations and next generation C2/BM activities. Provided system lab support to Block 40/45, NGIFF, Net-Centric Communications (NCC), RMP, and Japan and RSAF radar improvement integration and test. Supported AEW&C OSD mandated interoperability testing and E-3 Operational, Safety, Suitability and Effectiveness program. Provided radar system labs in support of US and FMS radar improvement programs/sustainment efforts--major activities include Japan and RSAF Radar improvement activities. TS-3/ADITS: Divested TS-3. Continued support of the E-3 AWACS Developmental Test and Evaluation AIL. ***FY 2013 Plans:*** TSI: Support C2ISR lab integration efforts that continue to mature emerging technologies. Provide system lab support to EP, Block 40/45, NGIFF, TNC, SADL, C2ISR, Japan and RSAF radar improvement integration and test. Support AEW&C OSD mandated interoperability testing and support mandatory E-3 Operational, Safety, Suitability, and Effectiveness program. Support the E-3 AWACS Developmental Test and Evaluation AIL. ***FY 2014 Plans:*** TSI: Will support Command, Control, Intelligence, Surveillance, & Reconnaissance (C2ISR) lab integration efforts that continue to mature emerging technologies. Will provide system lab support to EP, Block 40/45, Next Generation IFF, TNC, SADL, C2ISR, Japan and RSAF radar improvement integration and test. Will support AEW&C OSD mandated interoperability testing and support mandatory E-3 Operational, Safety, and Suitability and Effectiveness program. Will support the E-3 AWACS Developmental Test and Evaluation Avionics Integration Laboratory (AIL).			
Title: Material Solutions Development and Analysis ***Description:*** Focuses on emerging requirements by investigating enhanced capabilities and exploring new mission areas. ***FY 2012 Accomplishments:*** C2ISR: Conducted engineering / integration studies to determine required modifications and associated costs to upgrade and supported Risk Reduction activities for program planning including but not limited to RMP/EP. Executed key program risk-reduction elements via NCC-NEE, International Cooperative Research & Development (ICR&D), Joint Track Management Capability (JTMC) and Cooperative Engagement Capability (CEC).	3.381	0.168	0.282

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207417F: *Airborne Warning and Control System (AWACS)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
STWF: Addressed required communication upgrades to ensure viability of AWACS Link 16 capabilities. Provided digital control of platform communication systems such as ARC-210s, Single Channel Ground and Airborne Radio System (SINCGARS), Have Quick and Demand Assigned Multiple Access Satellite Communications (DAMA SATCOM). ***FY 2013 Plans:*** C2ISR: Conduct engineering / integration studies to determine required modifications and associated costs to upgrade and support Risk Reduction activities for program planning including but not limited to CEC and IPEC. Continue to execute International Cooperative Research & Development (ICR&D). ***FY 2014 Plans:*** C2ISR: Will conduct engineering / integration studies to determine required modifications and associated costs to upgrade and support Risk Reduction activities for program planning including but not limited to CEC and IPEC. Will continue to execute International Cooperative Research & Development (ICR&D).			
Title: Program Management and Administration (PMA) ***Description:*** Focuses on the PMA support for all AWACS Modernizations, AWACS Infrastructure and Support Systems, and Material Solutions Development and Analysis. ***FY 2012 Accomplishments:*** PMA: Provided PMA support for all AWACS Modernizations, AWACS Infrastructure and Support Systems, and Material Solutions Development and Analysis. ***FY 2013 Plans:*** PMA: Provide PMA support for all AWACS Modernizations, AWACS Infrastructure and Support Systems, and Material Solutions Development and Analysis. ***FY 2014 Plans:*** PMA: Will provide PMA support for all AWACS Modernizations, AWACS Infrastructure and Support Systems, and Material Solutions Development and Analysis.	13.396	11.634	11.581
Accomplishments/Planned Programs Subtotals	111.779	65.200	186.256

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: E00300: *E-3 Mods*	134.795	193.099	196.987		196.987	195.793	262.064	302.246	239.944	Continuing	Continuing

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207417F: *Airborne Warning and Control System (AWACS)*

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA06: E00300: *E-3 Initial Spares*	3.749	17.498	13.587		13.587	23.450	16.101	13.920	14.170	Continuing	Continuing

Remarks

E. Acquisition Strategy

Most major programs (Block 40/45, DRAGON, and lab support) will be sole source to the Boeing Corporation, Seattle, WA.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207417F: *Airborne Warning and Control System (AWACS)*	PROJECT 67411L: *Airborne Warning & Control System (AWACS)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
(U) AWACS Modernization - Block 40/45 EMD, Pre-Production, and MCT EMD	SS/CPAF	Boeing:Seattle, WA	-	19.373	Jan 2012	5.562	Jan 2013	27.857	Jan 2014	-		27.857	Continuing	Continuing	TBD
(U) AWACS Modernization - Next Generation Identification Friend or Foe (IFF)	SS/CPIF	Boeing:Seattle, WA	-	29.758	Feb 2012	7.624	Jan 2013	19.890	Jan 2014	-		19.890	Continuing	Continuing	TBD
(U) AWACS Modernization - DRAGON	SS/FPIF	Boeing:Seattle, WA	-	31.803	Jan 2012	18.835	Jan 2013	98.268	Jan 2014	-		98.268	Continuing	Continuing	TBD
(U) AWACS Modernization- FPS	SS/FFP	Boeing:Seattle, WA	-	0.574	Nov 2011	0.000		0.000		-		0.000	0.000	0.574	TBD
(U) Material Solutions Development and Analysis - Support the War Fighter (STWF)	Various	Various:Various, NA	-	0.372	Jan 2012	0.000		0.000		-		0.000	Continuing	Continuing	TBD
(U) Material Solutions Development and Analysis - C2ISR System Improvement	SS/ Various	Boeing:Seattle, WA	-	3.009	Oct 2011	0.168	Oct 2012	0.282	Jan 2014	-		0.282	Continuing	Continuing	TBD
(U) Material Solutions Development and Analysis - EP	TBD	TBD:TBD,	-	0.000		16.100	Jan 2013	18.836	Jan 2014	-		18.836	Continuing	Continuing	TBD
(U) Prior Platform Modifications	Various	Various:Various, NA	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	84.889		48.289		165.133		0.000		165.133			

Remarks

Total Program does not include NATO funds.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207417F: *Airborne Warning and Control System (AWACS)*	PROJECT 67411L: *Airborne Warning & Control System (AWACS)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
(U) Support/ITSP, MITRE, travel, other	Various	AWACS Program Office:Hanscom AFB, MA	-	9.589	Oct 2011	8.717	Oct 2012	7.269	Oct 2013	-		7.269	Continuing	Continuing	TBD
		Subtotal	0.000	9.589		8.717		7.269		0.000		7.269			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
(U) AWACS Infrastructure and Systems Support - AWACS Development Integration Test Support (ADITS) Contract / Other test activities	SS/ Various	Boeing:Seattle, WA	-	7.911	Oct 2011	0.000	Oct 2012	0.000		-		0.000	0.000	7.911	TBD
(U) AWACS Infrastructure and Systems Support - Training, Support & Infrastructure (TSI)	SS/ Various	Boeing:Seattle, WA	-	5.583	Jan 2012	5.277	Jan 2013	9.542	Jan 2014	-		9.542	Continuing	Continuing	TBD
		Subtotal	0.000	13.494		5.277		9.542		0.000		9.542			

Remarks

In FY13, the remaining ADITS effort will be captured under Training, Support & Infrastructure (TSI). This effort includes the Avionics Integration Laboratory (AIL) and will continue through the FYDP.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
(U) Program Management Administration (PMA)	Various	AWACS Program Office:Hanscom AFB, MA	-	3.807	Oct 2011	2.917	Oct 2012	4.312	Oct 2013	-		4.312	Continuing	Continuing	TBD
		Subtotal	0.000	3.807		2.917		4.312		0.000		4.312			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207417F: *Airborne Warning and Control System (AWACS)*	PROJECT 67411L: *Airborne Warning & Control System (AWACS)*	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	111.779		65.200		186.256		0.000		186.256			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207417F: *Airborne Warning and Control System (AWACS)*	PROJECT 67411L: *Airborne Warning & Control System (AWACS)*

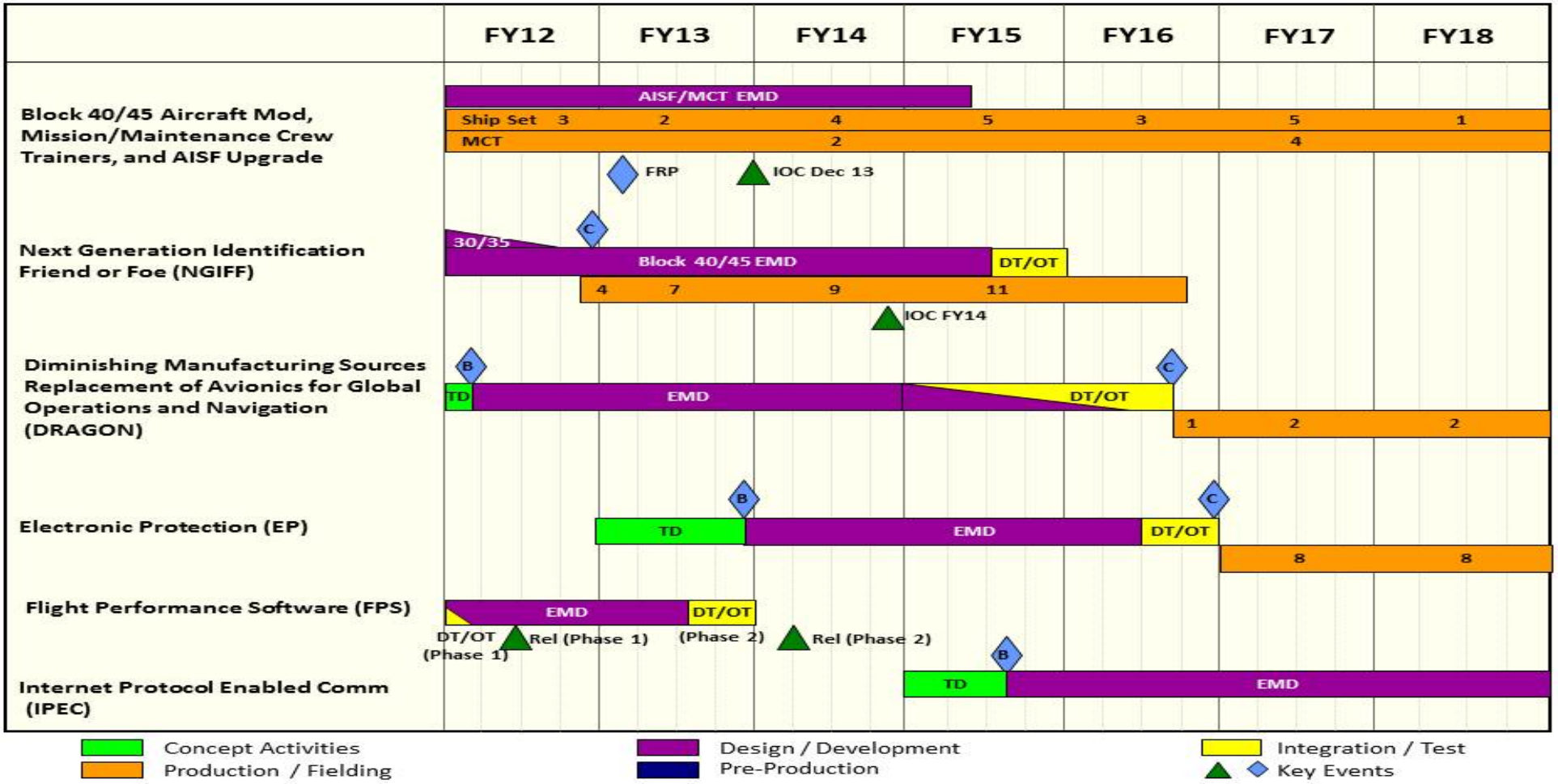


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207417F: *Airborne Warning and Control System (AWACS)*	**PROJECT** 67411L: *Airborne Warning & Control System (AWACS)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
40/45 MCT EMD	1	2012	1	2014
40/45 FRP Decision	4	2012	4	2012
40/45 IOC	4	2013	4	2013
NGIFF EMD (Deficiency resolution for UPX-40 software developed for Block 30/35)	1	2012	3	2012
NGIFF EMD (UPX-40 software and firmware development for Block 40/45)	1	2012	1	2015
NGIFF Milestone C	3	2012	3	2012
NGIFF 40/45 DT	3	2015	4	2015
NGIFF 40/45 OT	3	2015	4	2015
NGIFF IOC	4	2014	4	2014
DRAGON Technology Development	1	2012	1	2012
DRAGON Milestone B	1	2012	1	2012
DRAGON EMD	1	2012	2	2016
DRAGON DT/OT	1	2015	3	2016
DRAGON Milestone C	2	2016	2	2016
EP Technology Development	1	2013	4	2013
EP Milestone B	1	2014	1	2014
EP EMD	1	2014	4	2016
EP Milestone C	4	2016	4	2016
EP DT/OT	2	2016	4	2016
FPS Phase 1 DT/OT	1	2012	2	2012
FPS Phase 1 Release	2	2012	2	2012
FPS Phase 2 EMD	1	2012	2	2013

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207417F: *Airborne Warning and Control System (AWACS)*	**PROJECT** 67411L: *Airborne Warning & Control System (AWACS)*

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
FPS Phase 2 DT/OT	3	2013	4	2013
FPS Phase 2 Release	4	2013	4	2013
IPEC Technology Development	1	2015	3	2015
IPEC Milestone B	3	2015	3	2015
IPEC EMD	3	2015	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207418F: *Tactical Airborne Control Systems*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	7.931	5.767	0.743	-	0.743	5.553	5.060	3.677	3.743	Continuing	Continuing
675234: *TACP Support*	-	7.931	5.767	0.743	-	0.743	5.553	5.060	3.677	3.743	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Joint Terminal Control Training and Rehearsal System (JTC TRS) project, under the Tactical Airborne Control System, funds development necessary to provide a Distributed Mission Operations (DMO) capable, high-fidelity simulator for the Joint Terminal Attack Controller (JTAC), Combat Control Team (CCT) and Air Support Operations Center (ASOC). JTC TRS is essential to future upgrade and continuation training and currency control requirements due to an increase in USAF JTAC numbers while current and future available air assets to accomplish training are decreasing. Future JTAC control requirements will exceed the ability of live air to meet, and JTC TRS is the only future capability currently projected to allow USAF JTACs to achieve and maintain minimum required controls for both qualification and proficiency demands. JTC TRS development will provide the capability to network aircrew full mission trainers and training centers with other trainers including the Personnel Recovery Training and Rehearsal System (PR TRS). This development effort will also integrate ASOCs with the Joint Theater Air to Ground Simulation System (JTAGSS) trainer for Joint Fires. The JTC TRS Project provides research and development to facilitate interoperability with joint and sister Service air-ground simulation using industry standards. JTC TRS will allow JTAC and CCT to perform Close Air Support (CAS), Call-for-Fire (CFF) and Tactical Air Traffic Control (ATC) missions and allow ASOCs to perform Command and Control (C2) missions in a Live/Virtual/Constructive (LVC) environment. JTAGSS is a continuation of the ASOC simulation trainer initially funded in 2009 and complements the JTC TRS trainer by providing a total air-ground constructive simulation environment for integrated networked training and mission rehearsal capability that will develop JTAC/CCT and ASOC/SOF (Special Operations Forces) C2 (Command and Control) battle staff skills. JTAGSS will provide the ASOC, SOF, and TACP (Tactical Air Control Party) with the vertical and horizontal C2 communications and coordination training and mission rehearsal required for mission effectiveness. JTAGSS is required to train 400 ASOC personnel with limited to no live training opportunities to align with the AF move to using simulation for stand-alone and distributed training. There are insufficient exercises and live training events available to meet mandated readiness requirements. The system will include a secure network connection, a constructive simulation environment generator with sharable databases, computer work stations that have synthetic reflex agent applications for every ASOC/SOF crew position, and an instructor/operator station. PR TRS is envisioned to be a "plug and play" module for the host JTC TRS. PR TRS will provide Para-rescue (PJ) personnel with an immersive LVC environment to plan, train, and rehearse their employment, rescue/recovery, and combat trauma care skills. JTC TRS will host the network connection for PR TRS to conduct distributed training and rehearsal with other Recovery Forces. PR TRS will supplement live field training and live tissue training to provide realistic introductory, proficiency, currency, and upgrade training in a simulated battlefield, disaster, or humanitarian relief environment for Air Force PJs.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207418F: *Tactical Airborne Control Systems*	

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	8.309	5.767	4.445	-	4.445
Current President's Budget	7.931	5.767	0.743	-	0.743
Total Adjustments	-0.378	0.000	-3.702	-	-3.702
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	-0.127	0.000			
• SBIR/STTR Transfer	-0.251	0.000			
• Other Adjustments	0.000	0.000	-3.702	-	-3.702

Change Summary Explanation

FY 14 reduction due to higher DoD priorities

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: JTC TRS Trainer Development	1.509	3.517	0.200
Description: Development of high-fidelity simulation system for JTAC/CCT Training ***FY 2012 Accomplishments:*** (U): Continue development of high-fidelity simulation system for JTAC/CCT training. ***FY 2013 Plans:*** (U): Initiate development of Increment 1 of JTC TRS trainer. RFP Release 2nd quarter FY13. Contract award for 1st Quarter FY14. ***FY 2014 Plans:*** Continue development of Increment 1 of the JTC TRS trainer.			
Title: JTC TRS Test and Evaluation	0.000	0.750	0.100
Description: Test and Evaluation of JTC TRS Trainer ***FY 2012 Accomplishments:*** Test and Evaluation of JTC TRS trainer ***FY 2013 Plans:***			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207418F: *Tactical Airborne Control Systems*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Test and Evaluaton of JTC TRS Trainer to inlcude (but not limited to) Operational Assesment. ***FY 2014 Plans:*** Test and Evaluation of JTC TRS Trainer to include (but not limited to) Operator Unit Evaluation (OUE)			
Title: JTAGSS Trainer Development ***Description:*** Develops high fidelity simulation system for ASOC/SOF Command and Control System that supports JTAC training. Currently an AFRL program funded by Air Combat Command ***FY 2012 Accomplishments:*** Initiated requirements development for JTAGSS in collaboration with AFRL. ***FY 2013 Plans:*** Continue development of JTAGSS simulator configuration. ***FY 2014 Plans:*** Incremental upgrades of the JTAGSS Simulator	3.044	0.100	0.100
Title: XCITE Software Support ***Description:*** Support advances in XCITE software to directly support JTAC simulators ***FY 2012 Accomplishments:*** Upgraded to XCITE software to add/improve the Call For Fire (CFF) modeling capability to add and improve several aircraft and helicopter models. ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** N/A	1.523	0.000	0.000
Title: TSRA for JTC/CCT Trainers and JTAGSS trainer ***Description:*** Training Systems Requirements Analysis for JTC TRS and JTAGGS ***FY 2012 Accomplishments:*** Completed Training Systems Requirements Analysis for JTC TRS and JTAGSS. ***FY 2013 Plans:***	1.433	0.000	0.000

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207418F: *Tactical Airborne Control Systems*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
N/A ***FY 2014 Plans:*** N/A			
Title: Program Office Support ***Description:*** Program Office Support ***FY 2012 Accomplishments:*** Contractor Support, Government Travel, and Supplies. ***FY 2013 Plans:*** Contractor Support, Government Travel and Supplies. ***FY 2014 Plans:*** Contractor Support, Government Travel an Supplies	0.422	1.400	0.343
Accomplishments/Planned Programs Subtotals	7.931	5.767	0.743

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA 03: Line Item # 837100: *Tactical C-E Equipment*	0.000	8.092	8.306		8.306	9.181	8.176	3.742	3.809	Continuing	Continuing

Remarks

E. Acquisition Strategy

The acquisition strategy for the development, production, and sustainment of the fixed configuration of the JTC TRS will be executed as a small business set-aside with an evolutionary acquisition approach using incremental development and priced options for production and sustainment. A feasability study for a portable version fo the JTAC Trainer is planned to be an option on the JTC TRS contract. The acquisition strategy for the PR TRS is to be determined. The acquisition strategy for the JTAGSS trainer will be to field advance technology demonstration units to continue to perform proof of concept and technology validation of mission simulations for all ASOC crew positions including detailed communications planning, asset deconfliction, integration of joint fires, and other critical mission areas required for integrated TACP/ASOC C2 mission success. At the completion of the technology validation, a production contract will be competitively awarded to complete JTAGSS deployment and integration.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207418F: *Tactical Airborne Control Systems*

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207418F: *Tactical Airborne Control Systems*	PROJECT 675234: *TACP Support*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTAC Trainer Develoment	C/FPIF	ASC/WNS, AFMC:Wright Patterson AFB, OH	-	2.079	May 2013	3.217	May 2013	0.643	May 2014	-		0.643	Continuing	Continuing	TBD
JTAGSS Development	C/CPFF	ASC/WNS, AFMC:Wright Patterson AFB, OH	-	2.500	Sep 2012	0.100	Aug 2013	0.100	Jan 2014	-		0.100	Continuing	Continuing	TBD
		Subtotal	0.000	4.579		3.317		0.743		0.000		0.743			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Training System Requirements Analysis/ TSRA	MIPR	Naval Air Warfare CTR:Orlando, FL	-	1.393	Aug 2012	0.000		0.000		-		0.000	Continuing	Continuing	
XCITE/JTOSS development	PO	309 MXW:Ogden, Ut	-	1.523	Jun 2012	0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	2.916		0.000		0.000		0.000		0.000			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
605 TES ACC	MIPR	605 TES/TXT ACC:Eglin AFB FL, FL	-	0.000		0.750	Oct 2012	0.000		-		0.000	0.000	0.750	TBD
		Subtotal	0.000	0.000		0.750		0.000		0.000		0.000	0.000	0.750	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207418F: *Tactical Airborne Control Systems*	PROJECT 675234: *TACP Support*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support	Various	ASC/WNS, AFMC:Wright Patterson AFB, OH	-	0.436	Aug 2012	1.700	Nov 2012	0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	0.436		1.700		0.000		0.000		0.000			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	7.931		5.767		0.743		0.000		0.743			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207418F: *Tactical Airborne Control Systems*	PROJECT 675234: *TACP Support*

U.S. AIR FORCE

JTC TRS

AFLCMC... Providing the Warfighter's Edge

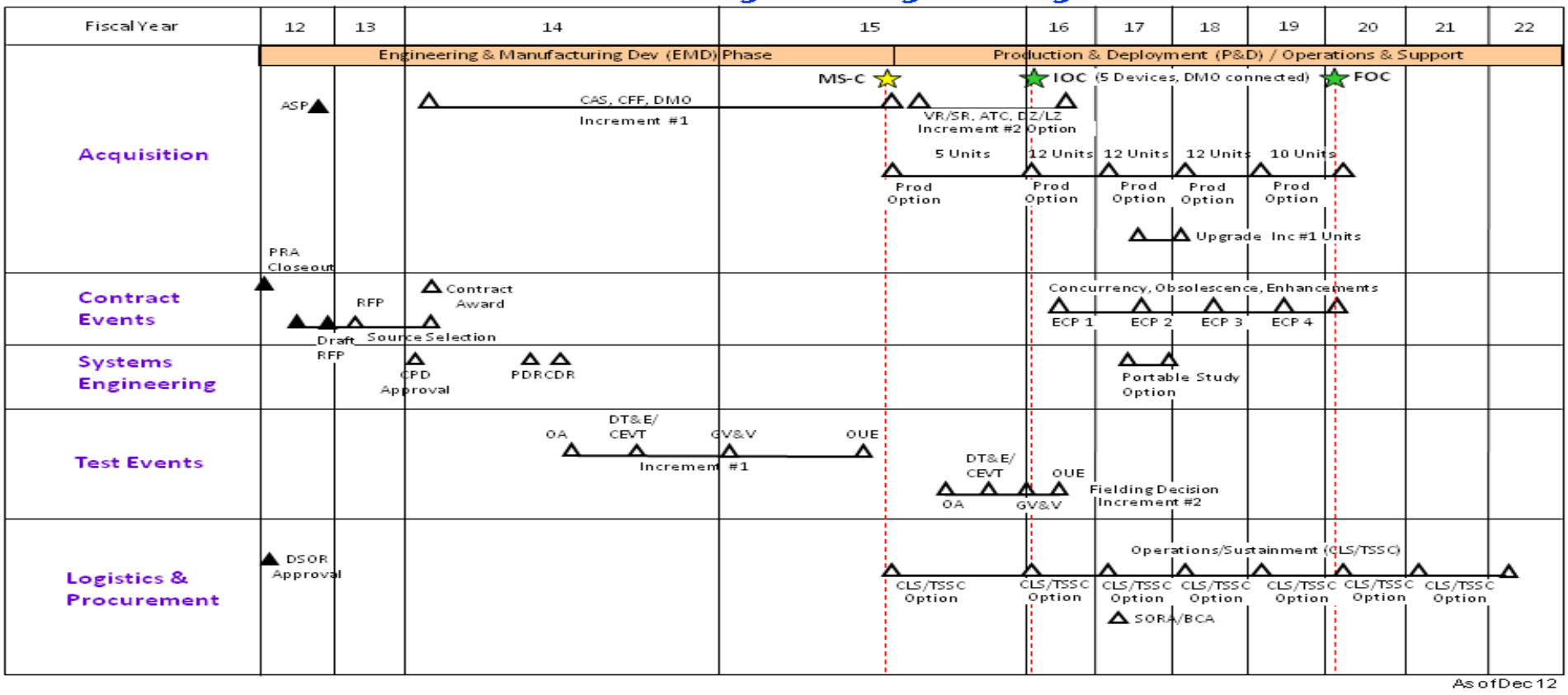


Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207418F: *Tactical Airborne Control Systems*	PROJECT 675234: *TACP Support*

U.S. AIR FORCE

JTAGSS Schedule

Updated: 11 Feb 13

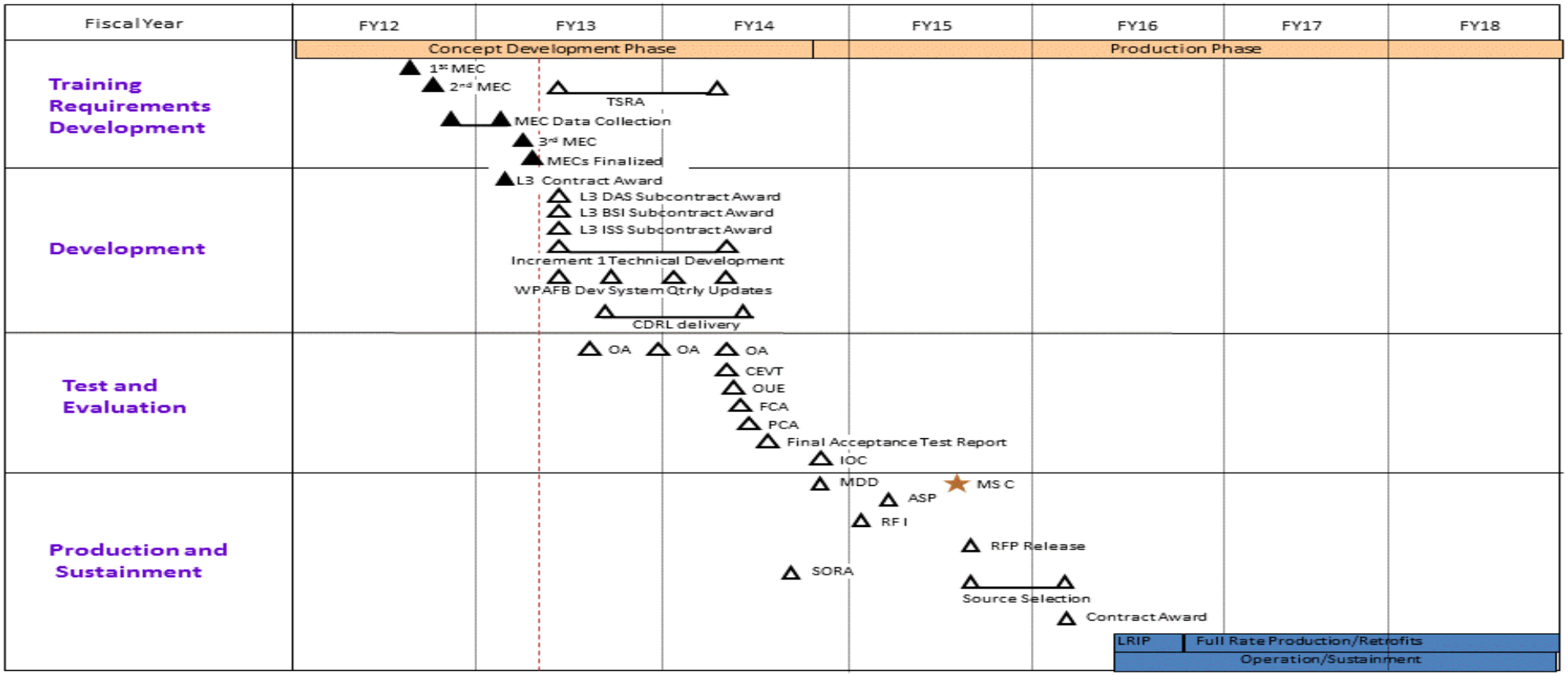


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207418F: *Tactical Airborne Control Systems*	**PROJECT** 675234: *TACP Support*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JTC TRS RFP Release	2	2013	2	2013
JTC TRS Contract Award	1	2014	1	2014
JTC TRS Development	1	2014	3	2016
JTC TRS Test and Evaluation	2	2014	3	2016
JTC TRS Production	4	2015	4	2018
JTAGSS Increment Contract Award	1	2013	2	2014
JTAGSS Development	1	2013	2	2014
JTAGSS Production	1	2016	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207423F: *Advanced Communications Systems*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	20.715	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
675189: *C2ISR JTRS Integration*	-	20.715	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY2013 Project 675189, C2ISR JTRS Integration, efforts was terminated, in order to allow the Air Force to develop an integration solution to transistion into a COTS/ NDI strategy to be excuted by platform programs.

A. Mission Description and Budget Item Justification

Joint Tactical Radio System (JTRS) is the Department of Defense (DoD) family of interoperable, modular, software-defined radios that will form the foundation of radio frequency information transmission for Joint Vision 2020. Joint Tactical Radio Systems (JTRS) will link the power of the Global Information Grid (GIG) to the warfighter in applying fire effects and achieving overall battlefield superiority. By developing and implementing an open architecture of cutting-edge radio waveform technology, multiple radio types (e.g., handheld, manpack, ground-mobile, airborne, etc.) are now capable of communicating with one another. JTRS radios are intended to interoperate with existing radio systems and improve Joint warfighting through a series of new, joint networking waveforms enabling communication via voice, data, and video over mobile, adhoc, internet protocol (IP) based networks. Each radio will operate as a node in the network to ensure secure wireless communication and networking services for airborne, mobile and fixed forces. These goals extend to U.S. allies, Joint and Coalition partners, and, in time, disaster response personnel. JTRS will make the Air Force more effective in Joint warfighting through a series of new, joint networking waveforms. These waveforms included the Mobile User Objective System (MUOS), which provides next generation SATCOM beyond-line-of-sight (BLOS) communications, as well as the Wideband Networking Waveform (WNW) and the Soldier Radio Waveform (SRW), which provide interoperability with Army ground forces from the brigade level down to the dismounted soldier. Together these waveforms enable Joint Close Air Support (JCAS), Combat Search and Rescue (CSAR), and other Joint missions. The JTRS program is built around an open Software Communications Architecture (SCA), allowing common software waveform applications to be implemented across the family of radios to provide joint-service, allied, and coalition interoperability. The Enterprise Business Model, incorporating a common set of shared open system standards, promotes competition and reduces procurement costs for
the DoD.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207423F: *Advanced Communications Systems*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	43.964	0.000	0.000	-	0.000
Current President's Budget	20.715	0.000	0.000	-	0.000
Total Adjustments	-23.249	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	-23.249	0.000	0.000	-	0.000

Change Summary Explanation

In FY2013, Project number 675189, C2ISR JTRS Integration, was terminated.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Systems Engineering and Integration	17.523	0.000	0.000
Description: Systems engineering and integration to develop and certify solutions to Air Force unique requirements for the integration of JTRS compliant radios into Air Force platforms. ***FY 2012 Accomplishments:*** Funded hardware and software development of a common integration solution for the integration of JTRS compliant terminals onto a variety of Air Force platforms. Also funding risk reductions activities and the development of integration solutions to meet the unique requirements of each host platform.			
Title: Platform Planning and Integration	0.600	0.000	0.000
Description: Platform planning and integration support ***FY 2012 Accomplishments:*** Funded non-recurring engineering (NRE) for integration of JTRS Multi Functional Information Distribution System (MIDS) terminal on the JSTARS aircraft. Continuing to fund integration efforts to support IP networking and data communication.			
Title: Test and Evaluation	0.667	0.000	0.000
Description: Interoperability testing and evalution to perform risk reduction to ensure successful platform integration.			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207423F: *Advanced Communications Systems*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Funded interoperability testing and evalution to perform risk reduction to ensure successful platform integration.			
Title: PMA ***Description:*** Program Management Administration ***FY 2012 Accomplishments:*** Program Management Administration	1.925	0.000	0.000
Accomplishments/Planned Programs Subtotals	20.715	0.000	0.000

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: Line Item # OTHACF: *Other Aircraft*	58.416	11.639	3.290		3.290	4.547	0.000	0.000	0.000	0.000	0.000
• OPAF: BA03: Line Item # 837100: *Tactical C-E Equipment*	38.567	56.229	13.816		13.816	67.153	32.999	23.714	24.141	Continuing	Continuing

Remarks

E. Acquisition Strategy

In 2005, the DoD established the Joint Program Executive Office (JPEO) for JTRS. The JPEO has full directive authority for all JTRS research, development, testing, and evaluation of waveforms, radios, common ancillaries, network management, and associated software. The JPEO is funded jointly by the Services in PE 0604280N. New PE in FY14 0605030F

Air Force JTRS Program Office will perform system engineering integration, to deliver an interoperable, fully synchronized, deployable JTRS system under various contract awards. The program office will lead the development of common integration hardware and sofware that can be used across multiple Air Force platforms. The AF JTRS program office will also work with the JPEO, industry, and the platform program offices to develop integration solutions specific to each platform. This effort will assist various AF platform users in acquiring and integrating the next generation communications system, to include all key documentation (CONOPS, TTPs, ICDs, TRDs, etc.)

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207423F: *Advanced Communications Systems*	PROJECT 675189: *C2ISR JTRS Integration*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering, Planning, and Integration-1	SS/FFP	Rockwell Collins:Cedar Rapids, IA	-	0.490	Feb 2012	0.000		0.000		-		0.000	0.000	0.490	48.766
Systems Engineering, Planning, and Integration-2	TBD	Boeing:Long Beach, CA	-	1.337	Sep 2012	0.000		0.000		-		0.000	0.000	1.337	13.201
Systems Engineering, Planning, and Integration-3	SS/CPFF	Nortrop Grumman:Redondo Beach, CA	-	1.213	Jun 2012	0.000		0.000		-		0.000	0.000	1.213	14.295
Systems Engineering, Planning, and Integration-4	SS/TBD	System Research and Application:Fairfax, VA	-	2.750	Aug 2012	0.000		0.000		-		0.000	0.000	2.750	15.453
Systems Engineering, Planning, and Integration-5	C/Various	Various:Various,	-	4.559	Apr 2012	0.000		0.000		-		0.000	Continuing	Continuing	79.795
Systems Engineering, Planning, and Integration-6	TBD	Various:Various,	-	8.658		0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	19.007		0.000		0.000		0.000		0.000			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Activities and Support	C/Various	Various:Various,	-	1.388	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	24.044
		Subtotal	0.000	1.388		0.000		0.000		0.000		0.000			24.044

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Planning and Test Agency Support	SS/ Various	Various:Various,	-	0.320	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	17.380

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207423F: *Advanced Communications Systems*	PROJECT 675189: *C2ISR JTRS Integration*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.320		0.000		0.000		0.000		0.000			17.380

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA	Various	Various:Various	-	0.000		0.000		0.000		-		0.000	0.000	0.000	0.000
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	20.715		0.000		0.000		0.000		0.000			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207423F: *Advanced Communications Systems*	PROJECT 675189: *C2ISR JTRS Integration*

Air Force JTRS Development and Integration Schedule

	FY12	FY13	FY14	FY15	FY16	FY17	FY18
System Engineering, Planning and Integration							
Platform Planning and Integration							
Operational and Interoperability Test Plan							

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207423F: *Advanced Communications Systems*	PROJECT 675189: *C2ISR JTRS Integration*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Systems Engineering	1	2012	4	2012
Platform Planning and Integration	1	2012	4	2012
Operational & Interoperability Test Planning	1	2012	4	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207431F: *Combat Air Intelligence System Activities*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	5.428	5.756	4.471	-	4.471	6.765	6.660	0.320	0.326	Continuing	Continuing
675307: *TARGETING ENTERPRISE RESEARCH*	-	3.851	4.084	2.778	-	2.778	5.038	4.884	0.000	0.000	Continuing	Continuing
675309: *GEO Info & Serv Software*	-	1.577	1.672	1.693	-	1.693	1.727	1.776	0.320	0.326	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The mission of Combat Air Intelligence Systems (CAIS) is to process, analyze, and disseminate intelligence for air component and unit operations worldwide by providing key intelligence infrastructure and tactical production capabilities for the Air Force with true backbone type of intelligence support for air operations. CAIS is focused on providing the "tactical" combat-oriented intelligence infrastructure for Air Force major commands: providing funding to ACC, PACAF, USAFE, AMC, AFMC, AFSOC, and AETC to primarily fund Air Intelligence Squadrons and the 480th Intelligence Group.

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

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	5.428	5.745	5.831	-	5.831
Current President's Budget	5.428	5.756	4.471	-	4.471
Total Adjustments	0.000	0.011	-1.360	-	-1.360
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.011	-1.360	-	-1.360

Change Summary Explanation

FY14 funding decrease is due to higher Department of Defense priorities.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207431F: *Combat Air Intelligence System Activities*	PROJECT 675307: *TARGETING ENTERPRISE RESEARCH*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675307: *TARGETING ENTERPRISE RESEARCH*	-	3.851	4.084	2.778	-	2.778	5.038	4.884	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Provides support to AF personnel utlilizing Tactical Intelligence Applications, Target Planning & Execution, Geospatial Intelligence (GEOINT), targeting capabilities. System information is in direct support to National, Combatant Command, and Air Force Intelligence Missions.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Targeting Enterprise Research	3.851	4.084	2.778
Description: Conduct Targeting Enterprise Research ***FY 2012 Accomplishments:*** Continue to conduct Targeting Enterprise Research. ***FY 2013 Plans:*** Continue to conduct Targeting Enterprise Research ***FY 2014 Plans:*** Continue to conduct Targeting Enterprise research.			
Accomplishments/Planned Programs Subtotals	3.851	4.084	2.778

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• Not applicable: *N/A*	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207431F: *Combat Air Intelligence System Activities*	PROJECT 675307: *TARGETING ENTERPRISE RESEARCH*

D. Acquisition Strategy

All contracts are awarded based on full and open competition.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207431F: *Combat Air Intelligence System Activities*	PROJECT 675307: *TARGETING ENTERPRISE RESEARCH*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Targeting Enterprise Research	TBD	TBD:TBD,	-	3.851	Jan 2012	4.084	Jan 2013	2.778	Jan 2014	-		2.778	Continuing	Continuing	TBD
		Subtotal	0.000	3.851		4.084		2.778		0.000		2.778			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

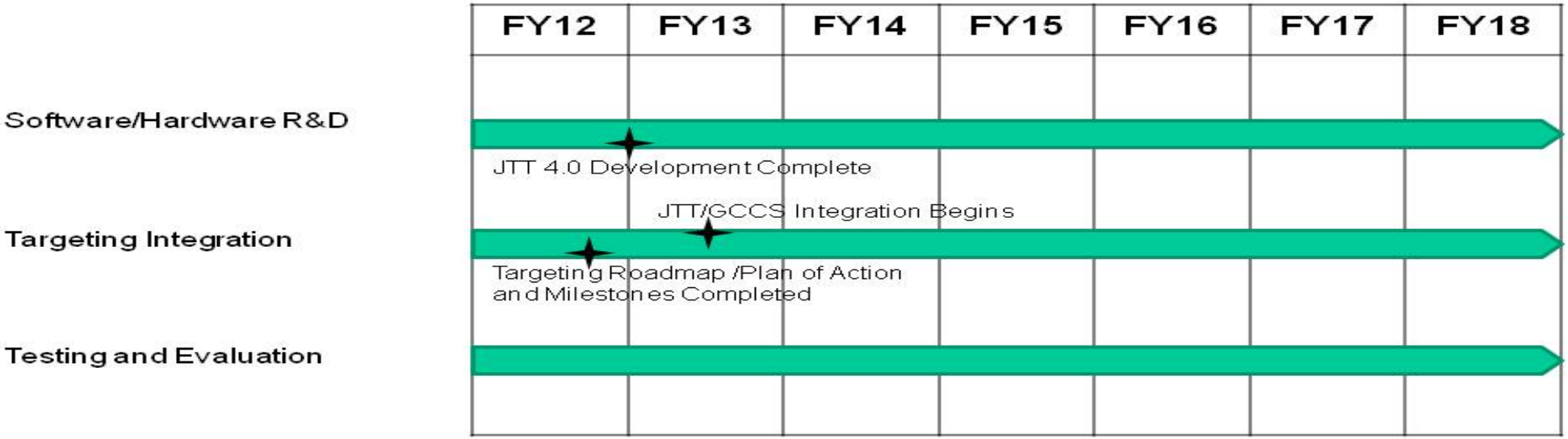
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	3.851		4.084		2.778		0.000		2.778			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207431F: *Combat Air Intelligence System Activities*	PROJECT 675307: *TARGETING ENTERPRISE RESEARCH*

Targeting Enterprise Schedule

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207431F: *Combat Air Intelligence System Activities*	PROJECT 675307: *TARGETING ENTERPRISE RESEARCH*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Software/Hardware Development	1	2012	4	2018
Test and Evaluation	1	2012	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207431F: *Combat Air Intelligence System Activities*	PROJECT 675309: *GEO Info & Serv Software*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675309: *GEO Info & Serv Software*	-	1.577	1.672	1.693	-	1.693	1.727	1.776	0.320	0.326	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Provides support to Geospatial resources utilized in Geospatial Intelligence (GEOINT) databasing applications, technology exploration and refresh initiatives, management and dissemination architecture, geospatial information and services modernization and enablers for targeting capabiilties. Provides support to the MAJCOMS to ensure requisite and available target intelligence and GEOINT tools and information directly available to warfighters.

Air Force GEOINT Support program funds the Air Force Geospatial Product Library (GPL) which is currently fielded to all Combatant Command Air Components and subordinate units supporting global air operations. The GPL provides digital GEOINT data to support mission planning, targeting & intelligence in support of mission objectives.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: GEO Info & Serv Software	1.577	1.672	1.693
Description: Provides GEO Info & Serv Software			
FY 2012 Accomplishments: Provides GEO Info & Serv Software.			
FY 2013 Plans: Provides GEO Info & Serv Software.			
FY 2014 Plans: Provides GEO Info and Services Software			
Accomplishments/Planned Programs Subtotals	1.577	1.672	1.693

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• None.: *N/A*	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207431F: *Combat Air Intelligence System Activities*	PROJECT 675309: *GEO Info & Serv Software*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost

Remarks

D. Acquisition Strategy

All major contracts within this project will be awarded after full and open competition.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207431F: *Combat Air Intelligence System Activities*	PROJECT 675309: *GEO Info & Serv Software*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	TBD	TBD:TBD,	-	1.577	Jan 2012	1.672	Jan 2013	1.693	Jan 2014	-		1.693	Continuing	Continuing	TBD
		Subtotal	0.000	1.577		1.672		1.693		0.000		1.693			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

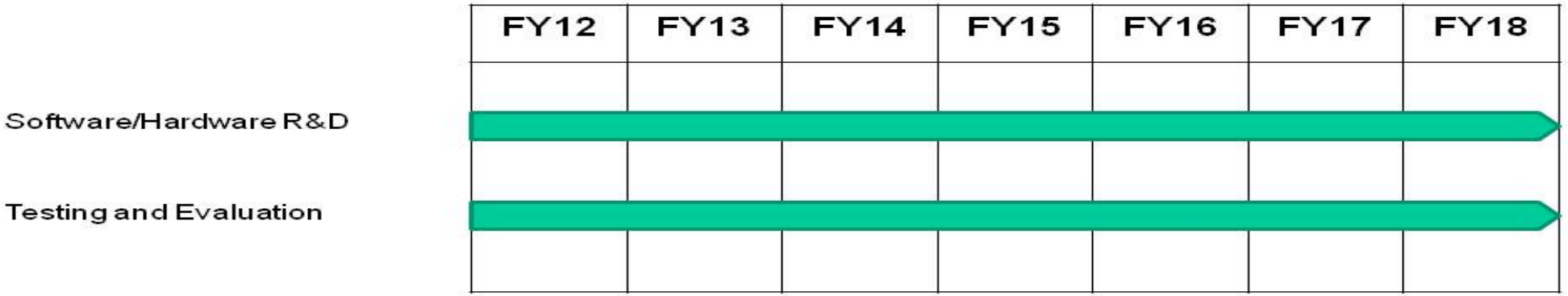
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	1.577		1.672		1.693		0.000		1.693			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207431F: *Combat Air Intelligence System Activities*	PROJECT 675309: *GEO Info & Serv Software*

U.S. AIR FORCE

GEOINT Services Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207431F: *Combat Air Intelligence System Activities*	PROJECT 675309: *GEO Info & Serv Software*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Software Development	1	2012	4	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207438F: *Theater Battle Management (TBM) C4I*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	15.009	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
674802: *DELIBERATE AND CRISIS ACTION PLANNING AND EXECUTION SEGMENT (DCAPES)*	-	15.009	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY 2013, Project Number 674802, Deliberate and Crisis Action Planning and Execution Segment (DCAPES), efforts transferred to PE 0207452F, DCAPES, Project Number 674802, Deliberate and Crisis Action Planning and Execution Segment, in order to provide clarity to the effort by providing a singular PE and Project Number.

A. Mission Description and Budget Item Justification

The TBM C4I Program Element (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.

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 SchedulingTool (ECAST), Web Enablement, and JOPES Modernization Migration. Activities also include studies and analysis to support both current program planning and execution and future program planning to modify systems to consume authoritative force structure from Global Force Management-Data Initiative (GFM-DI) organizational servers, linking the identifiers to or replacing current identifiers and, as applicable, exposing the data in a net-centric fashion.

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.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207438F: *Theater Battle Management (TBM) C4I*

Activities also include studies and analysis to support current program planning and execution, and future program planning.

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

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	15.485	0.000	0.000	-	0.000
Current President's Budget	15.009	0.000	0.000	-	0.000
Total Adjustments	-0.476	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.476	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Loosely Couple DCAPES/JOPES Interfaces	14.899	0.000	0.000
Description: Continue Increment 2 requirements definition, protoyping, development, testing, interoperability, sustainment, and service oriented architecture transition. ***FY 2012 Accomplishments:*** Field DCAPES v4.1.2.0 and Loose Coupling Release 1 v4.2.2.1 (JOPES v4.2.1 interoperability), took delivery of Loose Coupling Release 2 patch v5.0.0.1 (to remain interoperable with JOPES v4.2.1 changes), address critical warfighter requirements, maintain interoperability, and award Increment 2b contract. ***FY 2013 Plans:*** Effort moved to PE 0207452F. ***FY 2014 Plans:*** No FY 2014 funding.			
Title: Program Management Administration (PMA)	0.110	0.000	0.000

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207438F: *Theater Battle Management (TBM) C4I*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Program Management Administration (PMA) funding supports engineering and technical development, and implementation activities, along with acquisition support efforts. ***FY 2012 Accomplishments:*** Program Management and Administration. ***FY 2013 Plans:*** No FY 2013 funding. ***FY 2014 Plans:*** No FY 2014 funding.			
Accomplishments/Planned Programs Subtotals	15.009	0.000	0.000

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. 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.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207438F: *Theater Battle Management (TBM) C4I*	PROJECT 674802: *DELIBERATE AND CRISIS ACTION PLANNING AND EXECUTION SEGMENT (DCAPES)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DCAPES Increment 2a	SS/ Various	CSC:Falls Church, VA	-	9.510	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	TBD
LOGFAC Software Development	C/FFP	Harris IT Services Corp:Dulles, VA	-	1.634	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	
FFRDC	SS/ Various	Mitre:Bedford, MA	-	0.318	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	TBD
Architecture Documentation Development	C/Various	Copper River IT:Anchorage, AK	-	0.400	Jun 2012	0.000		0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	11.862		0.000		0.000		0.000		0.000			

Remarks

Updated FY12 Award date and amounts

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contract Acquisition/ Logistic Support	C/Various	OASIS Systems, Inc:Lexington, MA	-	0.680	Jan 2012	0.000		0.000		-		0.000	Continuing	Continuing	TBD
Contract Cost Analysis Support	C/CPFF	Tecolote Research, Inc:Goleta, CA	-	0.205	Oct 2011	0.000		0.000		-		0.000	Continuing	Continuing	TBD
Contract Engineering Support	C/CPFF	Jacobs Technology, Inc:Lincoln, MA	-	0.364	Dec 2011	0.000		0.000		-		0.000	Continuing	Continuing	TBD
Contract Requirements Support	C/FFP	BLT Technologies:San Antonio, TX	-	0.168	Jan 2012	0.000		0.000		-		0.000	Continuing	Continuing	
Software Migration Analysis	C/Various	Various:Various,	-	0.400	Aug 2012	0.000		0.000		-		0.000	Continuing	Continuing	
Contract System Security Support	C/CPFF	Centech Group:Fall Church, VA	-	0.196	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	TBD

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207438F: *Theater Battle Management (TBM) C4I*	PROJECT 674802: *DELIBERATE AND CRISIS ACTION PLANNING AND EXECUTION SEGMENT (DCAPES)*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	2.013		0.000		0.000		0.000		0.000			

Remarks

Updated FY12 award date and amounts

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation	MIPR	46 Test Sqdn:Eglin AFB, FL	-	0.538	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	TBD
Operational Testi & Evaluation	MIPR	605 Test Sqdn:Hurlburt Field, FL	-	0.191	Jun 2012	0.000		0.000		-		0.000	Continuing	Continuing	TBD
Interoperability Testing & Evaluation	MIPR	DISA JITC:Ft Hauchuca, AZ	-	0.101	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	TBD
User Test Support	MIPR	Various:Various,	-	0.194	Nov 2011	0.000		0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	1.024		0.000		0.000		0.000		0.000			

Remarks

Updated FY12 Award date and amounts

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration (PMA) Program Management Office (PMO) Support	Various	Various:Various,	-	0.024	Jan 2012	0.000		0.000		-		0.000	Continuing	Continuing	TBD

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207438F: *Theater Battle Management (TBM) C4I*	PROJECT 674802: *DELIBERATE AND CRISIS ACTION PLANNING AND EXECUTION SEGMENT (DCAPES)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA PMO Support - Licenses & SIPRNET Line	MIPR	Various:Various,	-	0.086	Nov 2012	0.000		0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	0.110		0.000		0.000		0.000		0.000			

Remarks

Updated FY12 award date and amounts

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	15.009		0.000		0.000		0.000		0.000			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207438F: *Theater Battle Management (TBM) C4I*	PROJECT 674802: *DELIBERATE AND CRISIS ACTION PLANNING AND EXECUTION SEGMENT (DCAPES)*

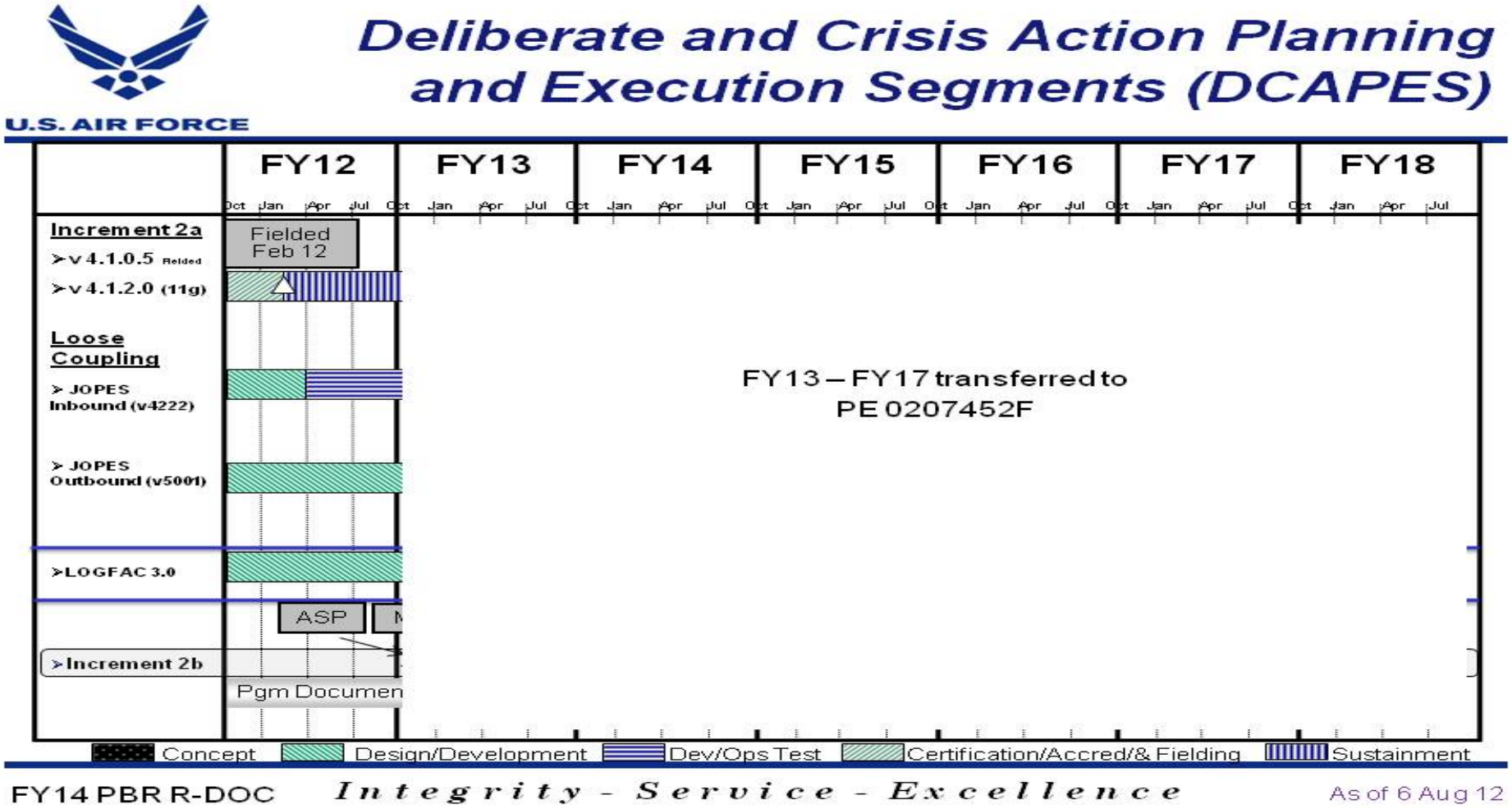


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207438F: *Theater Battle Management (TBM) C4I*	**PROJECT** 674802: *DELIBERATE AND CRISIS ACTION PLANNING AND EXECUTION SEGMENT (DCAPES)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
--- Increment 2a 4.1.2.0 Certification	1	2012	2	2012
--- Increment 2a 4.1.2.0 Sustainment	2	2012	4	2012
--- JOPES Inbound (v4.2.2.2) Design/Development	1	2012	2	2012
--- JOPES Inbound (v4.2.2.2) Ops Test/Certification	3	2012	4	2012
--- JOPES Outbound (v5.0.0.1) Design/Development	1	2012	4	2012
--- LOGFAC 3.0 Design/Development	1	2012	4	2012
--- Increment 2b: Documentation	1	2012	4	2012

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207444F: *Tactical Air Control Party-Mod*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	8.939	16.226	10.250	-	10.250	10.077	10.225	10.681	10.873	Continuing	Continuing
676013: *Equipment Modernizaton*	-	8.939	16.226	10.250	-	10.250	10.077	10.225	10.681	10.873	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Tactical Air Control Party-Modernization (TACP-M). TACP-M is a buy-to-budget program with requirements based on ACC's evolving combat needs and the capabilities available in the commercial market. Therefore, requirements are frequently adjusted to accomodate warfighter needs while working within available funding. The TACP-M program acquires capabilities for TACP operations. TACP members deploy with Army maneuver units and provide a command and control (C2) link for close air support (CAS), airlift, and Air Force surveillance/reconnaissance missions. TACPs are equipped with various targeting and communications equipment which interfaces with ground maneuver forces, CAS aircraft, joint fire assets, C2 aircraft/agencies, and Intelligence, Surveillance, and Reconnaissance (ISR) platforms/ agencies. Throughout the performance of their duties, TACPs detect targets and compute precision coordinates to aircraft to ensure pilots track the correct target in the employment of GPS aided weapons. The actions performed by TACPs not only shorten the kill chain, but also reduce the potential for fratricide and collateral damage in civilian-occupied areas.

The TACP-M program provides equipment modernization capabilities to TACPs, Air Support Operations Center (ASOC), and Tactical Operations Center (TOC) personnel. The program supports Overseas Contingency Operations (OCO) and significantly increased the mission effectiveness of the TACPs and ASOCs during Operation Enduring Freedom and Operation New Dawn. The TACP-M program continues to be instrumental in providing ground communications for TACPs during federal emergency relief operations and homeland defense initiatives.

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 (e.g. Streaming Video Receiver) technology. Upgraded digital communications enable machine-to-machine interface between TACPs and Close Air Support (CAS) aircraft, Army units and other TACP units. Machine-to-machine communication provides reliable, high speed digital communications, supports joint and multinational interoperability, improves battlefield Situational Awareness (SA), increases targeting accuracy, reduces kill chain decision time, improves data flow/ information exchange, and reduces potential fratricide. TACPs use software communication architecture (SCA)-certified, Joint Tactical Radio System (JTRS), software programmable radios, and ancillary components for reliable voice & data UHF SATCOM and LOS UHF /VHF communications. TACP-M is divided into three segments: software, dismounted and mounted. The mounted segment is further divided into fixed and mobile elements.

The software segment utilizes a common Close Air Support System Software(CASS) baseline across all TACP systems. The CASS software provides cross-service interoperability with numerous aircraft (A-10, F-16, F/A-18, etc), helicopters, unmanned air vehicles (Predator), land and naval artillery, network enabled weapons,

command & control nodes, and communications systems utilizing numerous messaging systems (such as Variable Message Format (VMF), Situational Awareness Data Link (SADL), and Link-16) to provide maximum flexibility and capability to the TACPs for the execution of joint fire support mission. In addition, TACP-M is working with various contractors and laboratories to conduct demonstrations and risk reduction efforts to assess advanced HMI and interoperability technologies for future fielding.

The dismounted segment consists of integrated systems and equipment comprised of non-developmental and commercial-off-the-shelf (COTS) components which are carried by dismounted TACP. These include laser range finders, thermal imagers, laser designators, manpack and handheld radios, ruggedized tactical computers, streaming video receivers, and other required equipment. The dismounted segment also incorporates the development of an advanced Target Location Designation System (TLDS) which is also being managed under the Army-led Joint Effects Targeting System (JETS) program. TLDS will combine the capability of a laser marker, designator and thermal imagers into a small, lightweight system.

The mounted (fixed) segment integrates computer and communications equipment into re-locatable vehicle, rack or transit case mounted systems for use in Tactical Operations Center (TOC) or Air Support Operations Center (ASOC) locations. The TACP mounted (fixed) segment includes the High Mobility, Multi-Wheeled Vehicle (HMMWV)-mounted Air Support Operations Center (ASOC) gateway, gateway lite, and the Dismounted Communications Package (DCP). The TACP-M Mounted (mobile) segment integrates similar equipment into mobile tactical vehicles employed by the Army and provides on-the-move tactical voice and data capability.

Following the termination of the Vehicular Communications System (VCS) in FY11, the TACP community has capability gaps in vehicle mounted communications systems. As a result, and based on ACC priorities and available funding, the TACP-M team is working through the JCIDS process with ACC to identify and resolve capability gaps related to vehicle mounted communications, which is referred to as the Mobile Communications System (MCS). These gaps are being addressed in a stepwise fashion: an initial implementation of a very limited, PRC-117G-based, voice-only capability in approximately 220 TACP HMMWVs that were originally slated for the VCS. This limited capability is referred to as the Voice Communications Package (VCP), and replaces the more capable Mobile Communications Package (MCP) that was going to take multiple years to implement. A more robust capability, implementing voice and data communications through additional PRC-117G and PRC-150 radios, computers, streaming video, and advanced soldier radio waveforms, will follow as the requirement is formalized, funding becomes available and contracts can be awarded to fill the long-term need.

Activities also include studies and analysis to support both current program planning and execution and future program planning.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force					DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*			R-1 ITEM NOMENCLATURE PE 0207444F: *Tactical Air Control Party-Mod*		
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	9.515	16.226	10.511	-	10.511
Current President's Budget	8.939	16.226	10.250	-	10.250
Total Adjustments	-0.576	0.000	-0.261	-	-0.261
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	-0.576	0.000	-0.261	-	-0.261

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Close Air Support System (CASS)	4.991	12.461	8.820

Description: CASS Software - For FY14, we are continuing work on some capabilities (F-35, Joint Digital Aided Close Air Support (DACAS) Block I, Small Diameter Bomb (SDB) II, etc.) and begining work on others, such as calls for fires (CFF), mission area specific software, CASS Built-In-Test capability, AH6 Apache, DACAS Exchange Network Parameters (XNP) for example. The form of the FY13 and FY14 effort descriptions should remain the same, but the examples cited should include some of the above. in addition, TACP is working with various contractors and laboratories to conduct demonstrations and risk reduction efforts to assess advanced HMI and interoperability technologies for future fielding.

FY 2012 Accomplishments:
Continued to develop new machine-to-machine (MTM) interfaces with weapons (e.g. Small Diameter Bomb II), new interfaces with joint air ground integration cell, C2 nodes, indirect fires integration, and aircraft across the USAF, joint (e.g. F-35) and coalition environment, and satisfy validated warfighter requirements. This effort also continues to support the Joint DACAS Block 1 initiative which will provide a common CASS terminal execution phase capability across service and coalition forces. CASS software will also be focused on developing a simplified user interface which is user-tailorable to specific TACP missions. This effort will include contractor support, engineering support, test and evaluation.

FY 2013 Plans:
Continuing to develop new MTM interfaces with weapons (e.g. Small Diameter Bomb II), new interfaces with Joint Air Ground Integration Cell, C2 nodes, indirect fires integration, and aircraft across the USAF, joint (e.g. F-35) and coalition environment, and satisfy validated warfighter requirements. This effort also continues to support the Joint DACAS Block 1 initiative which will provide a common CASS terminal execution phase capability across service and coalition forces. CASS software will also

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207444F: *Tactical Air Control Party-Mod*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
be focused on developing a simplified user interface which is user tailorable to specific TACP missions. This effort will include contractor support, engineering support, test and evaluation with an initial dismounted software effort potentially fielding in FY14. ***FY 2014 Plans:*** Will continue to develop new MTM interfaces with weapons (e.g. Small Diameter Bomb II), new interfaces with Joint Air Ground Integration Cell, C2 Nodes, indirect fires integration, and aircraft across the USAF, joint (e.g. F-35) and coalition environment, and satisfy validated warfighter requirements. This effort also continues to support the Joint DACAS Block 1 initiative which will provide a common CASS terminal execution phase capability across service and coalition forces. CASS software will also be focused on developing a simplified user interface which is TACP mission tailorable e.g ASOC Gateway, Vehicle Mount & Joint Terminal Attack Controller (JTAC)while maintaining consistent base engine across multiple platforms. The new effort will require to have CASS adopt flexible architecture to enable modular upgrades and capability enhancements thus lowering sustainment costs. Need to develop terminal control interface of ammunition in flight.			
Title: Program Management Support (PMA) ***Description:*** Program Management Administration (PMA) - PMA supports CASS, JETS and MC acquisition programs with engineering and technical support. Program Management Administration (PMA): FY14 funding is for program support activities required for device development. Permits the System Program Office to discharge responsibilities to support the fielding and installation of new and developing capabilities. This includes the initial bed down and operability testing, technical interchange meetings, and events incident to fielding both hardware and software products, and maintaining configuration control of fielded products. ***FY 2012 Accomplishments:*** Continued to support CASS, JETS and MC acquisition programs with engineering and technical support. Continued to support activities required for device production. Permits the System Program Office to discharge responsibilities to support the fielding and installation of new and developing capabilities. This includes the initial bed down and operability testing, technical interchange meetings, and events incident to fielding both hardware and software products, and maintaining configuration control of fielded products. ***FY 2013 Plans:*** Continuing to support CASS, JETS and MC acquisition programs with engineering and technical support. Continuing to support activities required for device production. Permits the System Program Office to discharge responsibilities to support the fielding and installation of new and developing capabilities. This includes the initial beddown and operability	1.643	1.693	1.430

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
testing, technical interchange meetings, and events incident to fielding both hardware and software products, and maintaining configuration control of fielded products. ***FY 2014 Plans:*** Will continue to support management with engineering and technical for development and implementation. PMA supports CASS, JETS and MC acquisition programs with engineering and technical support. Will continue to support activities required for device production. Permits the System Program Office to discharge responsibilities to support the fielding and installation of new and developing capabilities. This includes the initial beddown and operability testing, technical interchange meetings, and events incident to fielding both hardware and software products, and maintaining configuration control of fielded products. TACP M is also supporting ACC efforts to utilize the Combat Capability Developer Process in order to better align with the Joint Command & Control (JC2)& Capability Development Document(CDD). Note: JC2 replaced Net Enabled Command & Control(NECC).			
Title: Joint Effects Targeting System (JETS) ***Description:*** JETS is an Army-led program to develop, integrate, and test an integrated CAS targeting system that is smaller, lighter, and more accurate than current systems. JETS consists of two sub-systems: the Target Locations and Designation System (TDLS) that provides target acquisition, high-accuracy target location and laser designation. JETS will be incrementally developed. ***FY 2012 Accomplishments:*** Continued to support the development of a prototype TLDS system through the JETS program office. The primary TLDS capability requirements are: provide a reduction in hardware weight from current similar systems, provide a highly accurate target location capability. This effort includes contractor support, engineering support, and test and evaluation. ***FY 2013 Plans:*** Continuing to support the development of a prototype TLDS system through the JETS program office. The primary TLDS capability requirements are: provide a reduction in hardware weight from current similar systems, provide a highly accurate target location capability. This effort includes contractor support, engineering support, and test and evaluation. ***FY 2014 Plans:*** N/A	1.552	1.560	0.000
Title: Mobile Communication System	0.753	0.512	0.000

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207444F: *Tactical Air Control Party-Mod*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Repaced Vehicular Communication System (VCS), Mobile Communication Capability (MCC) - Design, develop, fabricate, integrate, test, provide associated documentation (e.g. technical manuals) in support of delivering a digital multiple channel, mobile communication system to replace the aging analog GRC-206 communications pallet. ***FY 2012 Accomplishments:*** After VCS HMMWV cancellation in FY11, Tactical Air Control Party-Modernization RDT&E efforts are focusing studies and analyses on developing Joint Capabilities Integration and Development System (JCIDS) documentation in support of a long term replacement for the aging GRC-206 communications pallet and other TACP systems. ***FY 2013 Plans:*** Continuing to perform studies and analyses to develop TACP-M Joint Capabilities Integration and Development System (JCIDS) documentation in support of a long term replacement for the aging GRC-206 communications pallet and close air support software and other TACP efforts.			
Accomplishments/Planned Programs Subtotals	8.939	16.226	10.250

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA03: Line Item # 837100: *Tactical C-E Equipment*	53.839	35.304	27.329		27.329	48.781	25.260	25.714	26.177	Continuing	Continuing

Remarks

E. Acquisition Strategy

TACP-M is executing an incremental development for the TACP CASS software. TACP CASS software systems engineering, design, integration, and fielding support is being provided under a cost plus fixed fee contract. JETS is an Army-managed joint interest development program the Air Force will continue to support.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207444F: *Tactical Air Control Party-Mod*	PROJECT 676013: *Equipment Modernizaton*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CASS Sys Int Software Dev't	TBD	TBD:TBD, NA	-	3.551	May 2012	10.938	Jun 2013	6.904	Jan 2014	-		6.904	Continuing	Continuing	TBD
Mobile Communication System	TBD	TBD:TBD, NA	-	0.753	Apr 2012	0.000		0.000		-		0.000	Continuing	Continuing	TBD
JETS	MIPR	Army - SSL Division:Ft Belvoir, VA	-	2.128	Jan 2012	2.072	Feb 2013	0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	6.432		13.010		6.904		0.000		6.904			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Agency Support	Various	Various:Various, NA	-	1.440	Nov 2011	1.523	Nov 2012	1.915	Nov 2013	-		1.915	Continuing	Continuing	TBD
		Subtotal	0.000	1.440		1.523		1.915		0.000		1.915			

Remarks

Development, operational and interoperability testing

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration	Various	Various:Various, NA	-	1.067	Jan 2012	1.693	Jan 2013	1.431	Jul 2014	-		1.431	Continuing	Continuing	TBD

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207444F: *Tactical Air Control Party-Mod*	PROJECT 676013: *Equipment Modernizaton*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	1.067		1.693		1.431		0.000		1.431			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	8.939		16.226		10.250		0.000		10.250			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207444F: *Tactical Air Control Party-Mod*	PROJECT 676013: *Equipment Modernizaton*

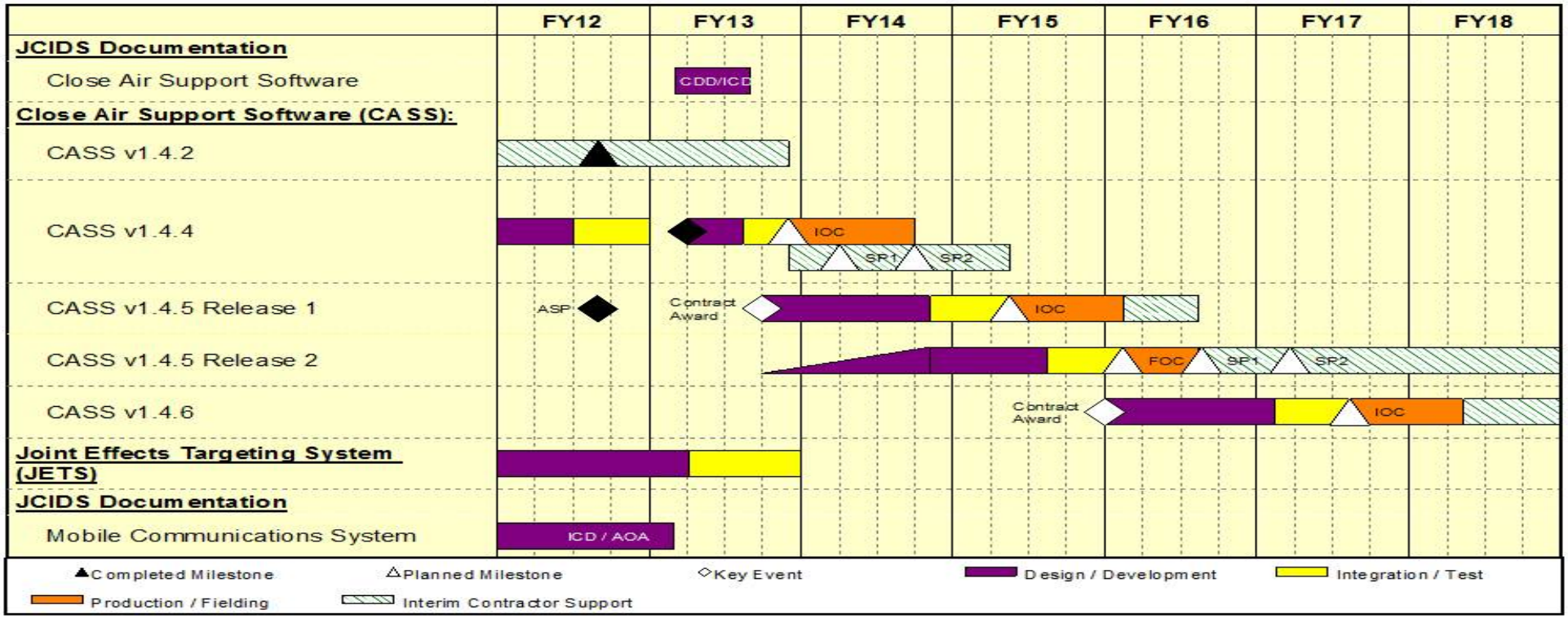


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207444F: *Tactical Air Control Party-Mod*	**PROJECT** 676013: *Equipment Modernizaton*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JCIDS Documentation	1	2012	4	2013
Close Air Support System (CASS) v1.4.2	1	2012	4	2013
Close Air Support System (CASS) v1.4.4	1	2012	2	2015
Close Air Support System (CASS) v1.4.5 Release 1	4	2013	3	2016
Close Air Support System (CASS) v1.4.5 Release 2	4	2013	4	2018
Close Air Support System (CASS) v1.4.6	1	2016	4	2018
Joint Effects Targeting Systems	1	2012	4	2013
JCIDS Documentation_Mobile Communications System	1	2012	1	2013

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207448F: *C2ISR Tactical Data Link*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	1.489	1.633	1.431	-	1.431	1.805	1.791	1.732	1.763	Continuing	Continuing
675045: *C2ISR Tactical Data Link*	-	1.489	1.633	1.431	-	1.431	1.805	1.791	1.732	1.763	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Tactical Data Links (TDL), as a subset of the broader 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 new and standardized waveforms and data formats allowing line-of-sight (LOS) and beyond-line- of-sight (BLOS) intra- and inter-flight communications. 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. 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), and Tactical Targeting Network Technology (TTNT). TDL efforts include incorporating changes and additions to the Link-16 message standard (MIL-STD-6016D) and applicable Interface Change Proposals (ICPs), assisting with Air Force and joint interoperability certification testing with the Air Force Command and Control Integration Center (AFC2IC) and Joint Interoperability Test Center (JITC); 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.

This effort provides critical capability and enhancements to the airborne network by creating common development, integration and interoperability among ground and C2 platforms and responds to quick reaction capability integration and demonstration 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, Reaper, Rivet Joint, Combat Sent, and Cobra Ball. TDLs keep all C2ISR platforms and data linked weapons current/interoperable in the airborne network to enable Global Strike, Global Persistent Attack, offensive and defensive counterair (OCA and DCA) and Suppression of Enemy Air Defenses (SEAD) missions.

Activities also include studies and analysis to support both current program planning and execution, as well as future program planning.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207448F: *C2ISR Tactical Data Link*

This program is in Budget Activity 7, Operational System Development, these budget activities include development efforts to upgrade systems currently fielded or has approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	1.522	1.633	1.650	-	1.650
Current President's Budget	1.489	1.633	1.431	-	1.431
Total Adjustments	-0.033	0.000	-0.219	-	-0.219
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.033	0.000			
• Other Adjustments	0.000	0.000	-0.219	-	-0.219

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: AWACS Block 30/35 Software Enhancements	0.112	0.000	0.000
Description: Improve AWACS Block 30/35 Link 16 interoperability and compatibility by incorporating key changes to communications software baseline. ***FY 2012 Accomplishments:*** Developed and released Request for Proposal (RFP) Package, evaluated proposal and awarded contract for AWACS Block 30/35 Identification Friend or Foe/Selective Identification Features (IFF/SIF) Interface Change Proposal (ICP) Delta Change Package (DCP).			
Title: AWACS Block 40/45 Mode 5 Link 16 Enhancements	0.772	0.437	0.000
Description: Improve AWACS Block 40/45 Link 16 interoperability and compatibility by incorporating key changes to communications software baseline. ***FY 2012 Accomplishments:*** Developed and released Request for Proposal (RFP) Package, evaluated proposal and awarded contract for AWACS Block 40/45 mode 5 implementation. ***FY 2013 Plans:***			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207448F: *C2ISR Tactical Data Link*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continuing development, test, and integration of FY12 AWACS Block 40/45 effort. Funding C2-focused airborne networking studies supporting data link enhancements to include, but not limited to, Link-16 Pathfinder and strength track reporting and correlation.			
Title: Aerial Network Engineering Lab ***Description:*** Fund C2 focused airborne networking studies supporting data link enhancements to include, but not limited to Link-16 Pathfinder and strength track reporting and correlation. ***FY 2012 Accomplishments:*** Developed AWACS 40/45 efforts. Funded C2 focused airborne networking studies supporting data link enhancements to include, but not limited to Link-16 Pathfinder and strength track reporting and correlation. ***FY 2013 Plans:*** Continuing development, test, and integration of AWACS 40/45 efforts. Funding C2 focused airborne networking studies supporting data link enhancements to include, but not limited to Link-16 Pathfinder and strength track reporting and correlation. ***FY 2014 Plans:*** Will continue to develop, test, and integrate AWACS 40/45 efforts. Funding C2 focused airborne networking studies supporting data link enhancements to include, but not limited to Link-16 Pathfinder and strength track reporting and correlation.	0.207	0.756	0.200
Title: AWACS Block 40/45 User Identified Critical ICP's ***Description:*** AWACS Block 40/45 User Identified Critical ICPs will be implemented such as time slot reallocation, strength track reporting and correlation, global area reference system, and MIL-STD updates. ***FY 2014 Plans:*** Will continue to improve AWACS Block 40/45 Link 16 interoperability and compatibility by incorporating key ICPs to the software baseline.	0.000	0.000	0.856
Title: Program Management Administration (PMA) ***Description:*** Program Management Administration costs provide management with the necessary engineering, technical, and administrative support needed to facilitate development and implementation. ***FY 2012 Accomplishments:*** Supported MITRE, PASS, Waveform Branch PMA ETASS and HNAPMA funding. ***FY 2013 Plans:***	0.398	0.440	0.375

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207448F: *C2ISR Tactical Data Link*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Supporting MITRE, PASS, Division Assessments and ESC Assessments. ***FY 2014 Plans:*** Will support MITRE and PASS.			
Accomplishments/Planned Programs Subtotals	1.489	1.633	1.431

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• RDTE:BA05:PE 0604281F: *TDN Enterprise*	45.104	24.534	51.456		51.456	46.999	35.686	21.863	22.257	Continuing	Continuing
• APAF:BA05:Line Item #A01000: *A-10*	0.674	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• APAF:BA05:Line Item #F01500: *F-15*	0.000	0.000	0.000		0.000	6.290	18.946	44.593	45.393	Continuing	Continuing
• APAF:BA05:Line Item #F01600: *F-16*	0.000	0.000	0.000		0.000	8.303	7.994	8.137	8.283	Continuing	Continuing
• APAF:BA05:Line Item #B00200: *B-2A*	0.000	0.000	0.257		0.257	0.488	0.477	0.102	0.000	Continuing	Continuing
• APAF:BA05:Line Item #B01B00: *B-1B*	0.000	0.000	0.696		0.696	1.273	1.144	0.129	0.000	Continuing	Continuing
• APAF:BA05: Line Item #OTHACF: *Other Aircraft*	0.957	0.000	0.192		0.192	1.590	2.561	1.608	0.617	Continuing	Continuing
• OPAF:BA03:Line Item #834010: *General Information Technology*	10.388	0.269	0.248		0.248	0.169	0.170	0.173	0.176	Continuing	Continuing

Remarks

E. Acquisition Strategy

The Airborne Networking Division provides for common development, integration and interoperability across the entire airborne network and ensures that TDLs 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-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207448F: *C2ISR Tactical Data Link*

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207448F: *C2ISR Tactical Data Link*	PROJECT 675045: *C2ISR Tactical Data Link*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
C2ISR Tactical Data Link Software Enhancements	SS/ Various	Boeing:Seattle, WA	-	1.091	Feb 2012	1.193	Feb 2013	1.056	Dec 2013	-		1.056	Continuing	Continuing	TBD
		Subtotal	0.000	1.091		1.193		1.056		0.000		1.056			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

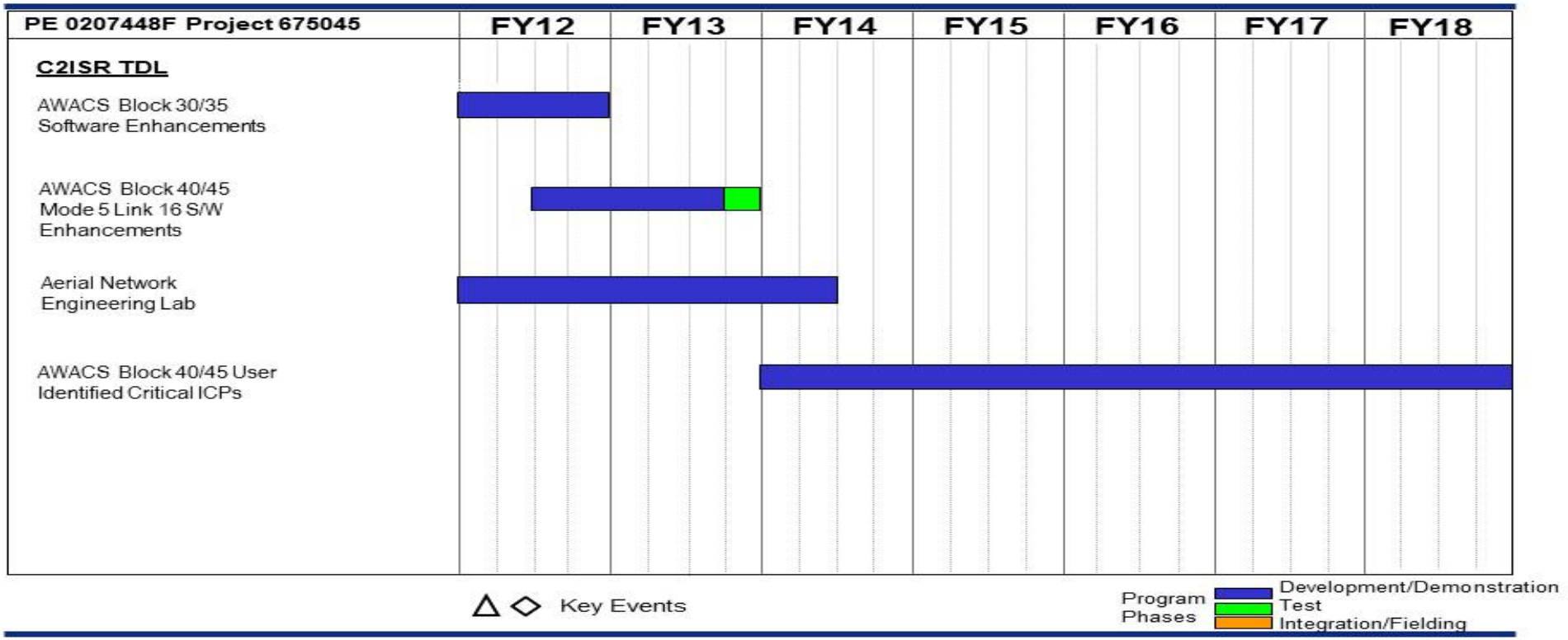
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA - Program Office and Contractor Support	Various	Various:Various,	-	0.398	Sep 2012	0.440	Feb 2013	0.375	Oct 2013	-		0.375	Continuing	Continuing	TBD
		Subtotal	0.000	0.398		0.440		0.375		0.000		0.375			

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	1.489		1.633		1.431		0.000		1.431			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207448F: *C2ISR Tactical Data Link*	PROJECT 675045: *C2ISR Tactical Data Link*

PE 0207448F C2ISR TDL
Program Schedule



Integrity - Service - Excellence

1

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207448F: *C2ISR Tactical Data Link*	**PROJECT** 675045: *C2ISR Tactical Data Link*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
AWACS Block 30/35 Software Enhancements	1	2012	4	2012
AWACS Block 40/45 Mode 5 Link 16 Software Enhancements	2	2012	4	2013
Aerial Network Engineering Lab	1	2012	2	2014
AWACS Block 40/45 User Identified Critical ICPs	1	2014	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force												DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207449F: *Command and Control (C2) Constellation*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	20.075	18.086	7.329	-	7.329	0.000	0.000	0.000	0.000	0.000	45.490
675078: *Horizontal Integration*	-	11.126	8.477	7.329	-	7.329	0.000	0.000	0.000	0.000	0.000	26.932
675140: *Joint Expeditionary Force Experiments*	-	8.949	9.609	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	18.558

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY 2014: Project 675140, Joint Expeditionary Force Experiments (JEFX), was terminated

A. Mission Description and Budget Item Justification

The Command and Control Constellation (C2C) is the sole Air Force program for defining, developing, and assessing integrated effects of global, theater and tactical level Air Force air, space, and cyber command and control (C2) capabilities in support of the joint warfighter. The Air Force faces a complex future where conflict will range across a broad spectrum of operations and lethality. The Air Force requires capabilities with the maximum possible flexibility to deal with the widest possible range of conflict.

The C2C is the enabling program element for C2 Integration/Modernization. The Air Force is working to establish a C2 framework and architecture to be used as a unifying vision of command and control for each of the services core functions. C2C will support the defense strategy through: integration of air, space cyber and intelligence, surveillance, and reconnaissance (ISR) C2, through architectural analysis, prototyping, experimentation and innovation to develop cross-cutting solutions, and enable an improved "sense-to-kill" cycle time. C2C innovations and experimentation provide strategic, operational, and tactical direction for Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel and Facilities (DOTMLPF) solutions to facilitate an integrated mission environment that supports C2 planning and execution for air, space, and cyberspace. In-depth development and analyses of C2 operational, systems, and technical architectures are geared towards identifying capability gaps, identifying required "to be" information services, and evaluating C2 program planned improvements. Through prototyping and experimentation, C2C integrates rapidly developing technologies to promote common standards, data sharing, and information services across Air Force and joint warfighting applications to support joint enterprise solutions.

Project 675078, Horizontal Integration (HI) conducts DOTMLPF analyses and assessments to guide cross-cutting, C2 sub-enterprise and cyberspace investment decisions that integrate USAF capabilities into joint and coalition operations. HI identifies, prioritizes, and develops requirements and horizontally integrated solution recommendations to ensure the latest technologies and information services are integrated into a cross cutting C2 system that enables integrated effects in all warfighter domains. The HI strategy will be validated by Headquarters, Air Force (HAF) to ensure that initiatives are harmonized with the most urgent warfighter needs described by the C2 Capability Assessment Team (CAT) and C2 Core Function Master Plan (CFMP) and supporting the 2012 Air Force, Joint and Defense Strategies

and Operational Concepts. Once validated, HI funds are applied toward identifying the most critical warfighter capabilities and ensuring they are horizontally integrated into both Air Force and joint C2 programs of record.

Project 675140, Joint Expeditionary Force Experiments (JEFX) are agile and frequent innovation-focused experiments which lead to pre-fielded operational and technical assessments. Constructive, live and virtual, operationally representative warfighter environments are created to support integration challenges which focus on critical C2 areas of interest that support the joint warfighter; including, C2 of ISR innovation that supports the air, space, and cyberspace domains. JEFX provides the infrastructure and integration initiatives for experimentation with emerging operational concepts and attendant new technologies that fill operational gaps in Air Force capabilities to meet emerging and rapidly changing real world threats. The JEFX strategy is validated and supported by the Commander, Air Combat Command (COMACC) and coordinated with Headquarters, Air Force (HAF) ensuring initiatives are harmonized with the most urgent warfighter needs and validated requirements described in the AF Core Function Master Plans (CFMP) and supported through MAJCOM Core function Lead Integrator (CFLI). JEFX initiatives are based on emerging CONOPS and warfighter challenges, important enablers of innovation and transformation, which are designed to support the themes and demonstrate emerging Air Force capabilities to deploy and employ decisive air, space and cyberspace power in support of the Joint Force.

This program is in Budget Activity 7, Operational System Development, these budget activities include development efforts to upgrade systems currently fielded or have approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	17.254	18.086	16.808	-	16.808
Current President's Budget	20.075	18.086	7.329	-	7.329
Total Adjustments	2.821	0.000	-9.479	-	-9.479
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	3.346	0.000			
• SBIR/STTR Transfer	-0.525	0.000			
• Other Adjustments	0.000	0.000	-9.479	-	-9.479

Change Summary Explanation

In FY 2012: Project 675078, Horizontal Integration (HI), increased $3.346M to support Air Force enterprise horizontal integration efforts.
In FY 2014: Project 675140, Joint Expeditionary Force Experiments (JEFX), was terminated, Horizontal Integration was reduced $1.126M due to higher Air priorities.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207449F: *Command and Control (C2) Constellation*	PROJECT 675078: *Horizontal Integration*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675078: *Horizontal Integration*	-	11.126	8.477	7.329	-	7.329	0.000	0.000	0.000	0.000	0.000	26.932
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Horizontal Integration (HI) develops an integrated mission environment that supports cross-cutting solutions across the air, space, and cyberspace command and control (C2) warfighter domain. HI activities include: requirements, architecture, systems engineering, technology development, risk reduction, prototyping, and transition. These activities are required to: identify, design, develop, experiment, and implement C2 solutions supporting operational requirements for warfighting integration and interoperability needs which are not the sole responsibility of a specific program of record.

The nature of integrated and interoperable C2 warfighting capabilities span multiple platforms and domains. These capabilities are routinely being adjusted to meet the changing requirements from the warfighting communities. The HI project is uniquely designed to look across platforms and domains enabling the Air Force to respond to operator needs across the seams of individual systems. These horizontal integration initiatives will be prototyped, assessed, appropriately captured in requirements documents and then transitioned to programs of record for production, fielding and sustainment.

Systems Engineering and analysis is the 'glue' that holds command and control constellation (C2C) elements together and closes the seams in the C2 architectures. Capability analysis identifies areas where interoperability can be improved within the Air Force, as well as among joint services, and coalition partners. Once capability issues are identified, they are prioritized and pilot initiatives are developed to provide solutions to the warfighter challenges to resolve the capability gaps. The HI project also helps to competitively prototype integrated solutions against validated program requirements.

The benefits of these activities are two-fold: the operational community is able to weigh the cost, risk, and performance trade-offs between enterprise solutions versus program centric solutions, and it supports competitive prototyping of all acquisition programs. The synchronization of HI prototyping and program milestone requirements offers an effective environment for increasing interoperability while reducing the impact of this policy on multiple programs. An infrastructure environment manages a continuous distributed operational environment that supports air, space, and cyberspace C2 and rapid acquisition, prototyping, development, integration, and fielding. C2 initiatives may use this infrastructure to mature their development status prior to entry into JEFX for operational and technical suitability assessment.

The HI prototype performances are assessed for operational utility, and the most promising initiatives/technologies will be matured and transitioned into weapon system configuration control baselines. Requirement documents will be published and revised, and a requirements database and implementation plan identifying the most significant C2C net-centric integration issues will be updated to catalog the activities necessary to accomplish this integration.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207449F: *Command and Control (C2) Constellation*	PROJECT 675078: *Horizontal Integration*

In addition, this project supports concept exploration, program definition/risk reduction efforts, and studies that support continuous improvements in C2. Guided by the MAJCOM-validated C2 capability gaps developed by the HI Capability Assessment Team annual process and the defense strategy to meet the evolving Anti-Access/Area Denial (A2/AD) threats to air, space and cyber C2 operations, these improvements include but are not limited to: integration of airspace and cross-domain synchronized operations,C2 of integrated air and missile defense, C2 of Air Force Forces and agile combat support, dynamic aerial network capabilities, and non-traditional ISR (NTISR), from 4th and 5th generation aircraft through processing and assessment, and interoperability with joint service, allied and coalition systems, C2 of personnel recovery, and air-sea battle. Activities also include studies and analysis to support both current program planning and execution, as well as future program planning.

This program is in Budget Activity 7, Operational System Development, these budget activities include development efforts to upgrade systems currently fielded or has approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Reqmts/ CBP/ Integrated Ops/ C2 Framework	2.700	2.000	2.006
Description: Requirements/Capabilities Based Planning (CBP) ***FY 2012 Accomplishments:*** Refined integrated air and missile defense (IAMD) C2 requirements. Continued future C2 integration/modernization strategy. ***FY 2013 Plans:*** Analyze, develop, and document emerging Air Force (AF) integrated Command and Control (C2) requirements. Continue future C2 integration/ modernization strategy in a series of concept and/or capability development and technology exploration activities designed to integrate C2 operations across air, space, and cyberspace domains. Continue refining IAMD C2 requirements. Develop concepts and capabilities in support of air sea battle concepts of operation. ***FY 2014 Plans:*** Will analyze, develop, and document emerging Air Force (AF) integrated command and control (C2) requirements. Will continue future C2 integration/modernization strategy in a series of concept and/or capability development and technology exploration activities designed to integrate C2 operations across air, space, and cyberspace domains. Will continue to refine IAMD C2 requirements.			
Title: Arch and SE	1.900	2.596	1.605
Description: Architecture Development and Systems Engineering ***FY 2012 Accomplishments:***			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continued technical expertise support of functional and engineering analyses within the C2 community. Specific emphasis was on air-ground modernization and C2 of ISR Integration. ***FY 2013 Plans:*** Continue functional and systems engineering analysis within the C2 community to flesh out technical architectures and their relationships to operational architectures within the warfighting environment. Specific focus areas and efforts depend on real world needs, C2 enterprise and C2 of cyber requirements with emphasis on airspace and C2 integration, NTISR, C2 of AFFOR, IAMD, 5th - 4th Generation Fighter Interoperability, Dynamic Aerial Networks, C2 of personnel recovery, and air-sea battle. ***FY 2014 Plans:*** Will continue functional and systems engineering analyses within the C2 community to flesh out technical architectures and their relationships to operational architectures within the warfighting environment. Specific focus areas and efforts will depend on real world needs, C2 enterprise and C2 of cyber requirements, with emphasis on airspace and C2 integration, NTISR, C2 of AFFOR, IAMD, 5th - 4th Generation Fighter Interoperability, Dynamic Aerial Networks, C2 of personnel recovery, and air-sea battle.			
Title: Analysis Integ and SE ***Description:*** Analysis Integration and Systems Engineering ***FY 2012 Accomplishments:*** Completed analysis and integration efforts. Specific focus areas were tailored to real world needs, the C2 enterprise, and C2 of cyber requirements. Completed the analysis and transition of prototype capability developed in previous years. ***FY 2013 Plans:*** [This effort incorporated into other efforts.] ***FY 2014 Plans:*** [This effort incorporated into other efforts.]	0.212	0.000	0.000
Title: Ops-Tech Analysis-Concept Dev't ***Description:*** Ops/Tech Analysis and Concept Development ***FY 2012 Accomplishments:*** Completed the modernization of the Command and Control (C2) programs. Enabled a collaborative integrated operating environment (IOE) to present, plan, and execute AF capabilities in support of joint operations. Improved and completed real time information exchange through the planning and execution phases. ***FY 2013 Plans:***	1.151	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
[This effort incorporated into other efforts.] ***FY 2014 Plans:*** [This effort incorporated into other efforts.]			
Title: HI Solutions Assessments ***Description:*** Horizontal Integration Solutions Assessment ***FY 2012 Accomplishments:*** Continued the selection of HI initiatives for execution that fostered enterprise integration across C2 and C2 of cyber programs and supported the DoDI 5000.02 requirement for competitive prototyping. After candidates were solicited, the submissions were evaluated, and the selected initiatives were funded for execution. ***FY 2013 Plans:*** Continue to conduct annual selection of HI initiatives for new execution or continuation that will: a. foster enterprise integration across C2 and extend an IOE, b. support the DoDI 5000.02 requirements for competitive prototyping and c. aid in refining requirements. Key criteria are near-term warfighter impact and likelihood of transition. Potential initiatives will be evaluated and the selected initiatives will be funded for execution. ***FY 2014 Plans:*** Will continue to conduct an annual selection of HI initiatives for new execution or continuation that will: a. foster enterprise integration across C2 and extend an IOE, b. support the DoDI 5000.02 requirements for competitive prototyping and c. aid in refining requirements. Key criteria will continue to be near-term warfighter impact and likelihood of transition. Potential initiatives will be evaluated, and the selected initiatives will be funded for execution.	4.816	3.299	3.119
Title: Program Management Administration (PMA) ***Description:*** Program Support Administration costs support management with engineering and technical for development and implementation ***FY 2012 Accomplishments:*** Supported the acquisition program with engineering and technical support. ***FY 2013 Plans:*** Continue to support the acquisition program with engineering and technical support. ***FY 2014 Plans:***	0.347	0.582	0.599

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Will continue to support the acquisition program with engineering and technical support.			
Accomplishments/Planned Programs Subtotals	11.126	8.477	7.329

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

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.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Requirements/Capability Based Planning (CBP)	C/CPFF	Northrop Grumman:Langley AFB, VA	-	2.700	Nov 2011	1.800	Dec 2012	1.884	Dec 2013	-		1.884	0.000	6.384	TBD
Requirements/Capability Based Planning (CBP)(2)	C/CPFF	BAE:Rome, NY	-	0.000		0.200	Oct 2012	0.122	Oct 2013	-		0.122	0.000	0.322	TBD
Architecture Development and Systems Engineering/ GAPS/AWS Horizontal Integration	C/FFP	MITRE:Hanscom AFB, MA	-	0.150	Nov 2011	0.466	Nov 2012	0.152	Nov 2013	-		0.152	0.000	0.768	TBD
Architecture Development and Systems Engineering/ GAPS/AWS Horizontal Integration (2)	C/FFP	Northrop Grumman:Langley AFB, VA	-	0.000		0.740	Dec 2012	0.501	Dec 2013	-		0.501	0.000	1.241	TBD
Architecture Development and Systems Engineering/ GAPS/AWS Horizontal Integration (3)	C/CPFF	Northrup Grumman:Rome, NY	-	0.000		1.390	Oct 2012	0.952	Oct 2013	-		0.952	0.000	2.342	TBD
Analysis, Integration, and SE/Capability Roadmaps (2)	C/FFP	MITRE:Hanscom AFB, MA	-	0.212	Jan 2012	0.000		0.000		-		0.000	0.000	0.212	TBD
Tech Analysis and Concept Development	C/CPFF	Northrup Grumman:Rome, NY	-	1.107	Nov 2011	0.000		0.000		-		0.000	0.000	1.107	TBD
Tech Analysis and Concept Development (1)	C/CPFF	BAE:Rome, NY	-	0.044	Oct 2011	0.000		0.000		-		0.000	0.000	0.044	TBD
Horizontal Integration Solution Assessment (1)	C/FFP	MITRE:Hanscom AFB, MA	-	1.972	Oct 2011	1.100	Oct 2012	1.631	Oct 2013	-		1.631	0.000	4.703	TBD
Horizontal Integration Solution Assessment (2)	C/FFP	Jacobs ETASS:Hanscom AFB, MA	-	0.098	Jan 2012	0.061	Jan 2013	0.086	Jan 2014	-		0.086	0.000	0.245	TBD
Horizontal Integration Solution Assessment	C/Various	Various:Hanscom AFB, MA	-	4.049	Oct 2011	2.138	Dec 2012	1.402	Dec 2013	-		1.402	0.000	7.589	TBD
		Subtotal	0.000	10.332		7.895		6.730		0.000		6.730	0.000	24.957	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Support Assessment	C/CPFF	Spectrum:Rome, NY	-	0.447	Nov 2011	0.000		0.000		-		0.000	0.000	0.447	TBD
		Subtotal	0.000	0.447		0.000		0.000		0.000		0.000	0.000	0.447	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support/PMA-1	C/FFP	Quantech PASS:Hanscom AFB, MA	-	0.247	Jan 2012	0.247	Jan 2013	0.248	Jan 2014	-		0.248	0.000	0.742	TBD
Program Management Support/PMA-2	C/FFP	Jacobs ETASS:Hanscom AFB, MA	-	0.100	Jan 2012	0.100	Jan 2013	0.100	Jan 2014	-		0.100	0.000	0.300	TBD
Program Management Support/PMA-3	Various	Various:Hanscom AFB, MA	-	0.000		0.235	Jan 2013	0.251	Jan 2014	-		0.251	0.000	0.486	TBD
		Subtotal	0.000	0.347		0.582		0.599		0.000		0.599	0.000	1.528	

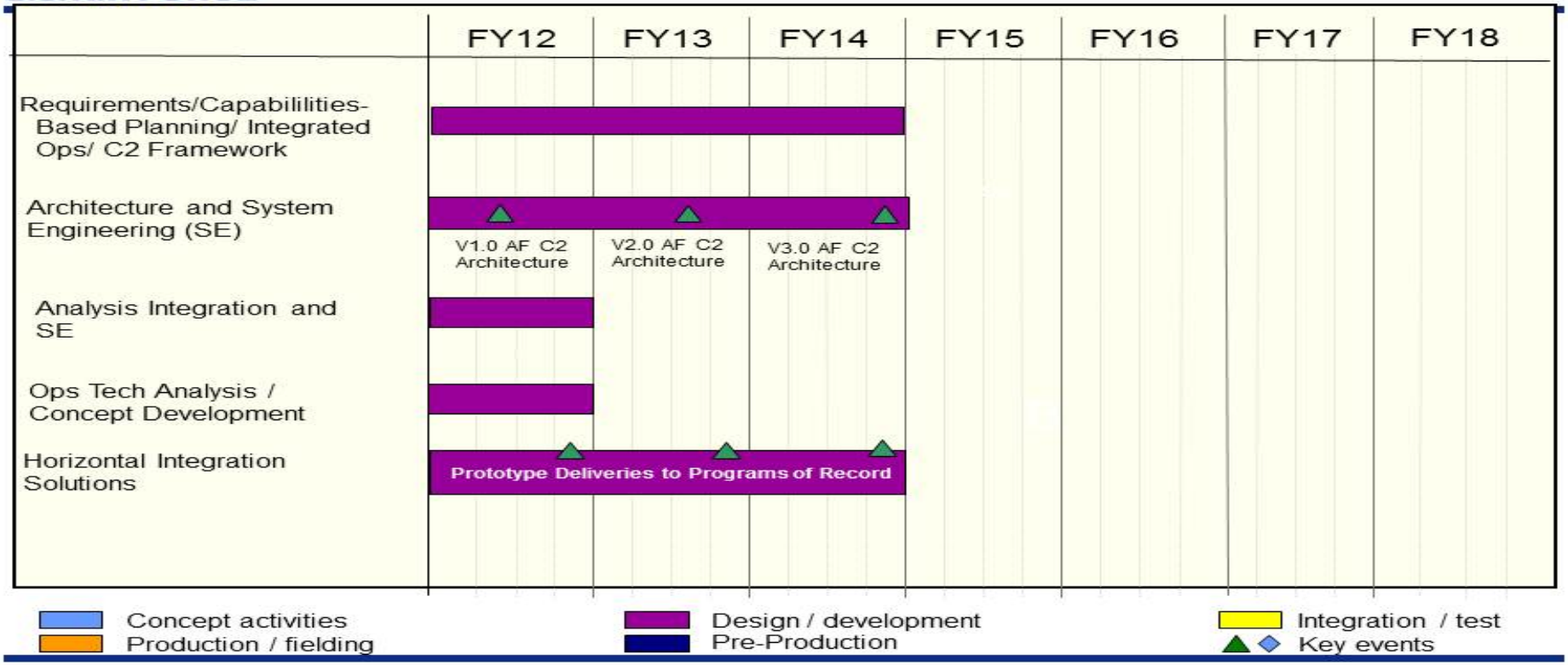
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	11.126		8.477		7.329		0.000		7.329	0.000	26.932	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207449F: *Command and Control (C2) Constellation*	PROJECT 675078: *Horizontal Integration*

Horizontal Integration (HI) Schedule

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Requirements/Capability Based Planning/Integrated Ops/C2 Framework	1	2012	4	2014
Architecture and Systems Engineering (Arch and SE)	1	2012	4	2014
Analysis Integration and Systems Engineering	1	2012	4	2012
Ops-Tech Analysis and Concept Development	1	2012	4	2012
Horizontal Integration (HI) Solutions	1	2012	4	2014

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207449F: *Command and Control (C2) Constellation*	PROJECT 675140: *Joint Expeditionary Force Experiments*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675140: *Joint Expeditionary Force Experiments*	-	8.949	9.609	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	18.558
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY 2013, Project 675140, Joint Expeditionary Force Experiments, was terminated in order to meet higher Air Force priorities.

A. Mission Description and Budget Item Justification

The Joint Expeditionary Force Experiments (JEFX) and supporting Limited Objective Experiments (LOEs) are warfighter integration and validation experiments that address operational challenges and are part of the Air Force (AF) command and control (C2) integration and experimentation enterprise. Activities include: evaluation of innovative solutions for C2 aspects of the AF integrated air and missile defense (IAMD) mission, Anti-Access/Area Denial (A2/AD) threats, dynamic aerial layer networking, 5th to 4th generation aircraft and 5th to 5th generation aircraft disparate tactical datalink (TDL) data translation capabilities Non-Traditional ISR (NTISR), Airspace Integration, Unit Level Agile Combat Support communication processes, as well as C2 Integration and Modernization for existing AF programs of record. JEFX provides continued integration and experimentation efforts across the AF C2 seams and programs in air, space and cyber domains as defined by CORONA, HQ AF, and the AF Command and Control Integration Center (AFC2IC).

JEFX/LOE activities explore significant capability gaps across the range of Air Force command and control (C2) by means of assessing Concept of Operations (CONOPS), tactics, techniques and procedures (TTPs) and materiel solutions. The activities address critical lessons learned from recent operations and the validated requirements described in the 2012 Air Force, Joint and Defense Strategies and Operational Concepts, the AF Core Function Master Plans (CFMP) and supported through MAJCOM Core Function Lead Integrator (CFLI). JEFX creates or leverages operationally representative-experiment enterprise warfighter environments to address joint and coalition warfighter gaps and shortfalls that demonstrate existing and emerging Air Force capabilities to deploy and employ decisive air, space and cyberspace power for the joint force commander and enable innovation and transformation. These unique missions are the major reason JEFX is an experiment and not simply a demonstration or exercise. Activities also include studies and analyses to support current program planning and execution, as well as future program planning.

This program is in Budget Activity 7, Operational System Development, these budget activities include development efforts to upgrade systems currently fielded or has approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Requirements Identification and SE	1.927	2.159	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Spiral develop systems architecture, systems engineering, and integration of initiatives into a cohesive system of systems process ***FY 2012 Accomplishments:*** Continued support for plan and design activities. JEFX 12 LOEs focused on the four issues outlined per CORONA Fall 2009 direction: 1) Lack AF-wide IAMD knowledge and emphasis on strategic to tactical; 2) Significant C-NAF organization & personnel deficiencies; 3) Lack exercise, experimentation & wargame oversight & fidelity; and 4) Obsolete C2 radars / sensors and C2 systems lack integration with joint partners. To address these issues, JEFX initiated integration of the BMD systems, other technology, and process initiatives into the AOC weapons system with the goal of full integration into the joint counter air mission capabilities. Initiated air sea battle concept as relevant operational scenario for JEFX 12. ***FY 2013 Plans:*** Continue integration and experimentation across Air Force (AF) C2 seams and programs in air, space and cyber domains as defined by CORONA, HAF, and AFC2IC. JEFX 2013 (JEFX 13) completes Integrated Air and Missile Defense (IAMD) efforts and begins providing some support for dynamic aerial layer networking, non-traditional intelligence, surveillance, reconnaissance (NTISR) and other C2 integration/modernization activities to include requirements identification, systems engineering of initiatives and LOEs focusing on the integration of C2 services. Requirements validation established in MAJCOM-directed CFMP processes connecting warfighter needs to initiative identification. The experimentation team will perform either an operational utility and/or a technical assessment feeding final experimentation products. ***FY 2014 Plans:*** N/A			
Title: Plan and Design ***Description:*** Plan, design, coordinate, assess and report the JEFX experiments, provide expertise to support initiative selection, acquisition, program management, communications and systems planning. ***FY 2012 Accomplishments:*** Continued support for plan and design activities. JEFX 12 LOEs focused on the four issues outlined per CORONA Fall 2009 direction: 1) Lack AF-wide IAMD knowledge and emphasis on strategic to tactical; 2) Significant C-NAF organization & personnel deficiencies; 3) Lack exercise, experimentation & wargame oversight & fidelity; and 4) Obsolete C2 radars/sensors and C2 systems lack integration with joint partners. To address these issues, JEFX initiated integration of the BMD systems, other	2.193	2.610	0.000

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
technology, and process initiatives into the AOC Weapons System with the goal of full integration into the joint counter air mission capabilities. Initiated air sea battle concept as relevant operational scenario for JEFX 12. ***FY 2013 Plans:*** Developing internally-generated, stand-alone events employing simulation facilities, as necessary. Evaluating innovative solutions for C2 aspects of the AF Integrated Air and Missile Defense (IAMD) mission, Anti-Access/Area Denial (A2/AD) threats, dynamic aerial layer networking, 5th to 4th generation aircraft and 5th to 5th generation aircraft disparate tactical datalink (TDL) data translation capabilities NTISR, airspace integration, unit level agile combat support communication processes, as well as C2 integration and modernization for existing AF programs of record. Leverages AF and joint sponsored experimentation events (i.e. AGILE Fire, Trident Warrior, etc.) when and where feasible. ***FY 2014 Plans:*** N/A			
Title: Develop Initiatives ***Description:*** Develop initiatives to introduce new technologies and operational capabilities into the Aerospace Expeditionary Force (AEF) Concept of Operations (CONOPS) ***FY 2012 Accomplishments:*** Continued support for plan and design activities. JEFX 12 LOEs focused on the four issues outlined per CORONA Fall 2009 direction: 1) Lack AF-wide IAMD knowledge and emphasis on strategic to tactical; 2) Significant C-NAF organization & personnel deficiencies; 3) Lack exercise, experimentation & wargame oversight & fidelity; and 4) Obsolete C2 radars/sensors and C2 systems lack integration with joint partners. To address these issues, JEFX initiated integration of the BMD systems, other technology, and process initiatives into the AOC weapons system with the goal of full integration into the joint counter air mission capabilities. Initiated air sea battle concept as relevant operational scenario for JEFX 12. ***FY 2013 Plans:*** Leveraging existing government and commercial technologies that address a specific integration shortfall. These initiatives are developed by the HI portion of this program with specific interest in operational and/or technical utility. Their requirements drive experiments supporting the programs of record by integrating incremental program improvements, select candidates for upcoming program selection, and field integration and other transition efforts. ***FY 2014 Plans:*** N/A	2.281	2.197	0.000
Title: Define and Build Events	2.209	2.057	0.000

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Implement architectural configuration, conduct M&S, install and test the communications infrastructure and execute the experiment. ***FY 2012 Accomplishments:*** Continued support for plan and design activities. JEFX 12 LOEs focused on the four issues outlined per CORONA Fall 2009 direction: 1) Lack AF-wide IAMD knowledge and emphasis on strategic to tactical; 2) Significant C-NAF organization & personnel deficiencies; 3) Lack exercise, experimentation & wargame oversight & fidelity; and 4) Obsolete C2 radars / sensors and C2 systems lack integration with joint partners. To address these issues, JEFX initiated integration of the BMD systems, other technology, and process initiatives into the AOC weapons system with the goal of full integration into the joint counter air mission capabilities. Initiated the air sea battle concept as the relevant operational scenario for JEFX 12. ***FY 2013 Plans:*** Migrating JEFX program from a major venue to a series of LOE venues with focus on initiative integration and systems engineering. Combining initiatives with Air Force and joint sponsored events. ***FY 2014 Plans:*** N/A			
Title: Assessment and Transition ***Description:*** Transition successful JEFX-assessed, and Air Force approved, warfighting capabilities for fielding into an integrated C2 baseline. ***FY 2012 Accomplishments:*** Continued support for plan and design activities. The JEFX 2012 LOEs focused on the four issues outlined per CORONA Fall 2009 direction: 1) Lack AF-wide IAMD knowledge and emphasis on strategic to tactical; 2) Significant C-NAF organization & personnel deficiencies; 3) Lack exercise, experimentation & wargame oversight & fidelity; and 4) Obsolete C2 radars/sensors and C2 systems lack integration with joint partners. To address these issues, JEFX initiated integrated BMD systems, other technology, and processed initiatives into the AOC weapons system that allowed the integration into the joint counter air mission capabilities. Initiated the air sea battle concept as relevant operational scenario for JEFX 12. ***FY 2013 Plans:*** Continuing program transition under the JEFX Limited Objective Experiments (LOEs) from a long-lead plan to a near-term transition with the Programs of Record or initiative sponsor. Focusing upon the initiative's transition with validation through operational and technical assessments. ***FY 2014 Plans:***	0.100	0.120	0.000

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
N/A			
Title: Program Management Administration (PMA) ***Description:*** Program Management Administration costs support management with engineering and technical for development and implementation. ***FY 2012 Accomplishments:*** Supported the acquisition program with engineering and technical support. ***FY 2013 Plans:*** Continue to support the acquisition program with engineering and technical support. ***FY 2014 Plans:*** N/A	0.239	0.466	0.000
Accomplishments/Planned Programs Subtotals	8.949	9.609	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

JEFX supports evolutionary acquisition of multiple programs by providing venues and initiatives to experiment new and emerging technologies to be integrated into other systems-of-record. All contracts awarded through full and open competition.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Requirements Identification and SE	C/CPAF	MITRE:Hanscom AFB, MA	-	0.518	Oct 2011	0.854	Oct 2012	0.000		-		0.000	0.000	1.372	TBD
Requirements Identification and SE (1)	C/Various	Various:Hanscom AFB, MA	-	0.051	Nov 2011	0.061	Oct 2012	0.000		-		0.000	0.000	0.112	TBD
Requirements Identification and SE (2)	C/CPFF	Spectrum:Rome, NY	-	1.358	Nov 2011	1.244	Oct 2012	0.000		-		0.000	0.000	2.602	TBD
Plan and Design	C/CPAF	MITRE:Hanscom AFB, MA	-	0.300	Nov 2011	0.350	Oct 2012	0.000		-		0.000	0.000	0.650	TBD
Plan and Design (1)	C/Various	Various:Hanscom AFB, MA	-	0.050	Nov 2011	0.060	Oct 2012	0.000		-		0.000	0.000	0.110	TBD
Plan and Design (2)	C/CPAF	L-3 Services:Hurlburt Field, FL	-	1.843	Nov 2011	2.200	Oct 2012	0.000		-		0.000	0.000	4.043	TBD
Develop Initiatives	C/Various	Various:Hanscom AFB, MA	-	0.639	Nov 2011	0.743	Oct 2012	0.000		-		0.000	0.000	1.382	TBD
Develop Initiatives (1)	C/CPFF	Northrup Grumman:Rome, NY	-	1.367	Oct 2011	1.202	Nov 2012	0.000		-		0.000	0.000	2.569	TBD
Develop Initiatives (2)	C/CPFF	SAIC:San Diego, CA	-	0.275	Oct 2011	0.252	Nov 2012	0.000		-		0.000	0.000	0.527	TBD
Define and Build Events	C/CPAF	MITRE:Hanscom AFB, MA	-	0.150	Nov 2011	0.170	Oct 2012	0.000		-		0.000	0.000	0.320	TBD
Define and Build Events (1)	C/Various	Various:Hanscom AFB, MA	-	0.180	Oct 2011	0.215	Oct 2012	0.000		-		0.000	0.000	0.395	TBD
Define and Build Events (2)	MIPR	98 RANWG:Nellis AFB, NV	-	0.125	Oct 2011	0.115	Oct 2012	0.000		-		0.000	0.000	0.240	TBD
Define and Build Events (3)	C/CPFF	Northrup Grumman:Rome, NY	-	1.504	Oct 2011	1.328	Oct 2012	0.000		-		0.000	0.000	2.832	TBD
Define and Build Events (4)	MIPR	46TS:Eglin AFB, FL	-	0.250	Nov 2011	0.229	Oct 2012	0.000		-		0.000	0.000	0.479	TBD
Assessment and Transition	C/CPAF	MITRE:Hanscom AFB, MA	-	0.050	Nov 2011	0.060	Nov 2012	0.000		-		0.000	0.000	0.110	TBD
Assessment and Transition (1)	C/Various	Various:Hanscom AFB, MA	-	0.050	Oct 2011	0.060	Oct 2012	0.000		-		0.000	0.000	0.110	TBD
		Subtotal	0.000	8.710		9.143		0.000		0.000		0.000	0.000	17.853	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207449F: *Command and Control (C2) Constellation*	PROJECT 675140: *Joint Expeditionary Force Experiments*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Experiment Support	C/FFP	Quantech PASS:Hanscom AFB, MA	-	0.239	Jan 2012	0.285	Jan 2013	0.000		-		0.000	0.000	0.524	TBD
Experiment Support (1)	Various	Various:Hanscom AFB, MA	-	0.000		0.181	Jan 2013	0.000		-		0.000	0.000	0.181	TBD
		Subtotal	0.000	0.239		0.466		0.000		0.000		0.000	0.000	0.705	

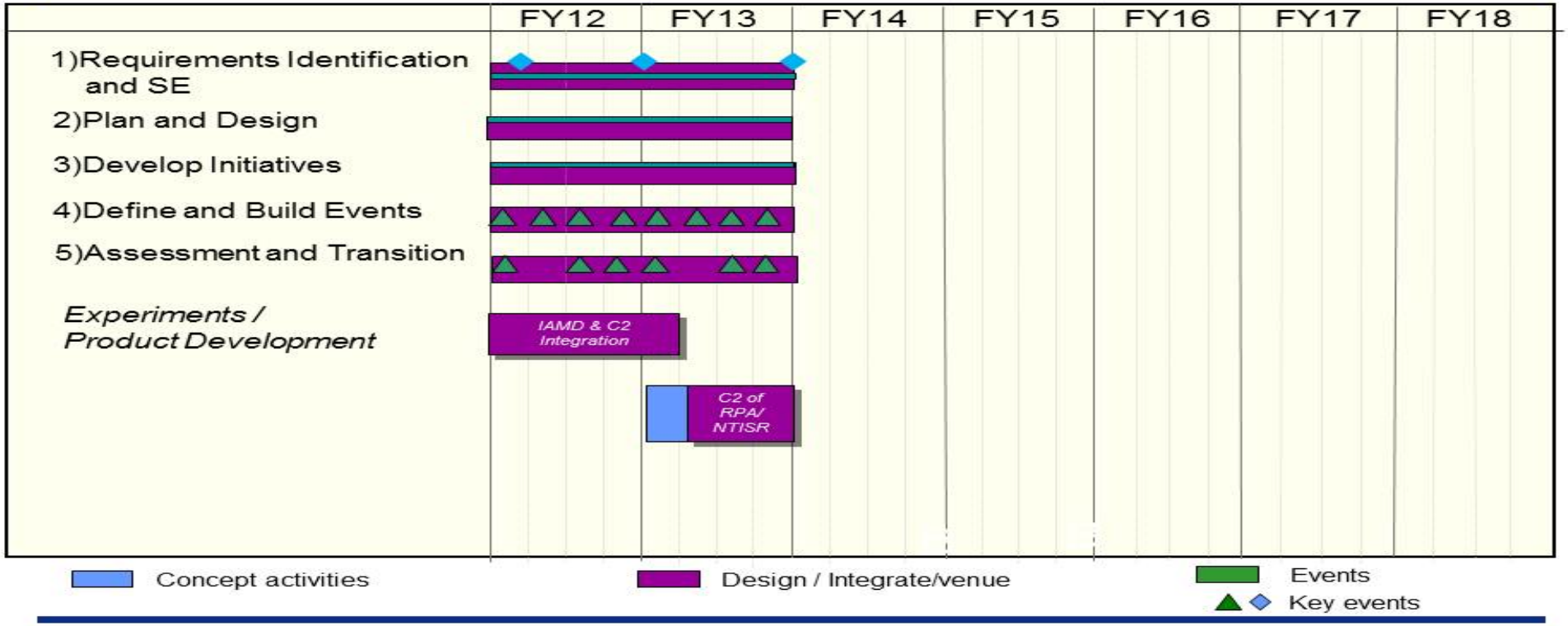
	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	8.949		9.609		0.000		0.000		0.000	0.000	18.558	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207449F: *Command and Control (C2) Constellation*	PROJECT 675140: *Joint Expeditionary Force Experiments*

U.S. AIR FORCE

C2 Constellation Joint Expeditionary Force Experiment (JEFX) Schedule



Current as of: 25 Jan 13

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207449F: *Command and Control (C2) Constellation*	**PROJECT** 675140: *Joint Expeditionary Force Experiments*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Requirements Identification and System Engineering	1	2012	4	2013
Plan and Design	1	2012	4	2013
Develop Initiatives	1	2012	4	2013
Define and Build Events	1	2012	4	2013
Assessment and Transition	1	2012	4	2013
Experiments/Product Development	1	2012	4	2013

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207452F: *DCAPES*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.000	15.690	15.081	-	15.081	14.015	14.092	14.441	14.701	Continuing	Continuing
674802: *DELIBERATE AND CRISIS ACTION PLANNING AND EXECUTION SEGMENT (DCAPES)*	-	0.000	15.690	15.081	-	15.081	14.015	14.092	14.441	14.701	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY 2013, Project Number 674802, Deliberate and Crisis Action Planning and Execution Segment (DCAPES), efforts transferred from PE 0207438F, Theater Battle Management (TBM) C4I, Project Number 674802, Deliberate and Crisis Action Planning and Execution Segment (DCAPES), in order to clarify the effort by providing a singular PE and Project Number.

A. Mission Description and Budget Item Justification

The Deliberate and Crisis Action Planning and Execution Segments (DCAPES)Program Element (PE) includes Deliberate and Crisis Action Planning and Execution Segments (DCAPES), a system 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.

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 SchedulingTool (ECAST), Web Enablement, and JOPES Modernization Migration. Activities also include studies and analysis to support both current program planning and execution and future program planning to modify systems to consume authoritative force structure from Global Force Management-Data Initiative (GFM-DI) organizational servers, linking the identifiers to or replacing current identifiers and, as applicable, exposing the data in a net-centric fashion.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207452F: *DCAPES*

(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.

Activities also include studies and analysis to support current program planning and execution, and future program planning.

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

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.000	15.690	15.081	-	15.081
Current President's Budget	0.000	15.690	15.081	-	15.081
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Loosely Couple DCAPES/JOPES Interfaces	0.000	1.552	0.000
Description: Increment 2 requirements definition, prototyping, development, testing, interoperability, sustainment, and service oriented architecture transition. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** Will field Loose Coupling Release 2 patch v5.0.0.1 (achieve Loose Coupling), address critical warfighter requirements, maintain interoperability, and initiate Inc 2b development effort. Will field LOGFAC 3.0. ***FY 2014 Plans:*** N/A			
Title: Develop DCAPES Increment 2.b	0.000	11.632	13.421

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207452F: *DCAPES*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Increment 2.b requirements include defining, prototyping, developmenting, testing, assuring interoperability, assuring sustainment, and further implementing a service oriented architecture transition to integrate advance LOGFAC capabilities and content. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** Complete documentation of Increment 2b requirements and initiate Increment 2b development. ***FY 2014 Plans:*** Continuing Increment 2b development.			
Title: Modify DCAPES to expose/consume Global Force Management data ***Description:*** This effort is to modify DCAPES to expose and/or consume authoritative force structure to or from Global Force Management Data Initiative (GFM-DI) Organization Servers, linking the identifiers to or replacing current identifiers and, as applicable, affecting the exposure and/or consumption of the data in a net-centric fashion while continuing to support legacy interface partners. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** Will modify DCAPES to expose and/or consume authoritative force structure data being sent to or coming from Global Force Management Data Initiative (GFM-DI) Organization Servers. ***FY 2014 Plans:*** Will continue to modify DCAPES to expose and/or consume authoritative force structure data being sent to or coming from Global Force Management Data Initiative (GFM-DI) Organization Servers.	0.000	2.138	1.300
Title: Program Management Administration (PMA) ***Description:*** Program Management Administration funding supports engineering, technical development and implementation, and acquisition support activities. ***FY 2012 Accomplishments:***	0.000	0.368	0.360

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207452F: *DCAPES*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
N/A ***FY 2013 Plans:*** PMA support. ***FY 2014 Plans:*** PMA Support.			
Accomplishments/Planned Programs Subtotals	0.000	15.690	15.081

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. 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.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207452F: *DCAPES*	PROJECT 674802: *DELIBERATE AND CRISIS ACTION PLANNING AND EXECUTION SEGMENT (DCAPES)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DCAPES Increment 2a	SS/ Various	CSC:Falls Church, VA	-	0.000		1.915	Dec 2012	0.000		-		0.000	Continuing	Continuing	TBD
DCAPES Increment 2b	C/Various	CSC:Falls Church, VA	-	0.000		10.201	Nov 2012	11.456	Nov 2013	-		11.456	Continuing	Continuing	TBD
FFRDC	SS/ Various	MITRE:Bedford, MA	-	0.000		0.315	Oct 2012	0.325	Oct 2013	-		0.325	Continuing	Continuing	TBD
Architecture Documentation Development	C/Various	Copper River IT:Anchorage, AK	-	0.000		0.429	Mar 2013	0.450	Mar 2014	-		0.450	Continuing	Continuing	TBD
		Subtotal	0.000	0.000		12.860		12.231		0.000		12.231			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contract Logistic Functional Support	C/Various	OASIS Systems Inc:Lexington, MA	-	0.000		0.128	Jan 2013	0.150	Jan 2014	-		0.150	Continuing	Continuing	TBD
Contract Cost Analysis Support	C/Various	Tecolote Research, Inc.:Goleta, CA	-	0.000		0.217	Oct 2012	0.225	Oct 2013	-		0.225	Continuing	Continuing	TBD
Contract Engineering Support	C/Various	Jacobs Technology, Inc:Lincoln, MA	-	0.000		0.304	Dec 2012	0.300	Dec 2013	-		0.300	Continuing	Continuing	TBD
Contract System Security Support	C/Various	Centech Group:Falls Church, VA	-	0.000		0.228	Feb 2013	0.230	Feb 2014	-		0.230	Continuing	Continuing	TBD
		Subtotal	0.000	0.000		0.877		0.905		0.000		0.905			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207452F: *DCAPES*	PROJECT 674802: *DELIBERATE AND CRISIS ACTION PLANNING AND EXECUTION SEGMENT (DCAPES)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation	MIPR	46 Test Sqdn:Eglin AFB, FL	-	0.000		0.560	Jan 2013	0.560	Jan 2014	-		0.560	Continuing	Continuing	TBD
Operational Test & Evaluation	MIPR	605 Test Sqdn:Hurlburt Field, FL	-	0.000		0.550	Jan 2013	0.550	Jan 2014	-		0.550	Continuing	Continuing	TBD
Interoperability Testing & Evaluation	MIPR	DISA JITC:Ft Hauchuca, AZ	-	0.000		0.250	Jan 2013	0.250	Jan 2014	-		0.250	Continuing	Continuing	TBD
User Test Support	MIPR	Various:Various,	-	0.000		0.225	Oct 2012	0.225	Oct 2013	-		0.225	Continuing	Continuing	TBD
		Subtotal	0.000	0.000		1.585		1.585		0.000		1.585			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration (PMA) Contract Program Management Office (PMO) Support	C/Various	OASIS Systems, Inc:Lexington, MA	-	0.000		0.308	Jan 2013	0.300	Jan 2014	-		0.300	Continuing	Continuing	TBD
PMA PMO Support - Travel, Licenses, DISA	MIPR	Various:Maxwell AFB Gunter Annex, AL	-	0.000		0.060	Jan 2013	0.060	Jan 2014	-		0.060	Continuing	Continuing	TBD
		Subtotal	0.000	0.000		0.368		0.360		0.000		0.360			

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		15.690		15.081		0.000		15.081			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207452F: *DCAPES*	**PROJECT** 674802: *DELIBERATE AND CRISIS ACTION PLANNING AND EXECUTION SEGMENT (DCAPES)*

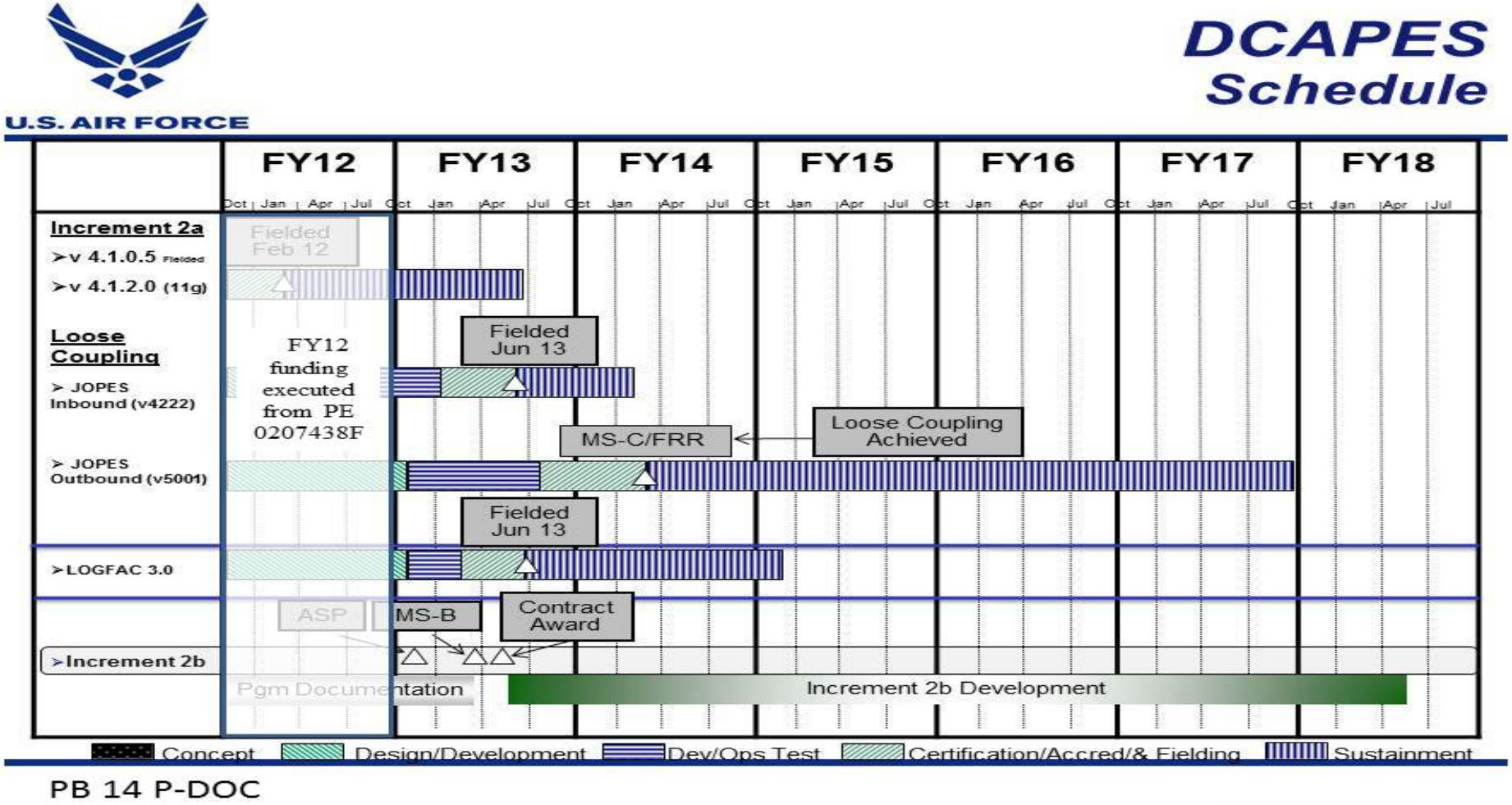


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207452F: *DCAPES*	**PROJECT** 674802: *DELIBERATE AND CRISIS ACTION PLANNING AND EXECUTION SEGMENT (DCAPES)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
--- Increment 2a 4.1.2.0 Sustainment	1	2013	3	2013
--- JOPES Inbound (v4.2.2.2) Ops Test	1	2013	2	2013
--- JOPES Inbound (v4.2.2.2) Certification/Acreditation/Fielding	2	2013	3	2013
--- JOPES Inbound (v4.2.2.2) Sustainment	3	2013	2	2014
--- JOPES Outbound (v5.0.0.1) Design/Development	1	2013	1	2013
--- JOPES Outbound (v5.0.0.1) Ops Test	1	2013	4	2013
--- JOPES Outbound (v5.0.0.1) Certification	4	2013	2	2014
--- JOPES Outbound (v5.0.0.1) Sustainment	2	2014	4	2017
--- LOGFAC 3.0 Design/Development	1	2013	1	2013
--- LOGFAC 3.0 Certification/Accreditation	2	2013	3	2013
--- LOGFAC 3.0 Sustainment	3	2013	1	2015
--- Increment 2b: Documentation	1	2013	3	2013
--- Increment 2b: Development	3	2013	3	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207581F: *Joint Surveillance/Target Attack Radar System (JSTARS)*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	71.991	24.241	13.248	-	13.248	26.966	25.862	30.275	30.820	Continuing	Continuing
670003: *JSTARS*	-	71.991	24.241	13.248	-	13.248	26.966	25.862	30.275	30.820	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Joint Surveillance Target Attack Radar System (JSTARS) is the world's premier airborne ground surveillance platform, meeting joint combat capability requirements. The 707-based E-8C Joint STARS aircraft provides all-weather radar-derived Command and Control, Intelligence, Surveillance, and Reconnaissance (C2ISR) and targeting information on moving and stationary ground/surface targets to include dismounts, slow moving rotary and fixed wing aircraft, and rotating antennas. JSTARS provides target information for matching direct attack aircraft, standoff weapons, and ground-based attack assets against selected targets. It can be cued by other intelligence, surveillance, and reconnaissance (ISR) and target acquisition systems. This capability enables air and ground regional/geographic commanders to effectively make and execute battlefield decisions at the component commander's level to battlefield forces. It also helps achieve predictive battle space 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 C2ISR, network centric operations capabilities, and interoperability with joint service, allied, and coalition systems.

This program element currently comprises: four development programs (JSTARS Modernization, Prime Mission Equipment-Diminishing Manufacturing Sources (PME-DMS), Communications and Networking Upgrades (CNU) and JSTARS Re-engining), as well as Test Infrastructure and Program Management Administration (PMA).

Activities also include studies and analyses to support both current program planning and execution and future program planning.

I. JSTARS Modernization:

The JSTARS modernization program consists of multiple efforts to develop and integrate platform wide system improvements. Future development efforts will depend on availability of funding. These include, but are not limited to Spiral Development and Avionics-Diminishing Manufacturing Sources (Av-DMS) for cockpit upgrades. These efforts are detailed below.

Spiral Development - The Spiral Development effort includes various technology development/insertion activities to enhance target identification, data processing & transmittal, and weapon control capabilities, such as JSTARS Net Enabled Weapons (JNEW) and Joint Surface Warfare (JSuW), JSTARS Radar Modernization

(JSRM), Blue Force tracker (BFT), Battlefield Airborne Communication Node (BACN), combat identification and future program planning for Analysis of Alternatives recommendations. The JSuW-JNEW activities include participation in the JSuW Joint Capability Technology Demonstration (JCTD) and Engineering and Manufacturing Development (EMD) for Network Enabled Weapons (NEW) which includes, but is not limited to, Joint Air-to-Surface Standoff Missile-Air Surface Warfare-Anti-Surface Warfare (JASSM-ASuW). The JSRM activities apply multi-platform radar technology insertion program (MP-RTIP) technology to JSTARS. The MP-RTIP capability on the E-8C will provide the ability to detect, track, and identify both stationary and moving ground vehicles. Future program planning activities include, but are not limited to, modular equipment enclosure (MEE), automatic identification system (AIS), analyst support architecture (ASA) software, and common data link (CDL) integration. Spiral development efforts also support requirements for current and future Urgent Operational Needs (UON), quick reaction capabilities (QRCs), top-down directed efforts, requirements definition, capability gap analysis, pre-Milestone A (MS A) technical risk reduction activities, BFT, multi-agency communication capability (MACC) and the Air Force tactical receive system (AFTRS) radio replacement for the integrated broadcast service (IBS) data and other large airborne platform integration efforts including self-defense suite (SDS), and radar & aircraft performance improvements. Equipment developed under spiral development are procured under Kill Chain Enhancement-MN-38203.

Avionics Diminishing Manufacturing Sources - The Av-DMS efforts include, but are not limited to, Aircraft Information Program (AIP), Ground Proximity Warning System (GPWS), Communications, Navigation, Surveillance and Air Traffic Management (CNS/ATM) upgrades, Control and Display Unit (CDU) Replacement, Emergency Locator Transmitter (ELT), Flight Data Recorder (FDR), Electronic Flight Bag (EFB), Mode 5 Identification Friend or Foe (IFF), Embedded GPS Inertial (EGI) with Selective Availability Anti-Spoofing Module (SAASM)/M-Code GPS, Digital Multi-Function Flight Display (Attitude Direction Indicator, Horizontal Situation Indicator and Attitude Heading Reference System), Automatic Dependent Surveillance-Broadcast (ADS-B), a new flight management system (FMS), flight director, Instrument Landing System (ILS) Marker Beacon multi-mode receiver (MMR), and digital engine instruments.

Additional Modernization efforts include interoperability with manned and unmanned platforms; space data links; advanced Battle-Management Command and Control (BMC2) concepts; 8.33/25 kHz VHF Radio with Single Channel Ground and Airborne Radio System (SINCGARS) voice and data communication; ISR Constellation; Air Moving Target Indicator (AMTI); Advanced Radar Modes (ARM); Aided Target Recognition (ATR); Synthetic Aperture Radar (SAR)/Enhanced Synthetic Aperture Radar (ESAR); Network Centric Collaborative Targeting (NCCT); and Beyond-Line-of-Sight (BLOS) Network Architecture Upgrades (BNAU).

Training and support systems upgrade modernization efforts include, but are not limited to: Weapon Systems Trainer (WST); Navigator Training System (NTS); and Mission Crew Trainers to include a Mission Maintenance Trainer (MMT), Prime Mission Equipment-Maintenance Training Device (PME-MTD) and the Mission System Trainer (MST).

II. Prime Mission Equipment-Diminishing Manufacturing Sources:

Diminishing Manufacturing Sources (DMS) issues are categorized as PME-DMS and Av-DMS issues and are top issues for fleet viability. The PME-DMS program will address hardware and software DMS issues and commercial-off-the-shelf (COTS) technology refresh for the operator work station (OWS), the central computing subsystem, and the Radar Airborne Signal Processor (RASP) subsystem.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207581F: *Joint Surveillance/Target Attack Radar System (JSTARS)*

III. Communications and Networking Upgrades:

The multi-phased CNU program includes, but is not limited to, replacement of the E-8C Link 16 Tactical Data Link (TDL) equipment with National Security Agency (NSA) Cryptographic Modernization Program (CMP) compliant equipment, the Multi-functional Information Distribution System (MIDS) Joint Tactical Radio System (JTRS), IBS, the Family of Advanced Beyond-Line-of-Sight-Terminals (FAB-T), Advanced Tactical Data Links integration, airborne networking, and network centric operation enhancements. All development efforts are complete with the exception of a MIDS JTRS advanced capabilities study.

IV. Re-engining:

The JSTARS Re-Engining program is a System Design and Demonstration (SDD) program to replace legacy TF33-P102C engines with JT8D-219 engines. The JT8D-219 engines are predicted to provide the E-8C aircraft improved performance, including thrust, altitude capability, mission duration, time to climb, critical field length (i.e. takeoff performance), fuel efficiency, noise abatement, emissions, and reliability. It also adds the potential for additional electrical power generation for future system upgrades. SDD efforts include flight test, development of weapon system trainer modification hardware & software, technical orders (i.e. flight and maintenance manuals), technical data development, logistic development & analysis, technical analysis & evaluation, engineering support for MIL-STD airworthiness qualification, flight data analysis & upgrade of the T-3 test aircraft's Propulsion Pod System (PPS), and spare engines including upgrade of used JT8D-219 engines to make them production representative. A PPS consists of engines (4), pneumatic bleed air system, engine build up unit, thrust reversers, nacelles, plyons, exhaust ducts, controls, and instrumentation.

With termination of the re-engining program, the AF completed a modified SDD. This consisted of pneumatic system design, flight manuals, airworthiness certification, and a successful flight test program. The remaining unfunded efforts to complete a full SDD are completion of all logistics development tasks and operational tests.

V. Test and Infrastructure:

The test infrastructure includes the JSTARS Extended Test Support (JETS), JSTARS Test Force (JTF), and C2 Enterprise Integration Facility (CEIF). All JSTARS efforts rely on the components of the test infrastructure to carry out RDT&E activities. The infrastructure includes but is not limited to a T-3 test aircraft, laboratories, support facilities, priority level (PL-2) security, information assurance, and range support. Due to the conclusion of developmental programs, the T-3 test aircraft will be put in preservation storage.

VI. Program Management Administration:

PMA supports JSTARS acquisition programs with administrative, engineering and technical activities required to support development, fielding, and installation of new and developing capabilities.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207581F: *Joint Surveillance/Target Attack Radar System (JSTARS)*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	74.018	24.241	23.292	-	23.292
Current President's Budget	71.991	24.241	13.248	-	13.248
Total Adjustments	-2.027	0.000	-10.044	-	-10.044
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-2.027	0.000			
• Other Adjustments	0.000	0.000	-10.044	-	-10.044

Change Summary Explanation

FY 2012: SBIR Reduction of $2.027M.

FY 2014: Reduction for higher AF priorities.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Modernization	5.395	1.917	0.156
Description: Multiple efforts to develop and integrate system improvements, platform wide. ***FY 2012 Accomplishments:*** Completed JSRM radar receiver development and began flight demo, continued Av-DMS development and studies, completed BNAU design, began BNAU integration and test, and continued Flight Viability Board (FVB) mitigation, QRC efforts, and Spiral Development. ***FY 2013 Plans:*** Will complete JSRM radar receiver flight demo, will complete Av-DMS development and studies, will complete BNAU integration and test, and will continue FVB mitigation, QRC efforts, and Spiral Development. ***FY 2014 Plans:*** Will continue FVB mitigation, QRC efforts, and Spiral Development.			
Title: Prime Mission Equipment-Diminishing Manufacturing Sources	20.794	0.000	0.000
Description: Activity to replace hardware and software DMS. ***FY 2012 Accomplishments:***			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207581F: *Joint Surveillance/Target Attack Radar System (JSTARS)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Successfully completed DT&E and OT&E milestones; completed PME DMS RASP and OWS SDD. ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** N/A			
Title: Communication and Networking Upgrades ***Description:*** Replacement and upgrade of communications and networks. ***FY 2012 Accomplishments:*** Completed CNU-JTRS SDD design, integrate, test and Link 16 Concurrent Multi-Netting (CMN)-4/2,Dynamic Net Management(DNM), and Link 16 Enhanced Throughput (LET) study. ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** N/A	0.026	0.000	0.000
Title: Re-Engining ***Description:*** Replaces legacy TF-33 PPS consisting of new engines, thrust reversers, nacelles, pylons, exhaust ducts, controls, instrumentation and all associated components. ***FY 2012 Accomplishments:*** Completed SDD activity including flight testing, flight manuals, pneumatic bleed air system, weapon system trainer, air worthiness qualification, production shutdown, and storage. ***FY 2013 Plans:*** N/A ***FY 2014 Plans:*** N/A	4.739	0.000	0.000
Title: Test and Infrastructure ***Description:*** Support test and infrastructure efforts including but not limited to Joint Test Force, JETS contract, CEIF, weight reduction studies, information assurance, range support, PL-2 security, T-3 aircraft, test labs, and facilities.	33.838	18.149	10.718

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207581F: *Joint Surveillance/Target Attack Radar System (JSTARS)*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: The Joint Test force participated in the JSRM Test flight program, the Black Dart exercises and completed Re-Engining testing. The test lab supported the ELMM retrofit program. A major upgrade to T-3 was performed under the JETS contract. ***FY 2013 Plans:*** The Joint Test Force will support completion of the JSRM and PME DMS flight test programs. The Joint Test Force will also assist in the Enterprise Challenge exercises and the beginning of the BNAU and MACC flight tests. The test labs will support the CNU retrofit program. ***FY 2014 Plans:*** The Joint Test Force and test labs will support the CNU and PME DMS retrofit programs. The test labs will assist in the evaluation of the IR7 software release. The T-3 test aircraft will be maintained in preservation storage.			
Title: Program Management Administration ***Description:*** Supports activities required to field and install new and developing capabilities. ***FY 2012 Accomplishments:*** Supported activities required for the fielding and installation of new and developing capabilities. This included operational testing, technical interchange meetings and events incident to fielding both hardware and software products. ***FY 2013 Plans:*** Supports activities required for the fielding and installation of new and developing capabilities. ***FY 2014 Plans:*** Will support program activities required for fielding and installation of new and developing capabilities.	7.199	4.175	2.374
Accomplishments/Planned Programs Subtotals	71.991	24.241	13.248

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• APAF: BA05: Line Item # E00800: *E-8*	22.558	59.320	57.472		57.472	29.757	1.455	0.805	0.000	Continuing	Continuing

Remarks

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207581F: *Joint Surveillance/Target Attack Radar System (JSTARS)*

E. Acquisition Strategy

Development efforts are performed in an incremental method. Most major programs will be sole source to Northrop Grumman Corp. in Melbourne, Florida and Norwalk, Connecticut. Trainer programs are sole source to Rockwell Collins in Sterling, Virginia.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207581F: *Joint Surveillance/Target Attack Radar System (JSTARS)*	PROJECT 670003: *JSTARS*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Spiral Development	Various	NGC:Melb, FL	-	1.404	Nov 2011	1.913	Nov 2012	0.156	Nov 2013	-		0.156	Continuing	Continuing	TBD
Communications & Network Upgrade (CNU) (Joint Tactical Radio System (JTRS))	SS/CPIF	NGC:Melb, Fl	-	0.026	Nov 2011	0.000		0.000		-		0.000	0.000	0.026	7.697
ELMM/ARM	SS/CPIF	NGC:Melb, Fl	-	0.000		0.000		0.000		-		0.000	0.000	0.000	96.545
PME DMS	SS/CPIF	NGC:Melb, Fl	-	20.794	Nov 2011	0.000		0.000		-		0.000	0.000	20.794	157.958
JSRM	SS/CPIF	NGC:Melb, Fl	-	3.056	Jan 2012	0.004	Nov 2012	0.000		-		0.000	Continuing	Continuing	80.839
Avionics DMS	SS/CPIF	NGC:Melb, FL	-	0.935	Nov 2011	0.000		0.000		-		0.000	Continuing	Continuing	2.268
Re-Engining	SS/CPIF	NGC:Melb, Fl	-	4.739	Dec 2011	0.000		0.000		-		0.000	0.000	4.739	243.069
		Subtotal	0.000	30.954		1.917		0.156		0.000		0.156			

Remarks

Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
E-8C JSTARS Ext. Test Spt (JETS)	SS/FFP	NGC:Melb, Fl	-	29.528	Nov 2011	15.509	Nov 2012	8.058	Nov 2013	-		8.058	Continuing	Continuing	TBD
JTF Test Ops/Support	Various	JTF:Melb, Fl	-	4.310	Nov 2011	2.640	Nov 2012	2.660	Nov 2013	-		2.660	Continuing	Continuing	TBD
		Subtotal	0.000	33.838		18.149		10.718		0.000		10.718			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207581F: *Joint Surveillance/Target Attack Radar System (JSTARS)*	PROJECT 670003: *JSTARS*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA	Various	Various:Bedford, MA	-	7.199	Nov 2011	4.175	Nov 2012	2.374	Nov 2013	-		2.374	Continuing	Continuing	TBD
		Subtotal	0.000	7.199		4.175		2.374		0.000		2.374			

Remarks

Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.

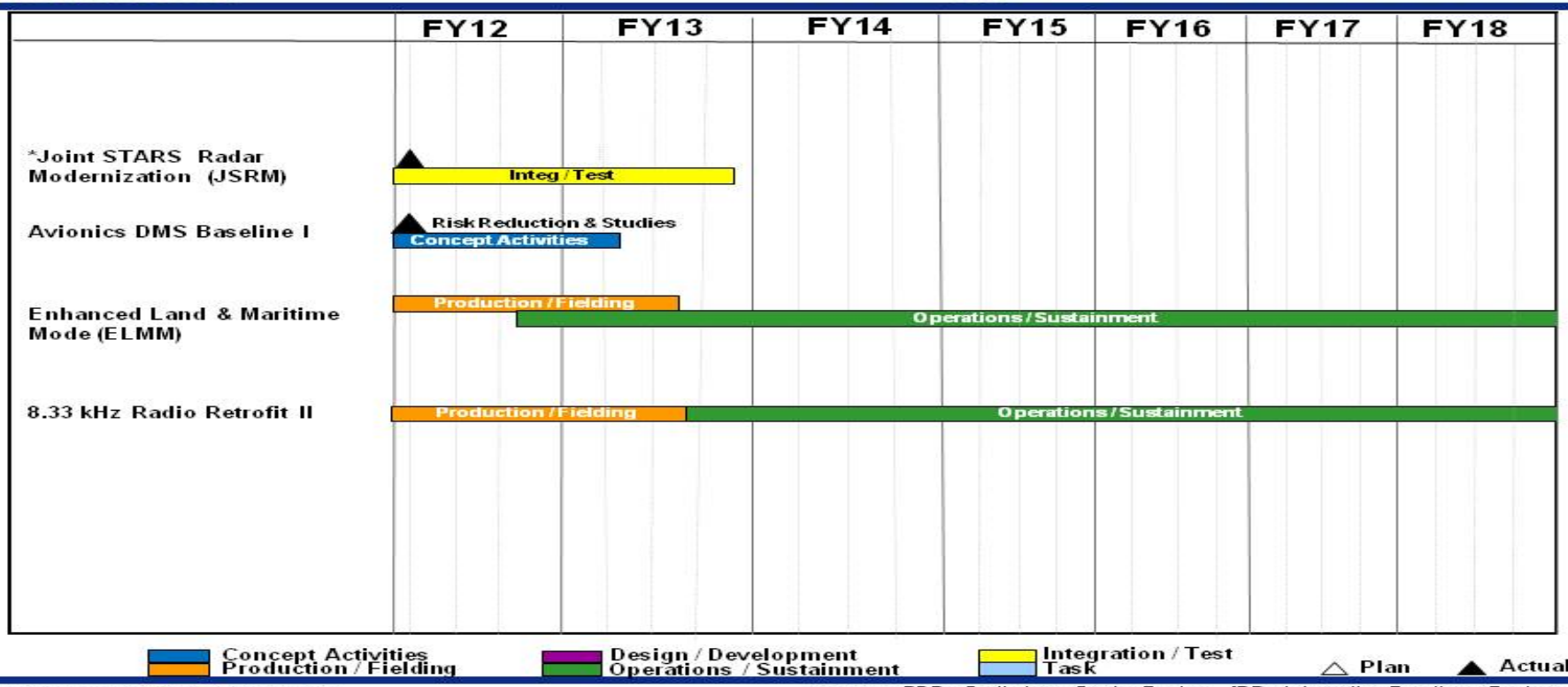
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	71.991		24.241		13.248		0.000		13.248			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207581F: *Joint Surveillance/Target Attack Radar System (JSTARS)*	PROJECT 670003: *JSTARS*

U.S. AIR FORCE

Joint STARS Modernization Program Schedule



*Demonstrations – no follow-on production

As of: 16 Jan 13

Acronyms
PDR – Preliminary Design Review
IRR – Integration Readiness Review
EMD – Engineering and Management Development
CDR – Critical Design Review
SIL – System Integration Lab

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207581F: *Joint Surveillance/Target Attack Radar System (JSTARS)*	PROJECT 670003: *JSTARS*

U.S. AIR FORCE

Joint STARS CNU Program Schedule

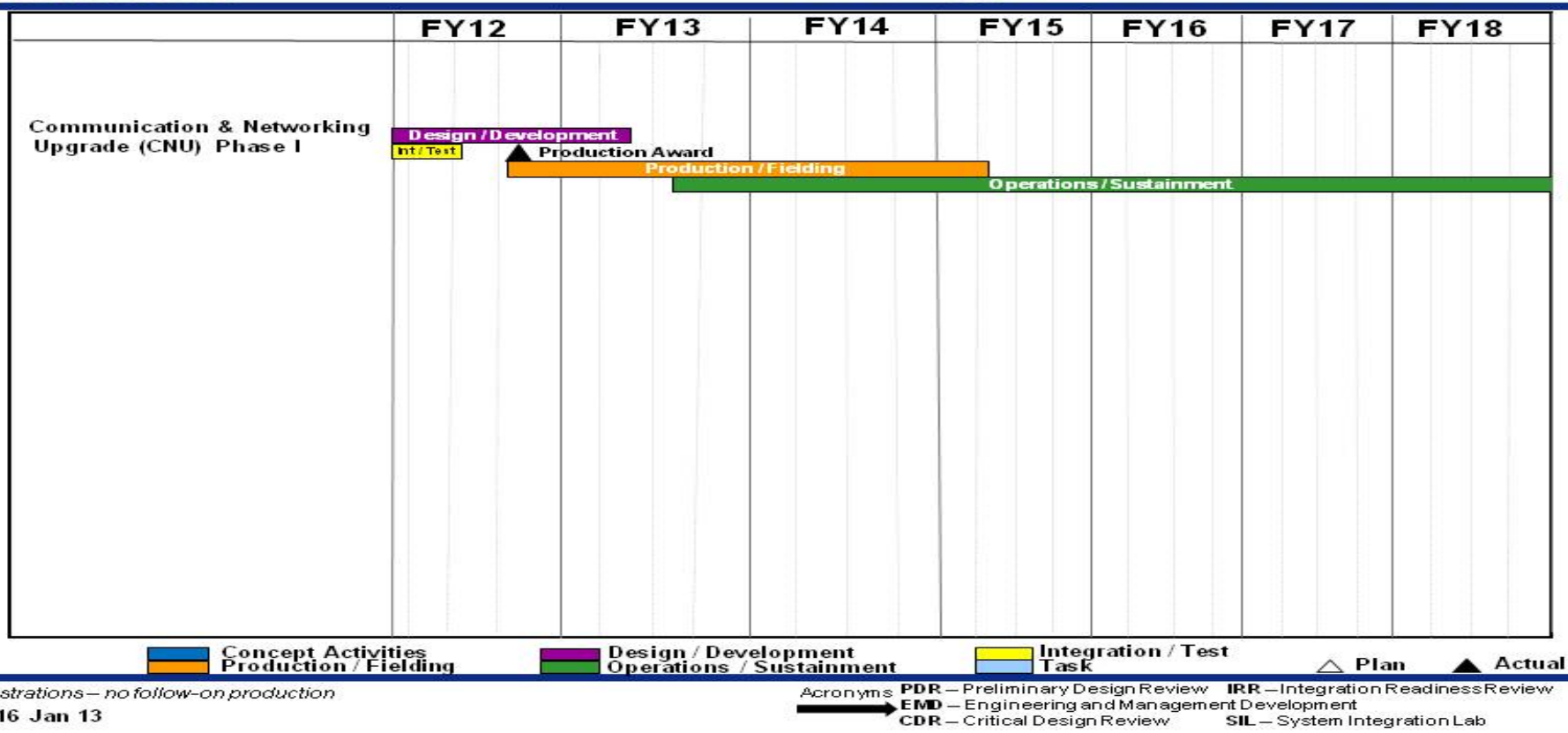
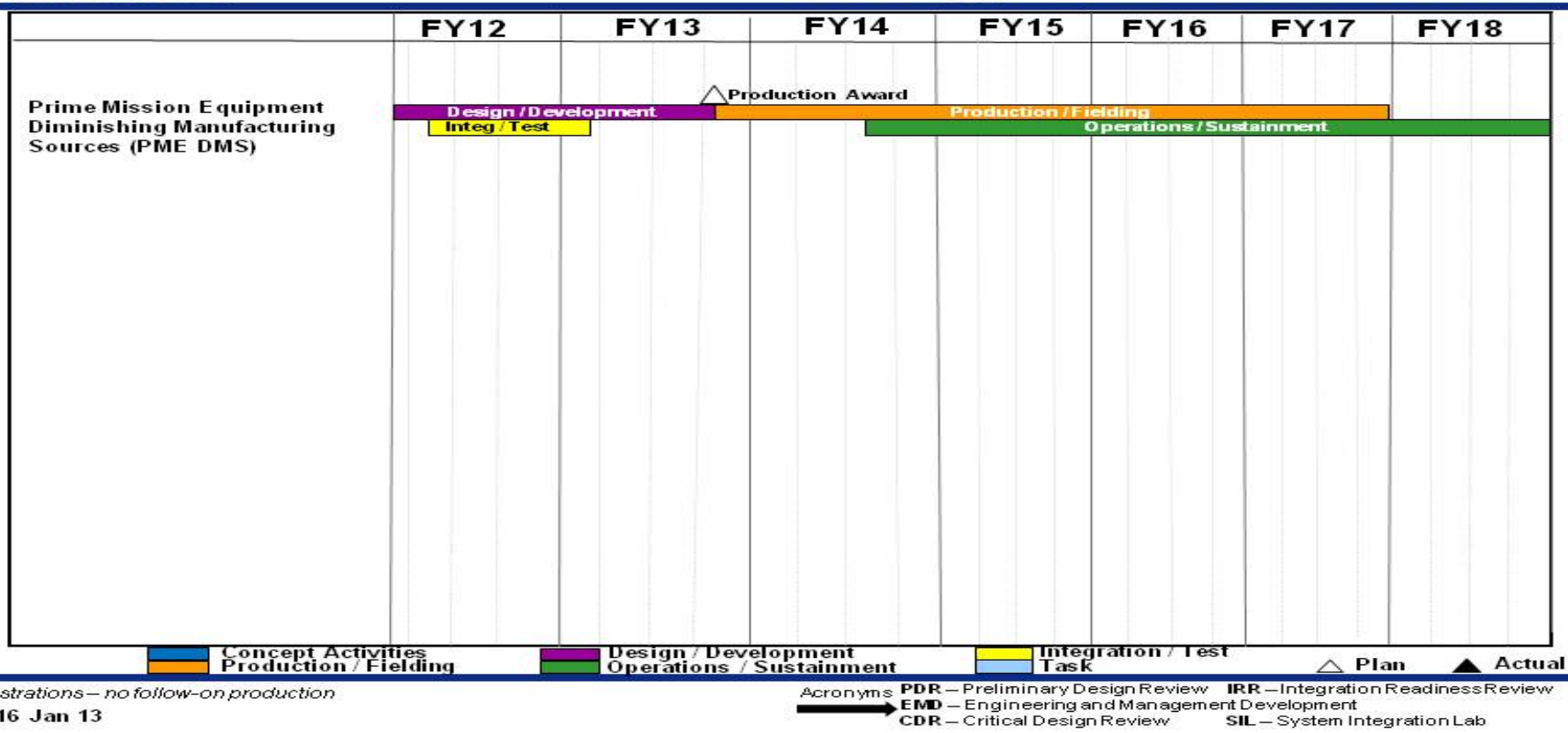


Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207581F: *Joint Surveillance/Target Attack Radar System (JSTARS)*	PROJECT 670003: *JSTARS*

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PME/DMS Program Schedule



**Demonstrations – no follow-on production*

As of: 16 Jan 13

Acronyms
PDR – Preliminary Design Review **IRR** – Integration Readiness Review
EMD – Engineering and Management Development
CDR – Critical Design Review **SIL** – System Integration Lab

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207581F: *Joint Surveillance/Target Attack Radar System (JSTARS)*	PROJECT 670003: *JSTARS*

Joint STARS Re-engining Program Schedule

U.S. AIR FORCE

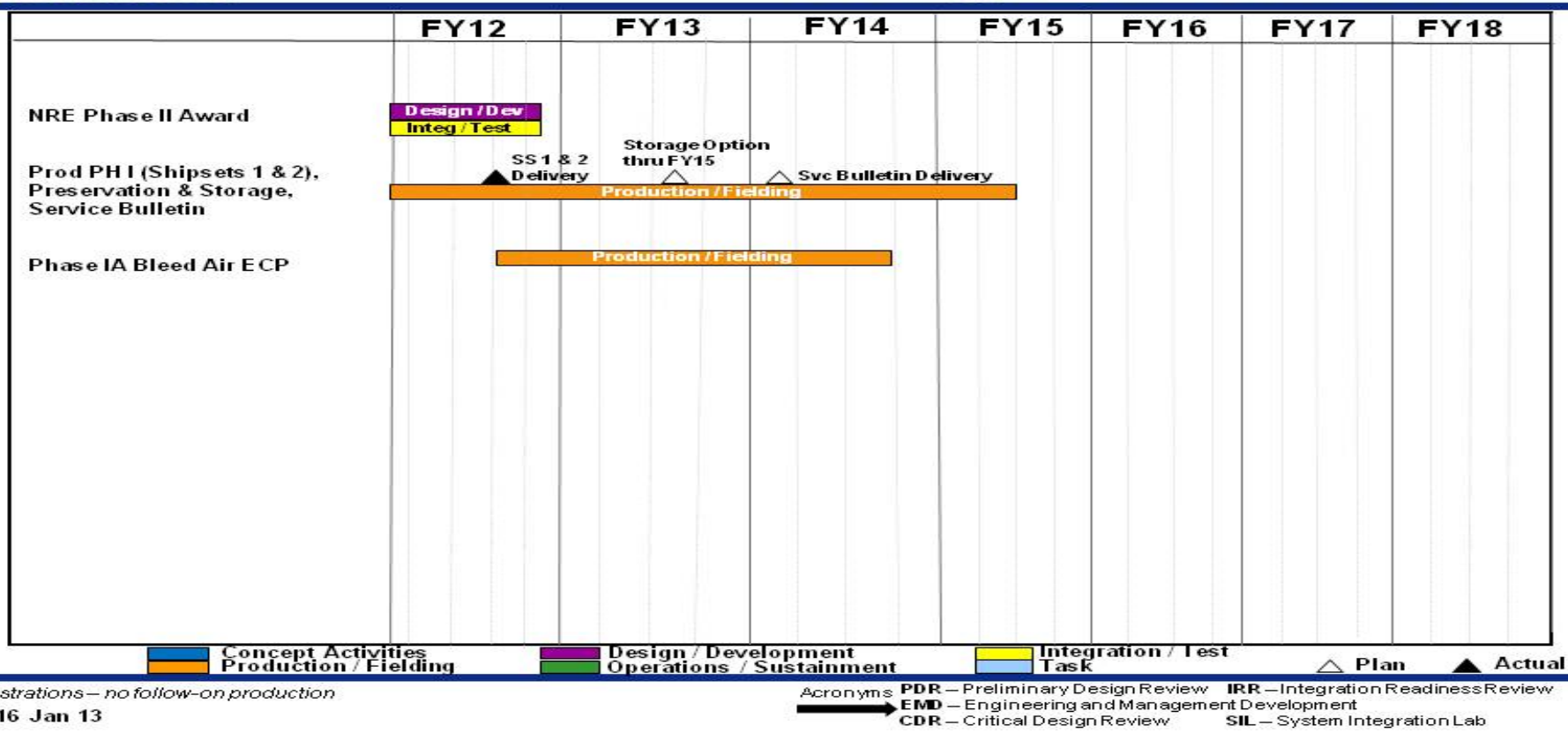


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207581F: *Joint Surveillance/Target Attack Radar System (JSTARS)*	**PROJECT** 670003: *JSTARS*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Joint STARS Radar Modernization (JSRM) p.1 of 4	1	2012	4	2013
Avionics DMS Risk Reduction & Studies p.1 of 4	1	2012	2	2013
ELMM Retrofit Production p.1 of 4	1	2012	3	2013
ELMM Sustainment p.1 of 4	4	2012	4	2018
8.33/25 kHz Radio Retrofit p.1 of 4	1	2012	3	2013
8.33/25 kHz Radio Sustainment p.1 of 4	3	2013	4	2018
CNU Phase I Design/Development p.2 of 4	1	2012	2	2013
CNU Production p.2 of 4	4	2012	2	2015
CNU Sustainment p.2 of 4	3	2013	4	2018
PME DMS SDD p.3 of 4	1	2012	4	2013
PME DMS Production P.3 of 4	4	2013	4	2017
PME DMS Sustainment p.3 of 4	3	2014	4	2018
Re-Engine SDD Phase II p.4 of 4	1	2012	4	2012
Re-Engine Production Phase I Preservation & Storage, Service Bulletin p.4 of 4	1	2012	2	2015
Re-Engine Production Phase IA Bleed Air ECP p.4 of 4	3	2012	3	2014

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207590F: *Seek Eagle*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	18.599	22.654	24.342	-	24.342	24.422	24.571	24.912	25.360	Continuing	Continuing
674037: *SEEK EAGLE Certifications*	-	18.599	22.654	24.342	-	24.342	24.422	24.571	24.912	25.360	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

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, tactics, and weapon development programs. Aircraft stores combinations change as operational plans and tactics change and as new stores are developed and fielded. Before operational, training, or test use, the Air Force must certify these configurations for safe loading, carriage, and separation (jettison and normal release), as well as verify ballistics accuracy under the user-certified carriage and employment parameters. The Air Force SEEK EAGLE program completes certification recommendations and recommended flight clearances through any combination of engineering analysis, wind tunnel testing, modeling and simulation, and ground/flight test and evaluation. The SEEK EAGLE effort encompasses eight disciplines: Fit and Function, Flutter, Loads, Stability and Control, Electromagnetic Compatibility/Interference (EMC/EMI), Separations, Ballistics, and Safe Escape.

In support of certification, the program recommends about 1000 aircraft/store combinations for flight each year with analysis and testing, requiring from weeks to years depending on the complexity. Integrated solutions for combat aircrew weapon delivery planning problems are developed and provided to combat forces via Combat Weapons Delivery Software (CWDS) and Joint Safe Escape Analysis Solution (JSEAS). SEEK EAGLE works in coordination with the Air Force Safety Center to provide Hazards of Electromagnetic Radiation to Ordnance (HERO) analysis and certification recommendations of ordnance systems containing electro-explosive devices. The program is also responsible for inserting new and emerging technologies into the SEEK EAGLE process as well as providing resources for the sustainment of a viable Air Force aircraft/store certification capability.

SEEK EAGLE funds are currently budgeted to support certification testing and analysis for new and inventory stores including, but not limited to: Small Diameter Bomb I & II (SDB), Laser Joint Direct Attack Munitions (LJDAM), Joint Air-to-Surface Standoff Missile (JASSM), Air Intercept Missile (AIM-9X), Advanced Medium Range Air-to-Air Missile (AIM-120D), Miniature Air-Launched Decoy (MALD), BRU-57 (Smart Bomb Rack), BRU-61 (SDB Bomb Rack), low collateral damage warhead (BLU-129), Wind Corrected Munitions Dispenser (WCMD), Sniper Targeting Pod with video data link, LITENING Targeting Pod with video data link, laser guided bombs, F-22 supersonic tank, B61 (Mod 12), penetrator warhead upgrades (BLU-111/BLU-117), practice bomb and aircraft instrumentation pod modifications. SEEK EAGLE funds are also used to support certification of other inventory stores on CAF and SOCOM aircraft, assist the F-35 JPO with subject matter expertise in the System Development and Demonstration phase (e.g., development of organic store certifications capability to support F-35 in the Production, Sustainment, and

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207590F: *Seek Eagle*

Follow-on Development phases), sustain organic F-22 store certifications capability, and to obtain non-inventory stores and store data for post-integration certification requirements.

This program is in Budget Activity 7, Operational System Development. These budget activities include development efforts to upgrade systems currently fielded or which have approval for full rate production and anticipate production funding in the current or subsequent year.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	18.599	22.654	24.342	-	24.342
Current President's Budget	18.599	22.654	24.342	-	24.342
Total Adjustments	0.000	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

Change Summary Explanation

No significant changes.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: F-22A	2.500	2.500	0.500
Description: F-22A Capability Development and Weapons Certification.			
FY 2012 Accomplishments: Continued developing organic F-22 engineering capability in remaining four disciplines (flutter, loads, stability and control, and EMC/EMI) by receiving additional contractor deliverables and developing organic computational M&S capabilities. Performed engineering analysis and began wind tunnel and flight test planning to support certification of AIM-120D and MXU-1010 and performed wind tunnel testing of AIM-9X on the F-22 for increment 3.2. Enlisted support from the contractor for engineering analysis for increment 3.2 aircraft-stores certification. Provided capability flight recommendations.			
FY 2013 Plans: Continue developing organic F-22 engineering capability in remaining four disciplines by receiving additional contractor deliverables and developing organic computational M&S capabilities. Perform engineering analysis and begin wind tunnel and			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207590F: *Seek Eagle*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
flight test planning to support certification of supersonic tank and perform wind tunnel testing of AIM-9X on the F-22 for increment 3.2. Enlist support from the contractor for engineering analysis for increment 3.2 aircraft-stores certification. Continue to provide capability flight recommendations. ***FY 2014 Plans:*** Finish certification of external fuel tanks at supersonic speeds and full AIM-120D integration.			
Title: F-35 ***Description:*** F-35 Capability Development for SEEK EAGLE begins in FY13, to support Combat Air Force's (CAF's) anticipated requirements after Initial Operational Capability (IOC). ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** Begin development of organic F-35 engineering capability in all eight engineering disciplines by receiving contractor data, tools, and technical support. ***FY 2014 Plans:*** Continue development of organic F-35 engineering capability in all eight engineering disciplines by receiving contractor data, tools, and technical support.	0.000	3.500	4.900
Title: M&S Capability ***Description:*** Modeling and Simulation (M&S) capability development in support of store certification ***FY 2012 Accomplishments:*** Continued development and improvement of M&S capability to support store certification disciplines. Example work included alpha and beta testing of new Create-AV/Kestrel code base for Stability and Control Discipline progressing from static aircraft to aircraft with moving control surfaces. Other key work included tools necessary to characterize F-22 and F-35 weapons bay environments including aero-acoustic prediction. ***FY 2013 Plans:*** Continue development and improvement of M&S capability to support store certification disciplines. Example work includes alpha and beta testing of new Create-AV/Kestrel code base for Stability and Control Discipline progressing from static aircraft to aircraft	2.900	3.000	3.200

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
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C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
with moving control surfaces. Other key work includes tools necessary to characterize F-22 and F-35 weapons bay environments including aero-acoustic prediction. ***FY 2014 Plans:*** Continue development and improvement of M&S capability to support store certification disciplines. Other key work includes tools necessary to characterize F-22 and F-35 weapons bay environments including aero-acoustic prediction.			
Title: Aircraft/Store Capability Analysis ***Description:*** Evaluate aircraft/store compatibility through analysis, M&S and flight and ground test. Provide flight recommendations to airworthiness authorities. ***FY 2012 Accomplishments:*** Continually provided compatibility flight recommendations as requested by ACC/A8, AAC, AFSOC and other agencies. Extensive F-16/SDB and F-16/AIM-9X ground and flight testing were performed. ***FY 2013 Plans:*** Continually provide compatibility flight recommendations as requested by ACC/A8, AAC, AFSOC and other agencies. Extensive F-16/SDB and F-16/AIM-9X flight testing will be performed. ***FY 2014 Plans:*** Continually provide compatibility flight recommendations as requested by ACC/A8, LCMC, AFSOC and other agencies. Extensive F-16/SDB and F-16/AIM-9X flight testing will be performed.	10.699	11.654	13.742
Title: CWDS ***Description:*** Develop Mission Planning Software including Combat Weapon Delivery Software (CWDS). ***FY 2012 Accomplishments:*** Continued support of efforts aimed at improving aircrew interface. Continued support of CWDS requirements for multiple Mission Planning Environments (MPEs) on two different frameworks: Portable Flight Planning Software (PFPS) and Joint Mission Planning System (JMPS). Continued transition to the redeveloped CWDS software for alignment with the JMPS roadmap architecture. Continued support of legacy CWDS development for full transition of all MPEs to new JMPS framework has occurred. ***FY 2013 Plans:*** Continue support of efforts aimed at improving aircrew interface. Continue support of CWDS requirements for multiple MPEs on two different frameworks: PFPS and JMPS. Continue transition to the redeveloped CWDS software for alignment with the JMPS	2.500	2.000	2.000

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207590F: *Seek Eagle*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
roadmap architecture. Continue support of legacy CWDS development until full transition of all MPEs to new JMPS framework has occurred. ***FY 2014 Plans:*** Continue support of efforts aimed at improving aircrew interface. Continue support of CWDS requirements for multiple MPEs on the JMPS framework. Continue transition to the redeveloped CWDS software for alignment with the JMPS roadmap architecture. Continue support of legacy CWDS development until full transition of all MPEs to new JMPS framework has occurred.			
Accomplishments/Planned Programs Subtotals	18.599	22.654	24.342

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• None: *N/A*	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

E. Acquisition Strategy

The SEEK EAGLE program does not execute in accordance with established acquisition program milestones. For initial aircraft-weapons integration, the aircraft or weapon program office is responsible for budgeting and providing the test assets to AFSEO for the store certification requirements. For post integration certification reiquirements, AFSEO funds are used to obtain the non-inventory test assets.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207590F: *Seek Eagle*	PROJECT 674037: *SEEK EAGLE Certifications*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Organic F-22 Capabilities	C/CPFF	Lockheed Martin:Marietta, GA	-	2.500	Dec 2011	0.500	Dec 2012	0.500		-		0.500	Continuing	Continuing	
Organic F-35 Capabilities	C/CPFF	Lockheed Martin:Marietta, GA	-	0.000		3.000	Dec 2012	4.000	Jan 2014	-		4.000	Continuing	Continuing	
Multiple fighter and weapon capability support	C/CPFF	Lockheed Martin:Marietta, GA	-	0.100	Feb 2012	0.200	Feb 2013	0.000		-		0.000	Continuing	Continuing	
F15 Test Support	C/CPFF	Boeing:St Louis, MO	-	0.075	Jun 2012	0.075	Jun 2013	0.000		-		0.000	Continuing	Continuing	
Enhance Existing and Develop Organic Electro EMI Capabilities	C/CPFF	Applied Research:Baltimore, MD	-	0.200	Apr 2012	0.250	Apr 2013	0.250	Apr 2014	-		0.250	Continuing	Continuing	
		Subtotal	0.000	2.875		4.025		4.750		0.000		4.750			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Mission Support CWDS	C/CPFF	Survice:Ft Walton Beach, FL	-	1.800	Nov 2011	2.000	Nov 2012	0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	1.800		2.000		0.000		0.000		0.000			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
96th Test Wing	RO	Eglin AFB:Eglin AFB, FL	-	12.024		13.029		15.555		-		15.555	Continuing	Continuing	
AEDC	PO	Arnold Engineering Dev Center:Arnold AFB, TN	-	0.300		1.500		1.000		-		1.000	Continuing	Continuing	
AFFTC	PO	Edwards AFB:Edward AFB, CA	-	0.300		0.800		0.000		-		0.000	Continuing	Continuing	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207590F: *Seek Eagle*	PROJECT 674037: *SEEK EAGLE Certifications*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	Various	Various:Multiple,	-	1.300		1.300		3.037		-		3.037	Continuing	Continuing	
		Subtotal	0.000	13.924		16.629		19.592		0.000		19.592			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	18.599		22.654		24.342		0.000		24.342			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207590F: *Seek Eagle*	PROJECT 674037: *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 Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207590F: *Seek Eagle*	**PROJECT** 674037: *SEEK EAGLE Certifications*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
LJDAM	1	2012	4	2018
JASSM	1	2012	4	2018
SDB	1	2012	4	2018
AIM-9X	1	2012	4	2018
AIM-120	1	2012	4	2018
WCMD	1	2012	4	2018
MALD	1	2012	4	2018
SNIPER	1	2012	4	2018
LITENING	1	2012	4	2018
BRU-57	1	2012	4	2018
BRU-61	1	2012	4	2018
B61 (Mod 12)	1	2012	4	2018
BLU-111	1	2012	4	2018
BLU-117	1	2012	4	2018
BLU-129	1	2012	4	2013
AGM-65L	1	2012	4	2013
AN/ASQ-T50	1	2012	4	2013
BDU-50	1	2012	4	2013

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	22.113	15.501	10.448	-	10.448	19.601	18.851	17.065	17.372	Continuing	Continuing
674567: *M&S Foundations*	-	6.197	6.590	1.202	-	1.202	9.813	8.912	6.833	6.956	Continuing	Continuing
674991: *Accelerated Acquisition*	-	5.079	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	5.079
675004: *New and Emerging Capabilities*	-	1.310	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.310
675135: *Warfighter Readiness*	-	9.527	8.911	9.246	-	9.246	9.788	9.939	10.232	10.416	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

United States Air Force (USAF) Modeling & Simulation (M&S) Program Element (PE) is broken into four thrust areas: Modeling and Simulation Foundations, Accelerated Acquisition, New and Emerging Warfighting Capabilities, and Warfighter Readiness. It directly supports Air Force, Joint, Coalition composite training and rehearsal, concept development, and acquisition and testing through model and simulation development as well as the integration of these across and within Live, Virtual, and Constructive (LVC) environments. This program focuses on support of Department of Defense (DoD) Training Transformation (T2), acquisition excellence initiatives, and foundational capabilities needed for interoperability, accessibility, reuse, and scalability. It allows the authoritative portrayal of new and emerging Air Force capabilities within Army, Navy, Marines, OSD, interagency, and coalition LVC environments; as well as reciprocating their capabilities within our Air Force LVC environments.

LVC environments today are used as the most cost effective means to meet mission needs, the most practical means, and sometimes the only way. In support of the DoD T2 initiative, USAF M&S program thrust areas develop and modernize models and simulations that are the constructive backbone of Air Force and joint training and rehearsal. Once these models and simulations are developed, they are integrated across training LVC environments for use by Major and Combatant Commands. This development and integration is imperative to ensure that air, space, and cyberspace training and mission rehearsal activities are supported with realistic, interoperable, and readily available tools, data, and services. These, in turn, enable joint, coalition, and interagency training required to prepare forces for combat by generating the air and space picture for the Air and Space Operations Center (AOC), Joint Force Air Component Commander (JFACC), and Joint Force Commander in combat exercises; training over 30,000 personnel per year in exercises (e.g., Ulchi Freedom Guardian, Red & Blue Flags, Unified Endeavor, etc). These programs also provide the current foundational environment that enables warfighters to interact with high-fidelity tactical cockpit simulators, like 5th Generation (5th Gen) and beyond, which replicate high demand/low density platforms that are often unavailable for training due to real-world operations; while simultaneously linking it to warfighters using their current command and control systems 1,000 miles away and the constructive simulations being run from key operational wargaming and simulation centers worldwide.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207601F: *USAF Modeling and Simulation*

USAF M&S is integral to inter-agency Homeland Defense (HLD) exercises chartered to train combat units tasked to protect the Homeland, including the National Capital Region (exercise Amalgam Arrow); generates equipment and manpower efficiencies by using simulations which reduce fuel consumption, aircraft wear and tear, and manpower costs. In support of the DoD drive to improve the effectiveness and efficiency of its enterprise-wide acquisition business processes, the USAF M&S Program Element develops and supports enhancements to models, simulations, tools, and the LVC infrastructure to provide for system-of-systems M&S capabilities across the lifecycle, reduce developmental costs, and minimize risks. These capabilities support the acquisition process from concept development through test and evaluation. Activities also include studies and analysis to support both current program planning and execution and future program planning.

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

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	22.990	15.501	15.868	-	15.868
Current President's Budget	22.113	15.501	10.448	-	10.448
Total Adjustments	-0.877	0.000	-5.420	-	-5.420
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	-0.191	0.000			
• SBIR/STTR Transfer	-0.686	0.000			
• Other Adjustments	0.000	0.000	-5.420	-	-5.420

Change Summary Explanation

In FY 2014, project 674567 funding reprogrammed to meet higher Air Force priority needs.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 674567: *M&S Foundations*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
674567: *M&S Foundations*	-	6.197	6.590	1.202	-	1.202	9.813	8.912	6.833	6.956	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Modeling and Simulation Foundations (MSF) focuses on integrating foundational capabilities needed to improve the usefulness, productivity, scalability and efficiency of Modeling and Simulation (M&S) capabilities derived from the Warfighter Readiness (WR) thrust, the Accelerated Acquisitions (AA) thrust, and the New and Emerging Warfighting Capabilities (NEWC) thrust. MSF is the: standards, policies, procedures, architectures, and tools that enable the rapid and efficient composition of distributed environments to support both the warfighter needs and the US Air Force's (USAF) functional communities of: acquisition, training, planning, analysis, testing, education, and experimentation requirements. The efforts supporting the MSF thrust include both concept exploration and development.

Activities also include studies and analysis to support both current program planning and execution and future program planning. This also funds the USAF in its capacity as the Department of Defense (DoD) Modeling and Simulation Executive Agent (MSEA) for the Air and Space Natural Environment. MSF's objective is to establish a USAF Live-Virtual-Constructive-Integrated Architecture (LVC-IA) that provides a persistent network of constructive computer simulations, man-in-the-loop virtual simulators, and live forces/resources in an interoperable environment that supports USAF organizations and the functional communities. This objective will be achieved by MSF providing 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 concept development to acquisition and testing through composite training and mission rehearsal. This is done 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, policies, and common standards. MSF capability also supports: efficient, cost-effective verification, validation, and accreditation activity across all of the M&S functional and organizational communities.

As the DoD Air and Space Natural Environment Modeling and Simulation Executive Agent (ASNE MSEA), the Air Force coordinates all aspects of DoD M&S related to representations of the air and space natural environment. The tools developed through this include the Environmental Scenario Generator, the Environmental Data Cube Support System, and the Space Weather Analysis. ASNE MSEA collaborates with other national partners to provide the USAF and DoD access to authoritative natural environment scenarios necessary for robust "What-if" mission planning and rehearsal and for realistic training, analysis, and acquisition. ASNE MSEA leads the development and execution of the DoD Integrated Natural Environment Authoritative Representation Process (INEARP) Concept of Operations.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 674567: *M&S Foundations*

The Information Operations Suite (IOS) provides the authoritative representation of Air Force information operations. IOS is comprised of models that support training and mission rehearsal for the Air Force, Joint Task Force commanders, and COCOM battle staffs during Joint and Service exercises and experimentations. Other capabilities, such as the Air Force Synthetic Environment for Reconnaissance and Surveillance (AFSERS) provide for Intelligence, Surveillance, and Reconnaissance (ISR) training and exercise support by using virtual simulators and constructive models for command and staff level training. These capabilities provide commanders, staffs, and operators with common training systems for the employment, tasking, exploitation and dissemination of imagery.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Air Constructive Environment - Information Operations Suite (ACE-IOS)	4.609	5.047	1.202
Description: Information Operations Suite (IOS) provides the authoritative representation of Air Force information operations. IOS is comprised of models that support training and mission rehearsal for the Air Force, Joint Task Force commanders, and COCOM battle staffs during Joint and Service exercises and experimentations.			
FY 2012 Accomplishments: Provided the authoritative representation of Air Force information operations. IOS is comprised of models that support training and mission rehearsal for the Air Force, Joint Task Force commanders, and COCOM battle staffs during Joint and Service exercises and experimentations.			
FY 2013 Plans: Provides the authoritative representation of Air Force information operations. IOS is comprised of models that support training and mission rehearsal for the Air Force, Joint Task Force commanders, and COCOM battle staffs during Joint and Service exercises and experimentations. Specific accomplishments will be the development of these new FY13 capabilities: ACE-IOS Terrain Modeling, Process Abstract Intent and produce communication traffic/intelligence, IFF/SIF Mode 5 and S, New Joint Intelligence Messaging Management System (JIMMS) database application, model for Air Warfare Simulation (AWSIM) Airbase Communication Facility, and develop/replace the National Wargaming Simulation (NWARS) interface for the Joint Live Virtual Constructive (JLVC) Federation.			
FY 2014 Plans: Will continue to provide the authoritative representation of Air Force information operations at a reduced level of effort. IOS is comprised of models that support training and mission rehearsal for the Air Force, Joint Task Force commanders, and COCOM battle staffs during joint and service exercises and experimentations. Will continue to support the development of: ACE-IOS Terrain Modeling, Process Abstract Intent and produce communication traffic/intelligence, IFF/SIF Mode 5 and S, Joint Intelligence Messaging Management System (JIMMS) database application, model for Air Warfare Simulation (AWSIM) Airbase			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 674567: *M&S Foundations*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Communication Facility, and the National Wargaming Simulation (NWARS) interface for the Joint Live Virtual Constructive (JLVC) Federation.			
Title: Live, Virtual, and Constructive - Integrating Architecture (LVC-IA) ***Description:*** Provide M&S Foundations (MSF) support to: Live, Virtual, and Constructive(LVC) - Integrating Architecture (IA), concept exploration, model development, and model transition effort. ***FY 2012 Accomplishments:*** Provided MSF support to: Live, Virtual, and Constructive (LVC) - Integrating Architecture (IA), concept exploration, model development, and model transition effort. ***FY 2013 Plans:*** Provides MSF support to: Live, Virtual, and Constructive (LVC) - Integrating Architecture (IA), concept exploration, model development, and model transition effort.	0.593	0.548	0.000
Title: Air & Space Natural Environment (ASNE) ***Description:*** Provide DoD M&S community with tools to search the ASNE scenarios; measure effects on weapon systems and subsystems and distribute tailored reusable databases and products. ***FY 2012 Accomplishments:*** Developed the ASNE capabilities. Continued the implementation and RDT&E of a standardized integrated architecture for the live-virtual-constructive enterprise. ***FY 2013 Plans:*** Develops the ASNE capabilities. Continues the implementation and RDT&E of a standardized integrated architecture for the live-virtual-constructive enterprise.	0.995	0.995	0.000
Accomplishments/Planned Programs Subtotals	6.197	6.590	1.202

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Air Force Life Cycle Management Center (AFLCMC) at Hanscom AFB, MA manages the acquisition and incremental development process for all M&S activities. All major contracts will be awarded after full and open competition.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 674567: *M&S Foundations*

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 674567: *M&S Foundations*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Constructive Environment - Information Operations Suite (ACE-IOS)	C/CPFF	90th IOS:Lackland AFB, TX	-	4.609	Oct 2011	5.047	Oct 2012	1.202	Oct 2013	-		1.202	Continuing	Continuing	TBD
Live, Virtual & Constructive-Integrating Architecture (LVC-IA)/ Concept Refinement, Technology, services, and tools support	C/CPFF	AF Agency for Modeling & Simulation:Orlando, FL	-	0.593	Oct 2011	0.548	Oct 2012	0.000		-		0.000	Continuing	Continuing	TBD
Air & Space Natural Environment (ASNE)/ Services, Tools, and Environmental support	C/CPFF	AF/A3O-W:Arlington, VA	-	0.995	Oct 2011	0.995	Oct 2012	0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	6.197		6.590		1.202		0.000		1.202			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 674567: *M&S Foundations*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

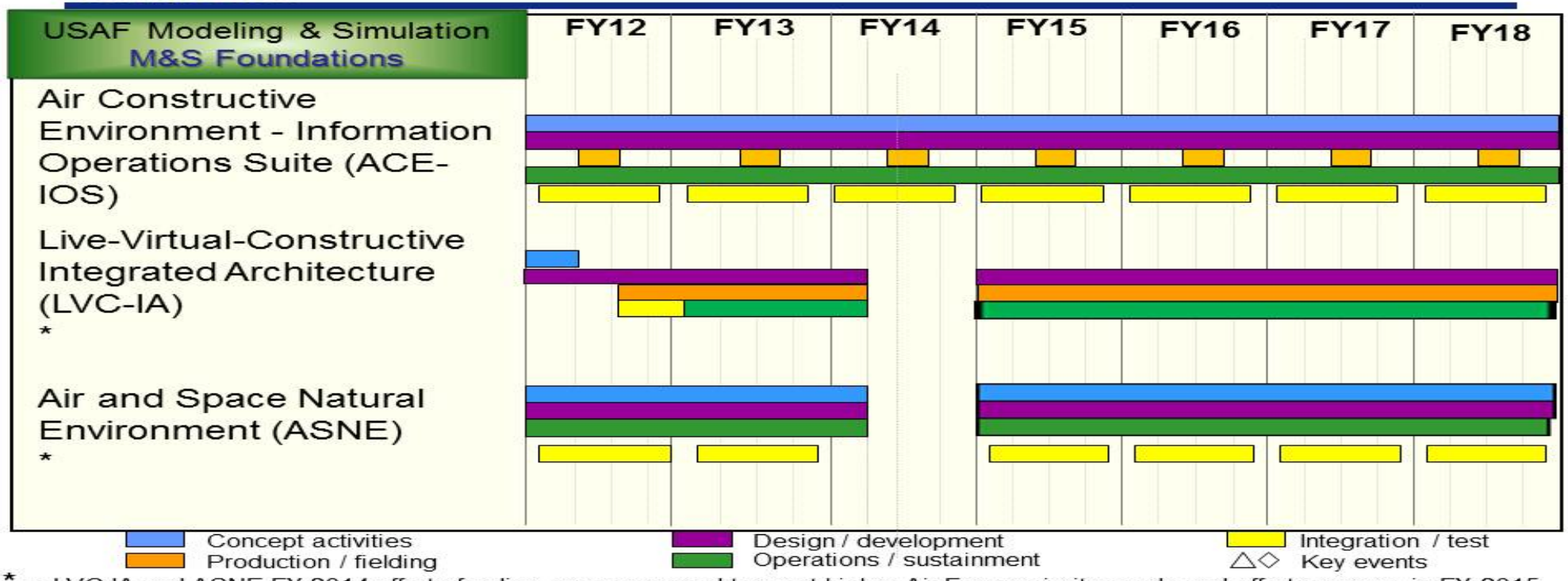
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	6.197		6.590		1.202		0.000		1.202			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 674567: *M&S Foundations*

USAF Modeling & Simulation
M&S Foundations (674567) Schedule

U.S. AIR FORCE



* – LVC-IA and ASNE FY 2014 efforts funding reprogrammed to meet higher Air Force priority needs and efforts resume in FY 2015

Integrity - Service - Excellence

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 674567: *M&S Foundations*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Air Constructive Environment - Information Operations Suite (ACE-IOS)	1	2012	4	2018
Live-Virtual-Constructive Integrated Architecture (LVC-IA)	1	2012	4	2018
Air and Space Natural Environment (ASNE)	1	2012	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 674991: *Accelerated Acquisition*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
674991: *Accelerated Acquisition*	-	5.079	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	5.079
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY 2012, Project 674991, Accelerated Acquisition, was terminated in order to meet higher Air Force priorities.

A. Mission Description and Budget Item Justification

In Fiscal Year 2012, Accelerated Acquisition (AA) focused on fostering M&S tools, data, and infrastructure that enabled high confidence acquisition of capabilities that supported the joint warfighter. This included Live-Virtual-Constructive (LVC) infrastructure, tools and processes supporting LVC events, and models, tools, data, simulations/stimulation that supported requirements definition, systems engineering and test activities. Activities also included M&S support for studies and analysis that supported both current program planning and execution and future program planning.

These efforts enabled more efficient delivery of effective capabilities to the warfighter while reducing the time and resources required for design, development, test and evaluation, maintainability and sustainment. A key objective was to improve interoperability of weapon systems and platforms through continuing, rigorous interoperability evaluation in a representative Joint Mission Environment. Additionally, AA activities sought to reduce risk associated with acquisition programs by influencing models, simulations, tools, data and infrastructure linking combat system engineering sites to facilitate concept exploration, development and assessment of systems in a net-centric mission context. This provided the capability to improve both Service and Joint system performance in a system-of-systems environment. Connectivity established by the infrastructure built upon existing Service and Joint combat system engineering and test sites, such as Command, Control, Communications, Computer, and Intelligence (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).

Development included concept of operations, business rules, and procedures that enabled acquisition managers to effectively use LVC capabilities. These efforts enabled accurately represented C4I networks for capability requirement definition, development, and testing activities to evaluate those systems for interoperability and integration into a joint environment. This addressed interoperability issues by providing a means for discovering issues early on.

This program was in Budget Activity 7, Operational System Development, this budget activity included development efforts to upgrade systems that have been fielded or have received approval for full rate production.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Architecture & Links	0.174	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 674991: *Accelerated Acquisition*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Continue communications architectures and network support ***FY 2012 Accomplishments:*** Continued to support architecture and link development and maturation of collaborative processes and capabilities of systems-of-systems assessments (e.g. airborne network assessments, air-ground layer interaction, etc.).			
Title: Event Coordination ***Description:*** Continue to support LVC events to assist in Air Force requirements definition, development and T&E activities ***FY 2012 Accomplishments:*** Continued to support event coordination development and maturation of collaborative processes and capabilities of systems-of-systems assessments (e.g. airborne network assessments, air-ground layer interaction, etc.).	0.253	0.000	0.000
Title: M&S Tools ***Description:*** Develop, enhance and verify models, tools, data, simulations/stimulation environments for systems engineering and test activities ***FY 2012 Accomplishments:*** Continued to support M&S tool development and maturation of collaborative processes and capabilities of support systems-of-systems assessments (e.g. airborne network assessments, air-ground layer interaction, etc.).	3.814	0.000	0.000
Title: Joint Service Integration ***Description:*** Continue to support joint service integration & test ***FY 2012 Accomplishments:*** Continued to support Joint Service Integration development and maturation of collaborative processes and capabilities of systems-of-systems assessments (e.g. airborne network assessments, air-ground layer interaction, etc.).	0.838	0.000	0.000
Accomplishments/Planned Programs Subtotals	5.079	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 674991: *Accelerated Acquisition*

D. Acquisition Strategy

Air Force Life Cycle Management Center (AFLCMC) at Hanscom AFB, MA manages the acquisition and incremental development process for all M&S activities. All major contracts will be awarded after full and open competition.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 674991: *Accelerated Acquisition*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Architecture & Links	Various	Various:Various,	-	0.174	Nov 2011	0.000		0.000		-		0.000	0.000	0.174	TBD
Event Coordination	Various	Various:Various,	-	0.253	Nov 2011	0.000		0.000		-		0.000	0.000	0.253	TBD
M&S Tools	Various	Various:Various,	-	3.814	Oct 2011	0.000		0.000		-		0.000	0.000	3.814	TBD
Joint Service Integration	Various	Various:Various,	-	0.838	Oct 2011	0.000		0.000		-		0.000	0.000	0.838	TBD
		Subtotal	0.000	5.079		0.000		0.000		0.000		0.000	0.000	5.079	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

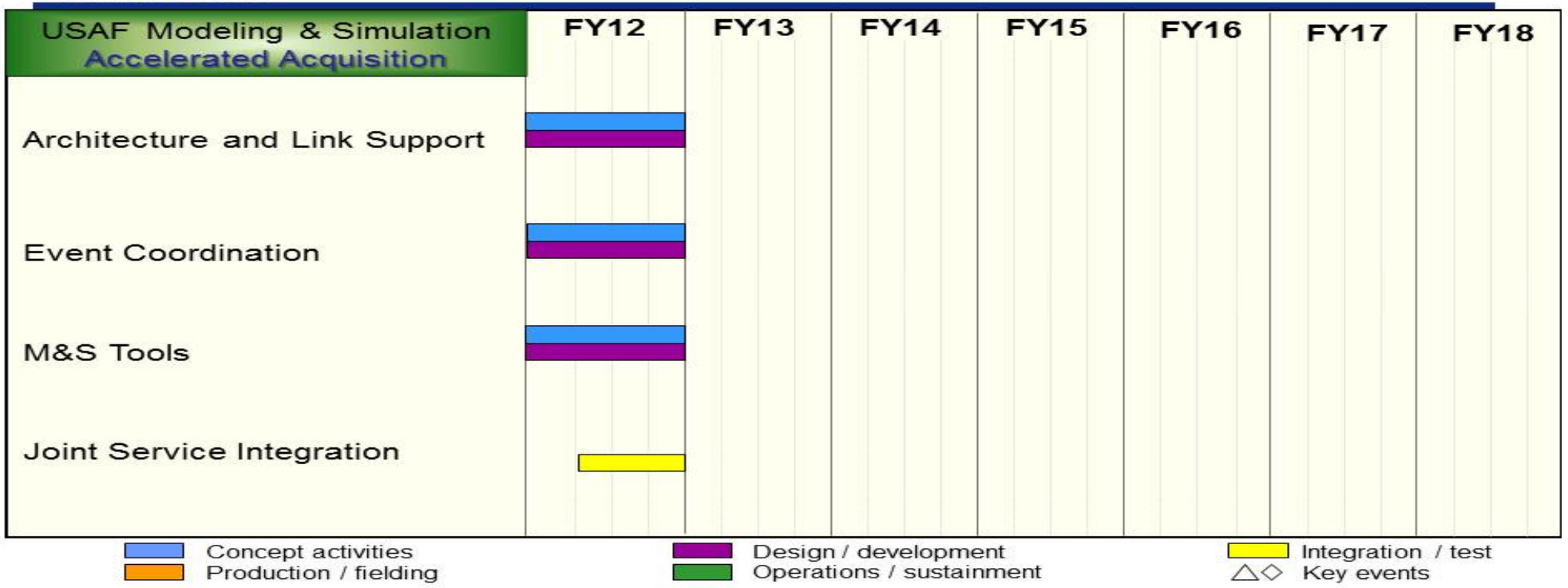
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	5.079		0.000		0.000		0.000		0.000	0.000	5.079	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 674991: *Accelerated Acquisition*

USAF Modeling & Simulation Accelerated Acquisition (674991) Schedule

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207601F: *USAF Modeling and Simulation*	**PROJECT** 674991: *Accelerated Acquisition*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Architecture & Link Support	1	2012	4	2012
Event Coordination	1	2012	4	2012
M&S Tools	1	2012	4	2012
Joint Service Integration	2	2012	4	2012

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 675004: *New and Emerging Capabilities*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675004: *New and Emerging Capabilities*	-	1.310	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	1.310
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY 2012, Project 675004, New and Emerging Capabilities, was completed meeting short-term special Modeling & Simulation (M&S) rapid prototype and fielding needs.

A. Mission Description and Budget Item Justification

The New and Emerging Capabilities (NEWC) are a collection of short-term, special Modeling & Simulation (M&S) programs requiring rapid prototype and fielding. These capabilities meet air, space, or cyberspace gaps identified by Air Force Major Commands, U.S. Combatant Commands, or agencies; address Air Force core competencies; ensure Air Force's force structure or power projections are appropriately represented in DoD, joint, and service training, rehearsal, and assessments; ensure interoperability of simulations among weapon system programs; and field initial Air Force capabilities in support of Department of Defense priorities. Activities also include studies and analysis to support both current program planning and execution and future program planning.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Joint Close Air Support (JCAS) Mobile Synthetic Training System	1.310	0.000	0.000
Description: The JCAS Mobile Synthetic Training System provides persistent, mobile, on-demand battlefield airman training. ***FY 2012 Accomplishments:*** Provided persistent, mobile, on-demand battlefield airman training, specifically Joint Terminal Attack Controller (JTAC) training, using synthetic Predator/Reaper imagery and/or fighter/bomber advanced targeting pod feeds. Training was accomplished on designated Air Force and joint ranges and (e.g. Nellis Range Complex, Fort Irwin National Training Center, and Fort Polk Joint Readiness Training Center) and designated military operating areas using live, virtual and constructive integrated M&S.			
Accomplishments/Planned Programs Subtotals	1.310	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 675004: *New and Emerging Capabilities*

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Air Force Life Cycle Management Center (AFLCMC) at Hanscom AFB, MA manages the acquisition and incremental development process for all M&S activities. All major contracts will be awarded after full and open competition.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 675004: *New and Emerging Capabilities*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint Close Air Support (JCAS) Mobile Synthetic Training System	Various	Various:Various,	-	1.310	Oct 2011	0.000		0.000		-		0.000	0.000	1.310	TBD
		Subtotal	0.000	1.310		0.000		0.000		0.000		0.000	0.000	1.310	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

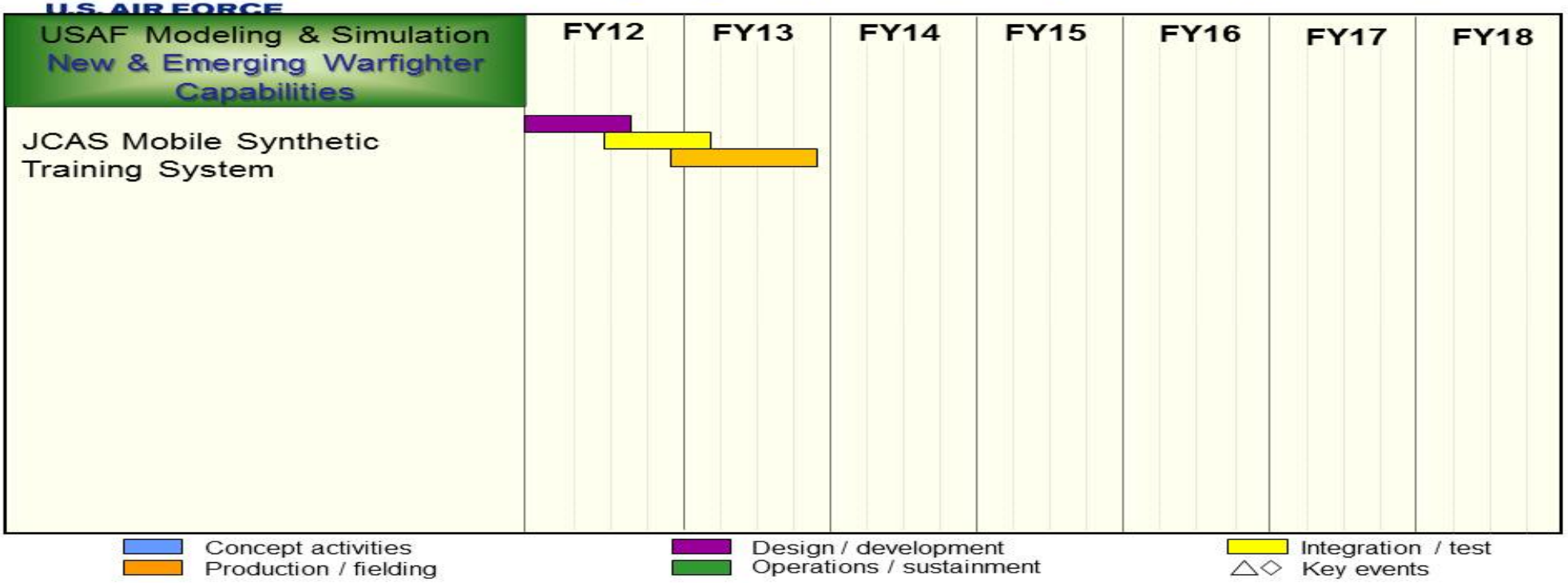
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	1.310		0.000		0.000		0.000		0.000	0.000	1.310	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 675004: *New and Emerging Capabilities*

USAF Modeling & Simulation
New & Emerging Capabilities (675004) Schedule



Integrity - Service - Excellence

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207601F: *USAF Modeling and Simulation*	**PROJECT** 675004: *New and Emerging Capabilities*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JCAS Mobile Synthetic Training System	1	2012	4	2013

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 675135: *Warfighter Readiness*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675135: *Warfighter Readiness*	-	9.527	8.911	9.246	-	9.246	9.788	9.939	10.232	10.416	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Modeling and Simulation support to our Warfighter's Readiness is a United States Air Force (USAF) corporate imperative to ensure air, space, cyberspace training, and mission rehearsal activities are supported with realistic, interoperable, and readily available, tools, data, services and environments. Warfighter readiness supports Department of Defense (DoD) Training Transformation (T2) and Joint National Training Capability (JNTC) along with the USAF priorities and core functions. Activities also include studies and analysis to support both current program planning, execution, and future program planning.

It includes several complimentary programs, initiatives and areas for investment: Warfighter and Joint Training Integration supports the Chief of Staff of the Air Force (CSAF) directed Live-Virtual-Constructive (LVC) integration efforts and is a critical piece to the USAF's implementation of the Strategic Plan for Transforming DoD Training. The goal of LVC training and mission rehearsal is to prepare our warfighters for the full range of military operations and maintain the combat readiness levels required by the Combatant Commands (COCOMs). This can only be accomplished by training and rehearsing in realistic operational environments. These environments include live training ranges and virtual simulators enhanced with constructive entities. Specific training and mission rehearsal events can include some or all of these simultaneously; making the ability to integrate LVC capabilities a necessity.

The Air, Space, and Cyberspace Constructive Environment (ASCCE) is the USAF's authoritative federation of constructive training models and tools realistically representing the tactical and operational capabilities the USAF brings to the joint fight. It includes the Air Force Modeling and Simulation Training Toolkit (AFMSTT), which provides the authoritative representation of AF and joint theater-level air and space power and is used to train Air and Space Operations Center (AOC) personnel and Combat Commanders (COCOM) battle staffs. The primary model in the AFMSTT is the Air Warfare Simulation (AWSIM). The Joint Training Transformation Initiative (JTTI) is a CSAF and Chief of Staff of the Army initiative to improve air, space, and cyberspace power fidelity to the Battle Command Training Program (BCTP), a US Army training event for senior commanders and their staffs, as well as improving ground component fidelity to AF operational-level exercises.

This program is in Budget Activity 7, Operational System Development, these budget activities include development efforts to upgrade systems currently fielded or has approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Air, Space, and Cyberspace Constructive Environment (ASCCE)	7.923	7.091	7.409
Description: Air Force Modeling & Simulation Training Toolkit (AFMSTT)/Air Warfare Simulation (AWSIM)			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 675135: *Warfighter Readiness*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Maintained, improved, certified and accredited the Air, Space, and Cyberspace Constructive Environment (ASCCE) and integrate with other Service models in support of major Service, Joint, and COCOM exercises, experiments, and mission rehearsals. ***FY 2013 Plans:*** Continue to develop the Air, Space, and Cyberspace Constructive Environment (ACCE) which supports the Air Force Modeling & Simulation Training Toolkit (AFMSTT)/ Information Operations Suite (IOS)/Air Warfare Simulation (AWS) modernization effort. ***FY 2014 Plans:*** Will continue the development of the Air, Space, and Cyberspace Constructive Environment (ACCE) which supports the Air Force Modeling & Simulation Training Toolkit (AFMSTT)/ Information Operations Suite (IOS)/Air Warfare Simulation (AWS) modernization effort.			
Title: ASCCE C&A / JTTI ***Description:*** ASCCE certification and accreditation/Joint Training Transformation Initiative (JTTI). ***FY 2012 Accomplishments:*** Developed ASCCE certification and accreditation/JTTI. ***FY 2013 Plans:*** Continuing the development of the ASCCE certification and accreditation/JTTI. ***FY 2014 Plans:*** Will continue the development of the ASCCE certification and accreditation/JTTI.	0.617	0.981	0.981
Title: Program Management Administration (PMA) ***Description:*** Program support administration costs support management with engineering and technical for development and implementation ***FY 2012 Accomplishments:*** Supported the acquisition program with engineering and technical support. ***FY 2013 Plans:*** Support the acquisition program with engineering and technical support. ***FY 2014 Plans:***	0.987	0.839	0.856

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 675135: *Warfighter Readiness*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Will continue to support the acquisition program with engineering and technical support.			
Accomplishments/Planned Programs Subtotals	9.527	8.911	9.246

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Air Force Life Cycle Management Center (AFLCMC) at Hanscom AFB, MA manages the acquisition and incremental development process for all M&S activities. All major contracts will be awarded after full and open competition.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 675135: *Warfighter Readiness*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AFMSTT/(Air Warfare Simulation (AWSIM))	C/CPFF	AFLCMC:Hanscom AFB, MA	-	7.923	Dec 2011	7.091	Dec 2012	7.409	Dec 2013	-		7.409	Continuing	Continuing	TBD
Air, Space & Cyber Constructive Environment Certification & Accrediation / Joint Training Integration/JTTI	MIPR	MITRE:Hanscom AFB, MA	-	0.617	Dec 2011	0.981	Dec 2012	0.981	Dec 2013	-		0.981	Continuing	Continuing	TBD
		Subtotal	0.000	8.540		8.072		8.390		0.000		8.390			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Administration	C/Various	AFLCMC:Hanscom AFB, MA	-	0.987	Oct 2011	0.839	Oct 2012	0.856	Oct 2013	-		0.856	Continuing	Continuing	TBD
		Subtotal	0.000	0.987		0.839		0.856		0.000		0.856			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 675135: *Warfighter Readiness*	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	9.527		8.911		9.246		0.000		9.246			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207601F: *USAF Modeling and Simulation*	PROJECT 675135: *Warfighter Readiness*

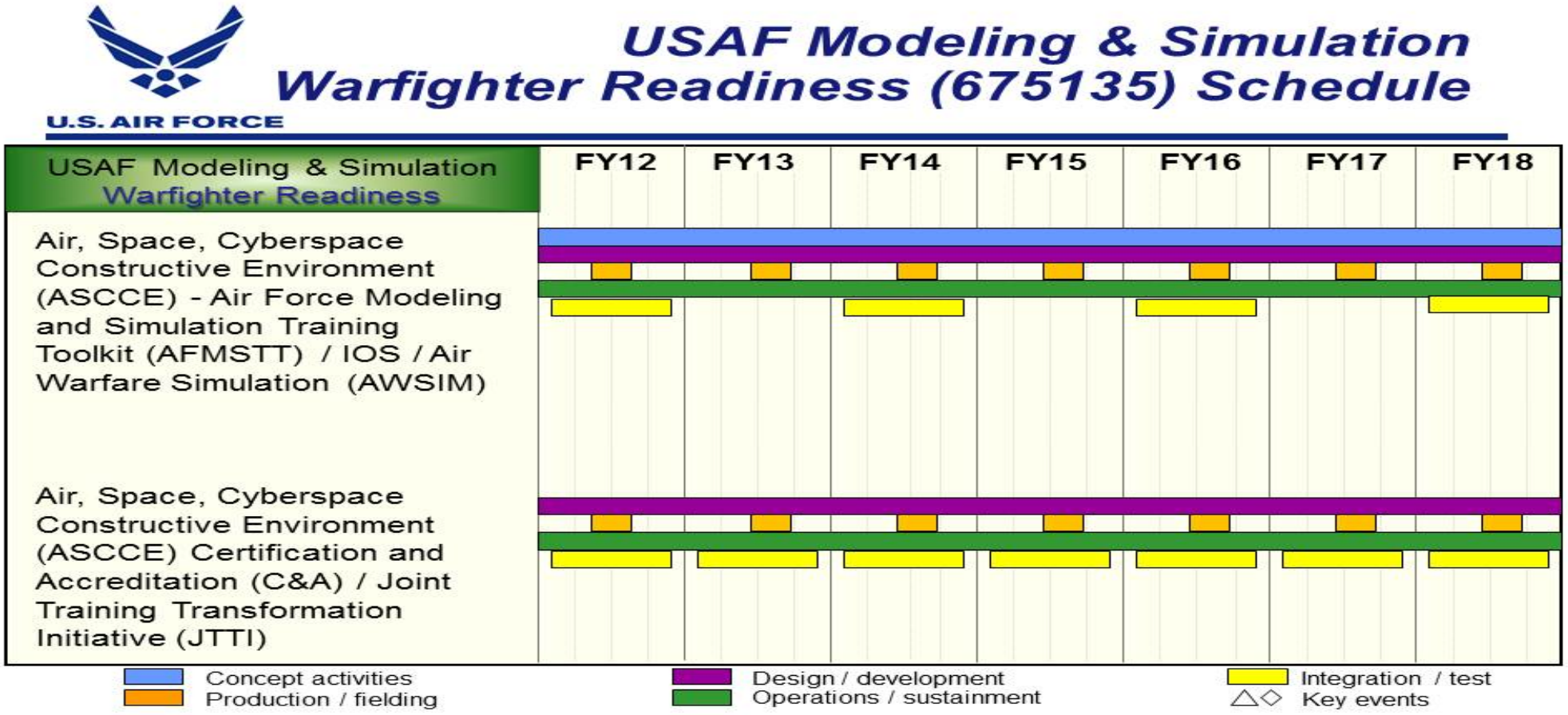


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207601F: *USAF Modeling and Simulation*	**PROJECT** 675135: *Warfighter Readiness*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
ASCCE (AFMSTT/IOS/AWSIM)	1	2012	4	2018
ASCCE C&A/JTTI	1	2012	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207605F: *Wargaming and Simulation Centers*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	5.617	5.699	5.512	-	5.512	6.031	6.146	6.124	6.233	Continuing	Continuing
672888: *Distributed Mission Operations Center (DMOC)*	-	5.617	5.699	5.512	-	5.512	6.031	6.146	6.124	6.233	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The United States Air Force (USAF) Distributed Mission Operations Center (DMOC) is an Air Combat Command, USAF Warfare Center, 505th Command and Control Wing (505th CCW) organization. It provides joint interoperability training and testing to geographically separated Live, Virtual, and Constructive (LVC) assets--real-world weapon systems, operator-in-the-loop, and computer-driven simulations. Responsibilities include: development and integration of Distributed Mission Operations (DMO) training and test events, networks, scenarios, and databases in support of service, joint, and coalition warfighters. Activities also include studies and analysis to support both current program planning and execution and future program planning.

DMOC is the lead integrator for Air Force DMO and virtual contributions to the Joint National Training Capability (JNTC). Additionally, DMOC is the lead agency for Virtual Flag (VF) exercises and the DMO Multi-Level Security (MLS)/Cross-Domain Solution (CDS) testbed.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207605F: *Wargaming and Simulation Centers*	

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	5.779	5.699	5.762	-	5.762
Current President's Budget	5.617	5.699	5.512	-	5.512
Total Adjustments	-0.162	0.000	-0.250	-	-0.250
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.162	0.000			
• Other Adjustments	0.000	0.000	-0.250	-	-0.250

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Distributed Mission Operations (DMO) Capability / Battlespace Systems Development (Mission Rehearsal)	3.306	3.420	3.208
Description: Simulation software / hardware development in support of users conducting RDT&E, mission rehearsal, and concepts of operation development. ***FY 2012 Accomplishments:*** Enhanced Red and Blue Air/Ground simulators, initial testing of virtual Contested Degraded Operations (CDO), integrated virtual datalink infrastructure, and enhanced simulator interoperability. ***FY 2013 Plans:*** Continuing enhancements of Red and Blue Air/Ground/Sea simulators and DMO interoperability tools, development of virtual CDO, and high side operations environment expansion. ***FY 2014 Plans:*** Will continue enhancements of Red and Blue Air/Ground/Sea simulators and DMO interoperability tools, development of virtual CDO, and high side operations environment expansion.			
Title: Certification & Accreditation (C&A) and Networthiness (V, V&A)	0.867	0.855	0.864
Description: Support requirements definition, test support, scenario development, analysis, systems engineering support, and C&A and Networthiness of core systems. ***FY 2012 Accomplishments:***			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207605F: *Wargaming and Simulation Centers*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Initiated the C&A of the Distributed Training Network Guard (DTNG), a DMOC/NAVAIR partnership program. Accomplished some accreditation work for the DMOC Replay Tool, Multinational Information Sharing (MNIS) rule set, and Distributed Interactive Simulation (DIS) Filter. ***FY 2013 Plans:*** Continuing C&A efforts for DTNG and other emerging requirements based on technology changes. ***FY 2014 Plans:*** Will continue C&A efforts for emerging requirements based on technology changes.			
Title: Distributed Training Sites & Systems Integration (DMOC Ops) ***Description:*** Establish site/system integration / interoperability between DMOC, operational units, and modeling & simulation facilities. ***FY 2012 Accomplishments:*** Integrated external simulators into DMO events and resolved interoperability issues. Enabled first ever integration of weapons systems/trainers for Air Interdiction of Maritime Targets (AIMT) training. ***FY 2013 Plans:*** Continuing to integrate new sites and systems into DMO events and resolve interoperability issues. Expand Air Sea Battle distributed training capability. Respond to emerging USAF, Joint, COCOM, and Coalition requirements. ***FY 2014 Plans:*** Will continue to integrate new sites and systems into DMO events and resolve interoperability issues based on emerging USAF, Joint, COCOM, and Coalition requirements.	0.884	0.872	0.881
Title: Program Management Administrative/Office (PMA/PMO) Support ***Description:*** PMO support costs include travel, supplies, facility sustainment, and support of the Comprehensive Cost and Requirements (CCaR) System, all of which are necessary costs to execute DMOC's three major efforts. ***FY 2012 Accomplishments:*** PMO support included travel, supplies, facility sustainment, and support of the Comprehensive Cost and Requirements (CCaR) System, all of which are necessary costs to execute DMOC/s three major efforts. ***FY 2013 Plans:***	0.560	0.552	0.559

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207605F: *Wargaming and Simulation Centers*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
PMO support includes travel, supplies, facility sustainment, and support of the Comprehensive Cost and Requirements (CCaR) System, all of which are necessary costs to execute DMOC's for three major efforts. ***FY 2014 Plans:*** Will continue PMO support to include travel, supplies, facility sustainment, and support of the Comprehensive Cost and Requirements (CCaR) System, all of which are necessary costs to execute DMOC?s three major efforts.			
Accomplishments/Planned Programs Subtotals	5.617	5.699	5.512

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. Acquisition Strategy

The Distributed Mission Operations Center (DMOC) supports AF/Joint/Coalition DMO and the Joint National Training Capability (JNTC) through the development and integration of DMO training and test events, networks, scenarios, and databases. Due to ever-changing modeling & simulation technology, the DMOC is an on-going, evolutionary effort to keep pace with those changes by continuously developing/upgrading DMO environment generators, systems, and tools and ensuring integration/ interoperability of new systems (i.e. 5th Gen Fighter) into DMO to provide the best warfighter training possible.

DMOC awards full and open contracts that manage the acquisition, development, testing, and integration of DMO standards, training, modeling and simulation, multi-level security testbed, and exercises on Air Force and Joint DMO networks.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207605F: *Wargaming and Simulation Centers*	PROJECT 672888: *Distributed Mission Operations Center (DMOC)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Distributed Mission Operations (DMO) Capability / Battlespace Systems Development (Mission Rehearsal)	C/CPFF	Lockheed Martin:Kirtland AFB, NM	-	2.612	Mar 2012	2.736	Mar 2013	2.516	Mar 2014	-		2.516	Continuing	Continuing	TBD
Certification & Accreditation (C&A) and Networthiness (V, V&A)	C/CPFF	Lockheed Martin:Kirtland AFB, NM	-	0.694	Mar 2012	0.684	Mar 2013	0.692	Mar 2014	-		0.692	Continuing	Continuing	TBD
Distributed Training Sites & Systems Integration (DMOC Ops)	C/CPFF	Lockheed Martin:Kirtland AFB, NM	-	0.278	Mar 2012	0.274	Mar 2013	0.277	Mar 2014	-		0.277	Continuing	Continuing	TBD
		Subtotal	0.000	3.584		3.694		3.485		0.000		3.485			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical requirements development, integration/ acceptance testing, and engineering support	C/CPFF	Modern Technology Solutions, Inc.:Kirtland AFB, NM	-	1.473	Sep 2012	1.453	Sep 2013	1.469	Sep 2014	-		1.469	Continuing	Continuing	TBD
		Subtotal	0.000	1.473		1.453		1.469		0.000		1.469			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207605F: *Wargaming and Simulation Centers*	PROJECT 672888: *Distributed Mission Operations Center (DMOC)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Office Support	Various	705 CTS:Kirtland AFB, NM	-	0.560	Oct 2011	0.552	Oct 2012	0.558	Oct 2013	-		0.558	Continuing	Continuing	TBD
		Subtotal	0.000	0.560		0.552		0.558		0.000		0.558			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	5.617		5.699		5.512		0.000		5.512			

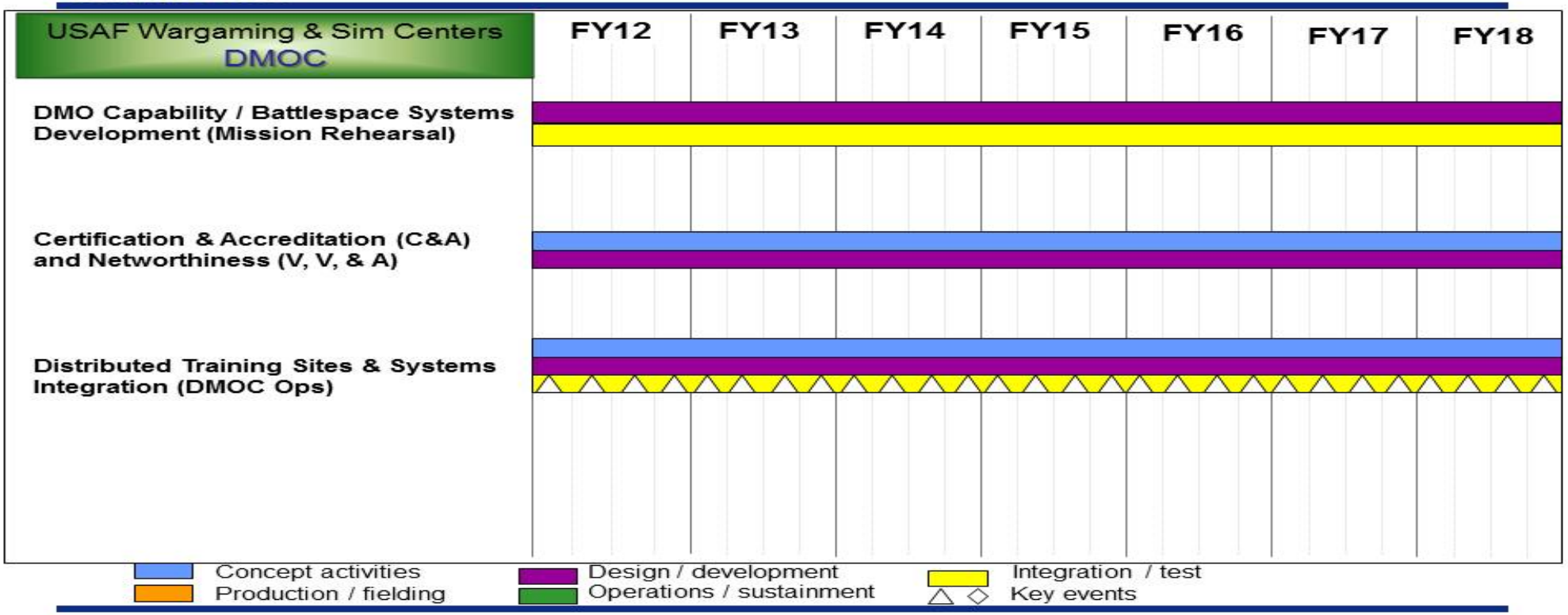
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207605F: *Wargaming and Simulation Centers*	PROJECT 672888: *Distributed Mission Operations Center (DMOC)*

PE 27605F – Wargaming & Sim Centers

Distributed Mission Operations Center (672888) Schedule

U.S. AIR FORCE



Integrity - Service - Excellence

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207605F: *Wargaming and Simulation Centers*	PROJECT 672888: *Distributed Mission Operations Center (DMOC)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
DMO Capability / Battlespace Systems Development (Mission Rehearsal)	1	2012	4	2018
Certification & Accreditation (C&A) and Networthiness (V, V, & A)	1	2012	4	2018
Distributed Training Sites & Systems Integration (DMOC Ops)	1	2012	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0207697F: *Distributed Training and Exercises*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	3.147	4.425	3.301	-	3.301	4.513	4.438	4.213	4.289	Continuing	Continuing
675042: *Log Application Logisitics Integration (LALI)*	-	0.523	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
675190: *JFCOM Wargaming*	-	2.624	4.425	3.301	-	3.301	4.513	4.438	4.213	4.289	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

In September 03, the AF/CV directed the establishment of funding 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, space and cyber space capabilities in joint activities, through modeling and simulation and wargaming activities. The primary activity this is accomplished with is the Chief of Staff of the United States Air Force's Unified Engagement (UE) wargame series. UE is a two cycle of plan, execute, analyze and report of activities that include workshops, seminars, capstone event, senior leader seminar, and Building Partnership Capacity events. The capstone event includes over 400 Joint, other Agency, and coalition partners supported by cutting edge technology. The Wargaming Environment (WIE) evolves with each UE game cycle and is made up of three main parts GamePoint, ViewPoint, and Modeling and Simulation Tools. GamePoint provides the latest collaboration and information throughout and during the wargame and associated events. ViewPoint provides users a simple method to visually view the information and conduct their own analysis. Modeling and Simulation provides integration of the latest modeling, simulation and analysis tools and also the infrastructure to support the WIE. This program is categorized in Budget Activity (BA) 07 because it supports the development efforts of operational systems.

B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	3.147	4.417	0.000	-	0.000
Current President's Budget	3.147	4.425	3.301	-	3.301
Total Adjustments	0.000	0.008	3.301	-	3.301
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.008	3.301	-	3.301

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207697F: *Distributed Training and Exercises*

Change Summary Explanation

FY14 funding increased to provide wargaming operations capabilities.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207697F: *Distributed Training and Exercises*	PROJECT 675042: *Log Application Logisitics Integration (LALI)*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675042: *Log Application Logisitics Integration (LALI)*	-	0.523	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Description/Justification for Logistics Application/Logistics Integration (LALI) located in BPAC 675042 PE 0708611F.

FY12 $523K for LALI incorrectly aligned to PE 0207697F and will be realigned during execution.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Log Application Logisitics Integration (LALI)	0.523	0.000	0.000
Description: Logistics Application Logistics Integration (LALI) funding provides development in support of the Air Force logistics transformation initiative for the 21st century, eLog21.			
FY 2012 Accomplishments: Support AF Logistics business process transformation (eLog21) initiatives through Business Intelligence (BI)capabilities (reports, predictive analyses, what-if analyses, etc).			
Accomplishments/Planned Programs Subtotals	0.523	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

LALI projects will be competively acquired using a variety of fixed price and cost plus contracts.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207697F: *Distributed Training and Exercises*	PROJECT 675042: *Log Application Logisitics Integration (LALI)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
LALI	C/CPFF	TBD:Arlington, VA	-	0.523	Sep 2012	0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.523		0.000		0.000		0.000		0.000			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.523		0.000		0.000		0.000		0.000			

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207697F: *Distributed Training and Exercises*	PROJECT 675190: *JFCOM Wargaming*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675190: *JFCOM Wargaming*	-	2.624	4.425	3.301	-	3.301	4.513	4.438	4.213	4.289	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

In September 03, the AF/CV directed the establishment of funding 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, space and cyber space capabilities in joint activities, through modeling and simulation and wargaming activities. The primary activity this is accomplished with is the Chief of Staff of the United States Air Force's Unified Engagement (UE) wargame series. UE is a two cycle of plan, execute, analyze and report of activities that include workshops, seminars, capstone event, senior leader seminar, and Building Partnership Capacity events. The capstone event includes over 400 Joint, other Agency, and coalition partners supported by cutting edge technology. The Wargaming Environment (WIE) evolves with each UE game cycle and is made up of three main parts GamePoint, ViewPoint, and Modeling and Simulation Tools. GamePoint provides the latest collaboration and information throughout and during the wargame and associated events. ViewPoint provides users a simple method to visually view the information and conduct their own analysis. Modeling and Simulation provides integration of the latest modeling, simulation and analysis tools and also the infrastructure to support the WIE.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: MAJOR THRUST 1	0.918	2.301	1.665
Description: Develop air, space and cyber space wargaming specific functionality in existing modeling and simulation and analysis tools and integrate into the latest version of the WIE.			
FY 2012 Accomplishments: Develops air and space wargaming specific functionality in existing simulation and analysis tools (e.g., JWARS, THUNDER/ STORM)			
FY 2013 Plans: Develops air and space wargaming specific functionality in existing simulation and analysis tools (e.g., JWARS, THUNDER/ STORM)			
FY 2014 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207697F: *Distributed Training and Exercises*	PROJECT 675190: *JFCOM Wargaming*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Develops air and space wargaming specific functionality in existing simulation and analysis tools (e.g., JWARS, THUNDER/ STORM)			
Title: MAJOR THRUST 2 ***Description:*** Provides for capabilities, Requirements, and Risk Assessment (CRRA) ***FY 2012 Accomplishments:*** Provides for Capabilities, Requirements, and Risk Assessment (CRRA) ***FY 2013 Plans:*** Provides for Capabilities, Requirements, and Risk Assessment (CRRA) ***FY 2014 Plans:*** Provides for Capabilities, Requirements, and Risk Assessment (CRRA)	0.684	1.000	0.800
Title: MAJOR THRUST 3 ***Description:*** Enables entity-level simulation tools and effects-based modeling for Joint Concept Development and Experimentation ***FY 2012 Accomplishments:*** Enables entity-level simulation tools and effects-based modeling for Joint Concept Development and Experimentation ***FY 2013 Plans:*** Enables entity-level simulation tools and effects-based modeling for Joint Concept Development and Experimentation ***FY 2014 Plans:*** Enables entity-level simulation tools and effects-based modeling for Joint Concept Development and Experimentation	0.622	0.700	0.541
Title: MAJOR THRUST 4 ***Description:*** Supplies platforms for software in operational environments and for programmed replacement costs ***FY 2012 Accomplishments:*** Enables entity-level simulation tools and effects-based modeling for Joint Concept Development and Experimentation ***FY 2013 Plans:*** Enables entity-level simulation tools and effects-based modeling for Joint Concept Development and Experimentation ***FY 2014 Plans:***	0.400	0.424	0.295

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207697F: *Distributed Training and Exercises*	PROJECT 675190: *JFCOM Wargaming*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Enables entity-level simulation tools and effects-based modeling for Joint Concept Development and Experimentation			
Accomplishments/Planned Programs Subtotals	2.624	4.425	3.301

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Unified Engagement (UE) Wargame Information Environment (WIE) support: The WIE is a continually evolving system that is a deployable standalone Local Area Network (LAN) with servers and laptops that host applications to support virtual battlespace collaboration, decision making, and three dimensional visualizations. Behind these applications are cutting edge technologies and database architectures from both commercial off the shelf and government developed software that assures relevance to the UE Wargame. The modeling, simulation, and analysis applications allow UE participants, adjudicators, and control team members to effectively and efficiently create UE Report with tested concepts and conclusions to improve our future Air Force to the CSAF biannually. The current version of the WIE is 2.5 and 3.0 is to be released is Dec 2013 which coincides with Unified Engagement Wargame capstone event which occurs every 2 years. Risks are low in the research, development, and test of the WIE because of the iterative nature in the design and development of the system.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207697F: *Distributed Training and Exercises*	PROJECT 675190: *JFCOM Wargaming*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	C/CPFF	TBD:TBD,	-	2.624	Nov 2012	4.425	Nov 2013	3.301	Nov 2013	-		3.301	Continuing	Continuing	TBD
		Subtotal	0.000	2.624		4.425		3.301		0.000		3.301			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	2.624		4.425		3.301		0.000		3.301			

Remarks

Note: Unified Engagement (UE) Wargame Information Environment (WIE): Funding is for a continuous series of updates and modifications to a continually evolving system that is a deployable standalone Local Area Network(LAN)which includes modeling, simulation, and analysis applications.

There are no Articles published as a result, however there are reports that are produced and sent to the CSAF biannually.

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0207697F: *Distributed Training and Exercises*	PROJECT 675190: *JFCOM Wargaming*

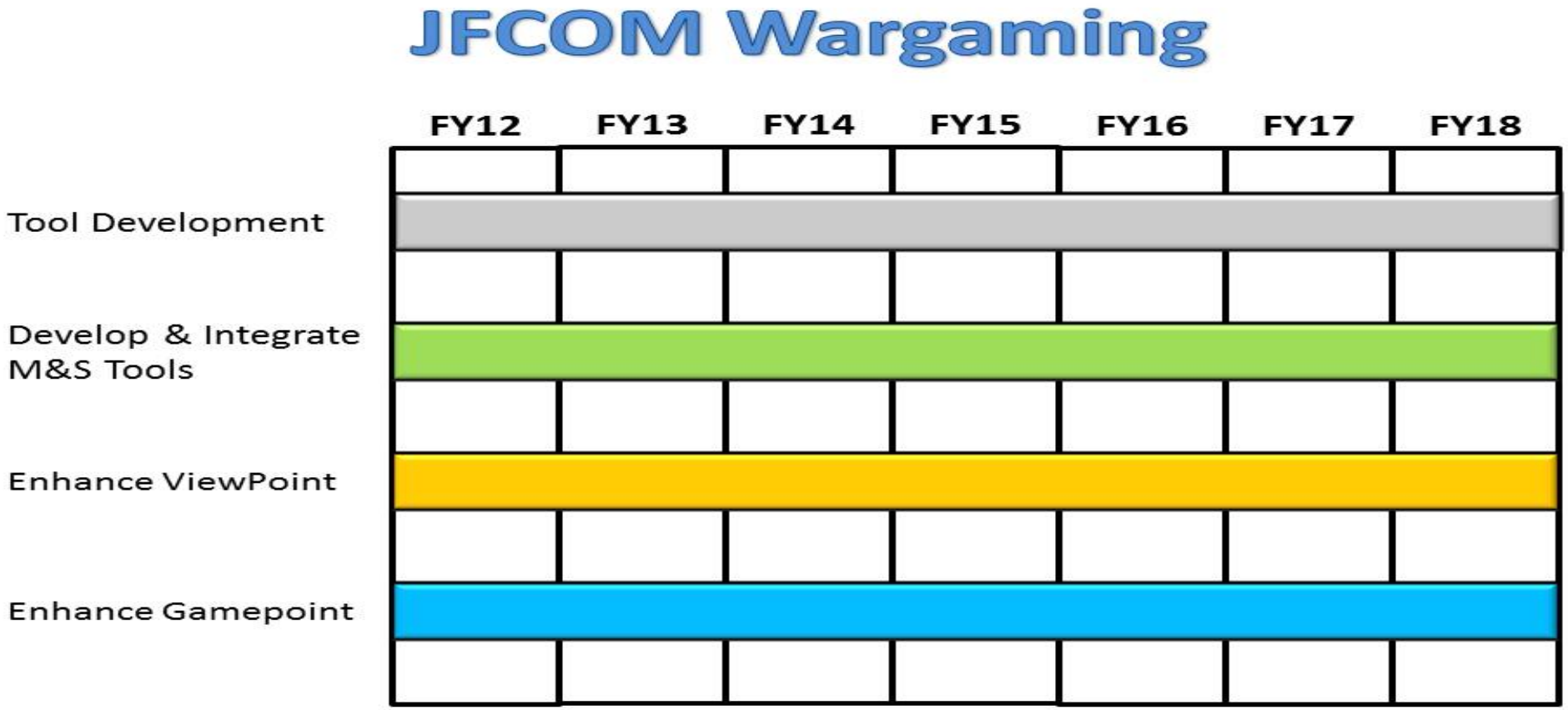


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0207697F: *Distributed Training and Exercises*	**PROJECT** 675190: *JFCOM Wargaming*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Tool Development	1	2012	4	2018
Develop and Integrate M&S Tools	1	2012	4	2018
Enhance ViewPoint	1	2012	4	2018
Improve GamePoint	1	2012	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	61.207	69.377	62.605	-	62.605	86.628	86.700	78.456	79.010	Continuing	Continuing
673858: *Mission Planning Systems (MPS) Development*	-	6.198	6.405	0.277	-	0.277	0.000	0.000	0.000	0.000	Continuing	Continuing
675302: *Precision Aerial Delivery Systems (PADS)*	-	5.361	5.546	3.299	-	3.299	7.059	12.126	12.904	14.235	Continuing	Continuing
675380: *Mission Planning Systems (MPS) Modernization*	-	49.648	57.426	59.029	-	59.029	79.569	74.574	65.552	64.775	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

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 weapons, 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 replaced 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). MPS will compress the mission planning cycle 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 MPS development program will migrate a variety of Air Force aircraft, weapons, and airdrop payload systems from legacy mission planners to MPS. These systems include, but are not limited to the: A-10, B-1B, C-5, C-17, C-130, E-3, E-8, F-15, F-16, F-22A, RC-135, HH-60, and their associated weapons (e.g. Small Diameter Bomb (SDB), Joint Direct Attack Munitions (JDAM), Joint Air-to-Surface Standoff Munitions (JASSM), etc.) and airdrop payloads. In addition, basic MPS 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. MPS will deliver significant benefits to 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. To meet the unique needs of Air Mobility Command (AMC), the Mobility Air Force Automated Flight Planning Service (MAFPS) component of MPS will provide a centralized/net-centric global mobility mission flight planning capability. This service will provide significant fuel savings through automated flight route optimization utilizing aircraft performance, air traffic management, weather, and other data. Additionally, elements of Mission Planning Systems will be utilized to continue the development of a Joint Precision Airdrop System (JPADS) in conjunction with the Army.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0208006F: *Mission Planning Systems*

The JPADS System of Systems (SoS) capability provides a planning and execution capability for DoD airdrop requirements. It is the primary airdrop mission planning and execution system for all ballistic airdrop mission, as well as precision guided airdrops that are required when the mission profile or surface-to-air threat assessment warrants a high-altitude and/or standoff precision delivery. JPADS enables high-altitude, precise airdrop delivery to forward ground forces, mitigating surface-to-air threats, reducing risk of Improvised Explosive Device (IED), and insurgent attack on ground convoys. JPADS allows the warfighter to consider weather, terrain, aircraft capabilities, threat, etc. to accurately deliver payloads to keep the warfighter supplied and in the fight.

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

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	63.009	69.377	70.332	-	70.332
Current President's Budget	61.207	69.377	62.605	-	62.605
Total Adjustments	-1.802	0.000	-7.727	-	-7.727
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-1.802	0.000			
• Other Adjustments	0.000	0.000	-7.727	-	-7.727

Change Summary Explanation

FY2014 increased by $4.200M for development of Mobility Air Forces (MAF) Automated Flight Planning Service (MAFPS).

FY2014 decreased by $11.927M for higher Air Force priorities.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 673858: *Mission Planning Systems (MPS) Development*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
673858: *Mission Planning Systems (MPS) Development*	-	6.198	6.405	0.277	-	0.277	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Project 673858 was renamed Mission Planning Systems Development from Mission Planning Systems in FY13.

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 requirement 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 plan; and download pertinent flight information to on-board aircraft avionics.

This project provides for the continuous improvement of mission planning software capabilities that cut across all platforms and systems. It allows for the investigation of new technologies and products that have the potential for improving mission planning systems. This includes the continuous upgrading of the MPS framework. The framework is the underlying baseline for all mission planning systems. It 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, commercial off the shelf-based, user friendly product; and 5) retain compatibility with platform changes to avionics and operational flight programs. Development and modernization activities within this project are as follows:

a. MPS Increment IV: Continues development activities to complete the initial migration of designated Increment IV platforms (from the Combat Air Forces (CAF) and Mobility Air Forces (MAF--includes Special Mission Air Combat Command (SMACC) aircraft) to the new MPS planning capability. This includes the F-22 Mission Planning Environment (MPE) which will support new capabilities for weapons integration, sensor updates, and avionics changes integrated on board the aircraft. Planned updates include transitioning selected platform to the Windows 7 operating system. Additionally, the development effort will also address new and emerging Operational Flight Program (OFP)-generated requirements as identified by the operational users. Maintenance and common component updates will be completed as required.

b. MPS Modernization: Continues the modernization of overarching technologies (including the framework) to support development of Mission Planning Environments (MPEs) for various CAF and MAF platforms. Development funding for these modernization efforts will move to project 675380 in FY14.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 673858: *Mission Planning Systems (MPS) Development*

c. CAF MPE Modernization: This effort will modernize CAF MPEs originally developed and delivered under MPS Increments II & IV. The modernization effort will provide new and improved mission planning capability for individual OFP requirements, such as new weapons, avionics upgrades, communications systems, etc. The OFPs requiring MPE updates under the CAF Modernization effort include but are not limited to those for A-10 (Suites 8, 9, 10, 11, 12), B-1B (Sustainment Blocks (SB) 15, 16, 16a, 17 and 18), and F-15 (Suites 7, 8, 9, and 10). CAF modernization also includes updates to mission planning capabilities supporting associated weapons, including Small Diameter Bomb (SDB), Joint Direct Attack Munitions (JDAM) and the Joint Air-to-Surface Standoff Missile (JASSM). Finally, CAF modernization will address required improvements to CAF related MPE Common Components (CCs), including Precision-Guided Munitions Planning System (PGMPS), Electronic Warfare CC (EWCC), etc. Development funding for these modernization efforts will move to project 675380 in FY14.

d. MAF MPE Modernization: This effort modifies the common MAF MPE developed and deployed during previous mission planning increments. The modernization activities will provide new and improved mission planning capabilities for the MAF fleet as required to meet evolving OFPs, fuel efficiency, and Global Planning netcentric requirements such as avionics upgrades, communication systems, interfaces with command and control systems, new chute data, etc. for various MAF platforms. The MPE updates under the MAF Modernization effort include but are not limited to those for Air Mobility Command--C-5, C-17, C-27, C-130s (multiple variants), KC-10, KC-46, and KC-135 and Special Mission Air Combat Command--E-3, E-8, E-4, HH-60, and RC-135. MAF modernization will also address required improvements to and integration of MAF related MPE CCs, including the Communications, Navigation Surveillance/Air Traffic Management (CNS/ATM) CC, Consolidated Airdrop Tool (CAT), Aeronautical Advisory and Notices to Airmen Tool (AANT), and Air Refueling Tool (ART) CC, etc. Development funding for these modernization efforts will move to project 675380 in FY14.

e. Test, Training and Certification: Continues all MPS-related integration, test, and certification activities for CAF and MAF platforms. Funding for these support efforts will be programmed with their associated project/program in FY14 and the outyears.

f. Operational and Technical Support: Continues all program office management operations and support activities to ensure the timely delivery of mission planning systems to the warfighter.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: MPS Increment IV	4.940	5.909	0.261
Description: Continues contractor-executed software development and test activities required to migrate selected CAF and MAF platforms to the new MPS Increment IV mission planning capability.			
FY 2012 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 673858: *Mission Planning Systems (MPS) Development*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continued development of the unique planning component portion of MPEs for the F-22 and A-10. Initial development of F-22 MPE includes migration to the Windows 7 Operating System as well as Link-16 enhancements, the Global Pilot Vehicle Interface, Combat Identification, and Electronic Protection. ***FY 2013 Plans:*** Completes development and contractor testing of unique planning component of the MPE for F-22 and A-10. ***FY 2014 Plans:*** Will complete operational testing of OFP-driven updates (e.g. Global Pilot Vehicle Interface, Windows 7 operating environment, Link 16, Combat ID) for the F-22 MPE.			
Title: Program Management Administration ***Description:*** Continues all program management office technical and administrative activities and operations necessary to support development and fielding of all MPS capabilities. ***FY 2012 Accomplishments:*** Provided ongoing program support to the various efforts within Project 673858, MPS Development. ***FY 2013 Plans:*** Provides ongoing program support to the various efforts within Project 673858, MPS Development ***FY 2014 Plans:*** Provides ongoing program support to the various efforts within Project 673858, MPS Development.	1.258	0.496	0.016
Accomplishments/Planned Programs Subtotals	6.198	6.405	0.277

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

MPS development 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.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 673858: *Mission Planning Systems (MPS) Development*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Mission Planning Enterprise Contract II	C/Various	Various:Various,	-	2.707	Nov 2011	4.605	Nov 2012	0.180	Nov 2013	-		0.180	Continuing	Continuing	TBD
Systems Engineering and Integration	C/CPAF	SAIC:McLean, VA	-	1.191	Nov 2011	0.937	Nov 2012	0.031	Nov 2013	-		0.031	Continuing	Continuing	TBD
A-10 Development	PO	Organic:Hill AFB, UT	-	0.350	Nov 2011	0.000		0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	4.248		5.542		0.211		0.000		0.211			

Remarks

Prior to FY12, Systems Engineering and Integration, Framework, and Common Component costs were funded in project 673858. Beginning in FY12, projects 675302 and 675380 will also fund these costs.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Engineering Institute (SEI)	C/T&M	SEI:Pittsburgh, PA	-	0.019	Nov 2011	0.011	Nov 2012	0.000		-		0.000	Continuing	Continuing	TBD
Tecolote (Cost Estimating)	C/T&M	Tecolote Inc:Bedford, MA	-	0.000		0.022	Nov 2012	0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	0.019		0.033		0.000		0.000		0.000			

Remarks

Prior to FY12, all support costs were funded in project 673858. Beginning in FY12, projects 675302 and 675380 will also fund these costs.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Responsible Test Organization (RTO)	PO	46TW:Eglin AFB, FL	-	0.390	Nov 2011	0.195	Nov 2012	0.022	Nov 2013	-		0.022	Continuing	Continuing	TBD
Certification and Accreditation	MIPR	JITC:Indian Head, MD	-	0.017	Jan 2012	0.007	Jan 2013	0.000		-		0.000	Continuing	Continuing	TBD

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 673858: *Mission Planning Systems (MPS) Development*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Type I Training	C/FP	Ogden Air Logistics Center:Hill AFB, UT	-	0.269	Nov 2011	0.103	Nov 2012	0.024	Nov 2013	-		0.024	Continuing	Continuing	TBD
Field Representative Hardware	C/Various	Various:Various,	-	0.026	Nov 2011	0.062	Nov 2012	0.004	Nov 2013	-		0.004	Continuing	Continuing	TBD
		Subtotal	0.000	0.702		0.367		0.050		0.000		0.050			

Remarks

Prior to FY12, all test and evaluation costs were funded in project 673858. Beginning in FY12, projects 675302 and 675380 will also fund these costs.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC Support	RO	Mitre Corp:Bedford, MA	-	0.181	Nov 2011	0.222	Oct 2012	0.007	Oct 2013	-		0.007	Continuing	Continuing	TBD
Program Management Administration	Various	Various:Various,	-	1.048	Nov 2011	0.241	Nov 2012	0.009	Nov 2013	-		0.009	Continuing	Continuing	TBD
		Subtotal	0.000	1.229		0.463		0.016		0.000		0.016			

Remarks

Prior to FY12, all management services costs were funded in project 673858. Beginning in FY12, projects 675302 and 675380 will also fund these costs.

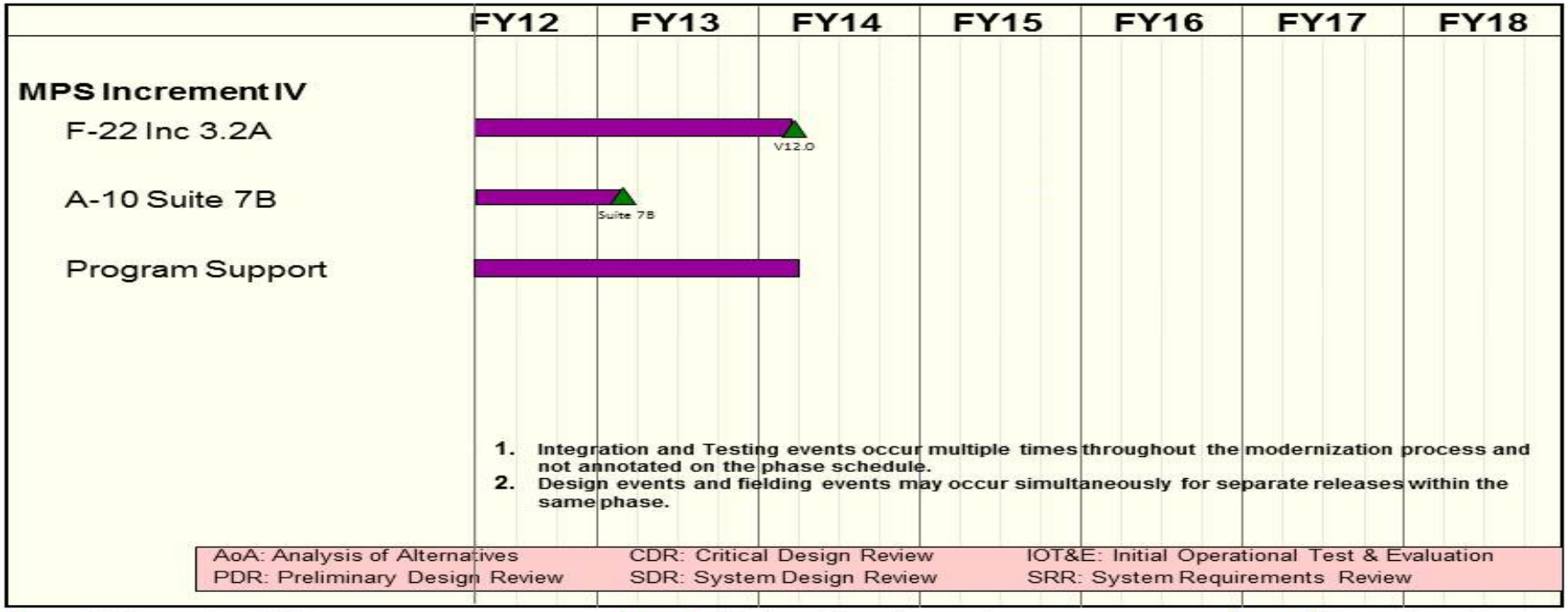
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	6.198		6.405		0.277		0.000		0.277			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 673858: *Mission Planning Systems (MPS) Development*

U.S. AIR FORCE

Mission Planning Systems (MPS) Development Program Schedule (BPAC 673858)



1

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 673858: *Mission Planning Systems (MPS) Development*

Schedule Details

	Start		End	
Events	Quarter	Year	Quarter	Year
F-22 Inc 3.2A v12.0 Fielding	1	2014	1	2014
A-10 Suite 7B Fielding	1	2013	1	2013
Program Support	1	2012	1	2014

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 675302: *Precision Aerial Delivery Systems (PADS)*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675302: *Precision Aerial Delivery Systems (PADS)*	-	5.361	5.546	3.299	-	3.299	7.059	12.126	12.904	14.235	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Project 675302 was renamed Precision Aerial Delivery Systems (PADS) from Mobility Air Forces (MAF) Planning Systems in FY13.

A. Mission Description and Budget Item Justification

Mission planning involves the creation of a flight plan based on multiple inputs including 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 requirement 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 plan; download pertinent flight information to on-board aircraft avionics; and, conduct dynamic/in-flight replanning as applicable. This project continues the development of a Joint Precision Airdrop System-Mission Planner (JPADS-MP) in conjunction with the Army. The JPADS System of Systems (SoS) capability provides a planning and execution capability for DoD airdrop requirements. It is the primary airdrop mission planning and execution system for all ballistic airdrop mission as well as precision guided airdrops that are required when the mission profile or surface-to-air threat assessment warrants a high-altitude and/or standoff precision delivery. JPADS enables high-altitude, precise airdrop delivery to forward ground forces, mitigating surface-to-air threats, reducing risk of Improvised Explosive Device (IED) & insurgent attack on ground convoys. JPADS allows the warfighter to consider weather, terrain, aircraft capabilities, threat, etc. to accurately deliver payloads to keep the warfighter supplied and in the fight.

The Joint Precision Airdrop System-Mission Planner (JPADS-MP) program of record (PoR), of which the Consolidated Airdrop Tool (CAT) software is a key deliverable, continues development of CAT to provide precision and conventional airdrop capability for AF and other services (e.g the Army, etc). Future releases of CAT software concentrate on increasing the accuracy of airdrop mission planning by improving aircraft, payload, and chute specific calculations along with weather analysis visualization tools specifically adapted for airdrop. In addition, the AFRL led Precision Airdrop (PAD) Flagship Capability Concept (FCC) effort will transition capabilities to the JPADS-MP PoR, specifically into various CAT software release deliverables. The PAD FCC is charged with updating airdrop platforms and airdrop related systems to improve accuracy across all airdrop mission types.

a. CAT 2.x includes but is not limited to Digital Terrain Data (DTED), Wireless Gate Release (WGRS), and aircraft specific Monte Carlo solutions. CAT v3.x includes but is not limited to updates to the operating systems and standard desktop configuration (SDC), refactor of the weather component known as WinPADS, replaces the Local Area Prediction System (LAPS), and Airdrop Damage Estimate (ADE) capabilities. CAT 3.x also transitions and supports the AFRL PADS FCC capability of bundle tracking.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 675302: *Precision Aerial Delivery Systems (PADS)*

b. CAT 4.x includes but is not limited to OS/SDC updates, migration to JMPS, combination airdrop and new map projections including polar stereographic. CAT v5.x includes but is not limited to approach headings for guided systems, secondary cargo airdrop release, and transitions AFRL PADS FCC forced exit and humanitarian airdrop capabilities. CAT v6.x includes but is not limited to new chute configurations and aerial guidance units, updates ballistics data and dispersion models and transitions AFRL PADS FCC Light Detection and Ranging (LIDAR) and RADAR sensing capabilities for real-time weather. CAT v7.x includes but is not limited to OS/SDC updates, force deployment, and transitions AFRL PADS FCC human effectiveness capabilities.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: JPADS Development	4.702	4.909	2.725
Description: Continue development of a JPADS capability for precise, high altitude delivery of material to forward ground forces. ***FY 2012 Accomplishments:*** Continued development of a JPADS capability for precise, high altitude delivery of material to forward ground forces. ***FY 2013 Plans:*** CAT v3.x effort will: 1) Modify the airdrop software for the integration of new solution to replace the antiquated "black box" module Local Analysis and Prediction System (LAPS) for improved localized weather modeling; 2) develop aircraft/chute system specific calculations for increased accuracy; 3) develop capability for airdrop software to ingest updates to payload ballistic data; 4) develop capability to display location of dropped bundles real-time on the mission computer; and 5) make necessary updates in the software to accommodate new mission computers. ***FY 2014 Plans:*** CAT v3.x will develop and integrate weather forecast and analysis tools customized for precision airdrop, and integrate Airdrop Damage Estimate (ADE) tool for improved planning. Efforts also include revising the work-flow of the software and maximizing automation in order to simplify mission execution for the aircrew. CAT v4.x development activities expand precision airdrop capabilities for accurate calculating leaflet dispersion and developing calculations and capabilities for combination airdrop for personnel and heavy equipment in a single pass. Efforts also include the migration of airdrop software to a JMPS framework.			
Title: Program Management Administration	0.659	0.637	0.574
Description: Ongoing program support for various efforts within Project 675302, Precision Aerial Delivery Systems (PADS). All FY11 and prior year program support resided in Project 675838, MPS Development. ***FY 2012 Accomplishments:***			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 675302: *Precision Aerial Delivery Systems (PADS)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Provided ongoing program support for various efforts within Project 675302, Precision Aerial Delivery Systems (PADS). ***FY 2013 Plans:*** Provides ongoing program support for various efforts within Project 675302, Precision Aerial Delivery Systems (PADS). ***FY 2014 Plans:*** Provides ongoing program support for various efforts within Project 675302, Precision Aerial Delivery Systems (PADS).			
Accomplishments/Planned Programs Subtotals	5.361	5.546	3.299

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA07: Line Item # 833170: *Mission Planning Systems*	9.709	8.487	8.525		8.525	9.175	9.348	9.525	9.696	Continuing	Continuing

Remarks

D. Acquisition Strategy

PADS 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.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 675302: *Precision Aerial Delivery Systems (PADS)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DITCO IV Contract	MIPR	TYBRIN:Ft Walton Beach, FL	-	3.566	Nov 2011	3.897	Nov 2012	1.561	Nov 2013	-		1.561	Continuing	Continuing	TBD
Systems Engineering and Integration	C/CPAF	SAIC:McLean, VA	-	0.749	Nov 2011	0.471	Nov 2012	0.690	Nov 2013	-		0.690	Continuing	Continuing	TBD
		Subtotal	0.000	4.315		4.368		2.251		0.000		2.251			

Remarks

Systems Engineering and Integration costs were programmed in project 673858 prior to FY12.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Engineering Institute (SEI)	C/T&M	SEI:Pittsburgh, PA	-	0.000		0.014	Nov 2012	0.012	Nov 2013	-		0.012	Continuing	Continuing	TBD
Tecolote (Cost Estimating)	C/T&M	Tecolote Inc:Bedford, MA	-	0.000		0.028	Nov 2012	0.024	Nov 2013	-		0.024	Continuing	Continuing	TBD
		Subtotal	0.000	0.000		0.042		0.036		0.000		0.036			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Responsible Test Organization (RTO)	PO	46TW:Eglin AFB, FL	-	0.215	Nov 2011	0.287	Nov 2012	0.250	Nov 2013	-		0.250	Continuing	Continuing	TBD
Certification and Accreditation	MIPR	JITC:Indian Head, MD	-	0.010	Jan 2012	0.011	Jan 2013	0.010	Jan 2014	-		0.010	Continuing	Continuing	TBD
Type I Training	C/FP	Ogden Air Logistics Center:Hill AFB, UT	-	0.148	Nov 2011	0.151	Nov 2012	0.133	Nov 2013	-		0.133	Continuing	Continuing	TBD
Field Representative Hardware	C/Various	Various:Various,	-	0.014	Nov 2011	0.092	Nov 2012	0.081	Nov 2013	-		0.081	Continuing	Continuing	TBD

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 675302: *Precision Aerial Delivery Systems (PADS)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.387		0.541		0.474		0.000		0.474			

Remarks

Test and Evaluation costs were programmed in project 673858 prior to FY12.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC Support	RO	MITRE Corp:Bedford, MA	-	0.000		0.285	Oct 2012	0.243	Oct 2013	-		0.243	Continuing	Continuing	TBD
Program Management Administration	Various	Various:Various,	-	0.659	Nov 2011	0.310	Nov 2012	0.295	Nov 2013	-		0.295	Continuing	Continuing	TBD
		Subtotal	0.000	0.659		0.595		0.538		0.000		0.538			

Remarks

Management Services costs were programmed in project 673858 prior to FY12.

	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	5.361		5.546		3.299		0.000		3.299			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 675302: *Precision Aerial Delivery Systems (PADS)*

Precision Aerial Delivery Systems (PADS)
Project 675302

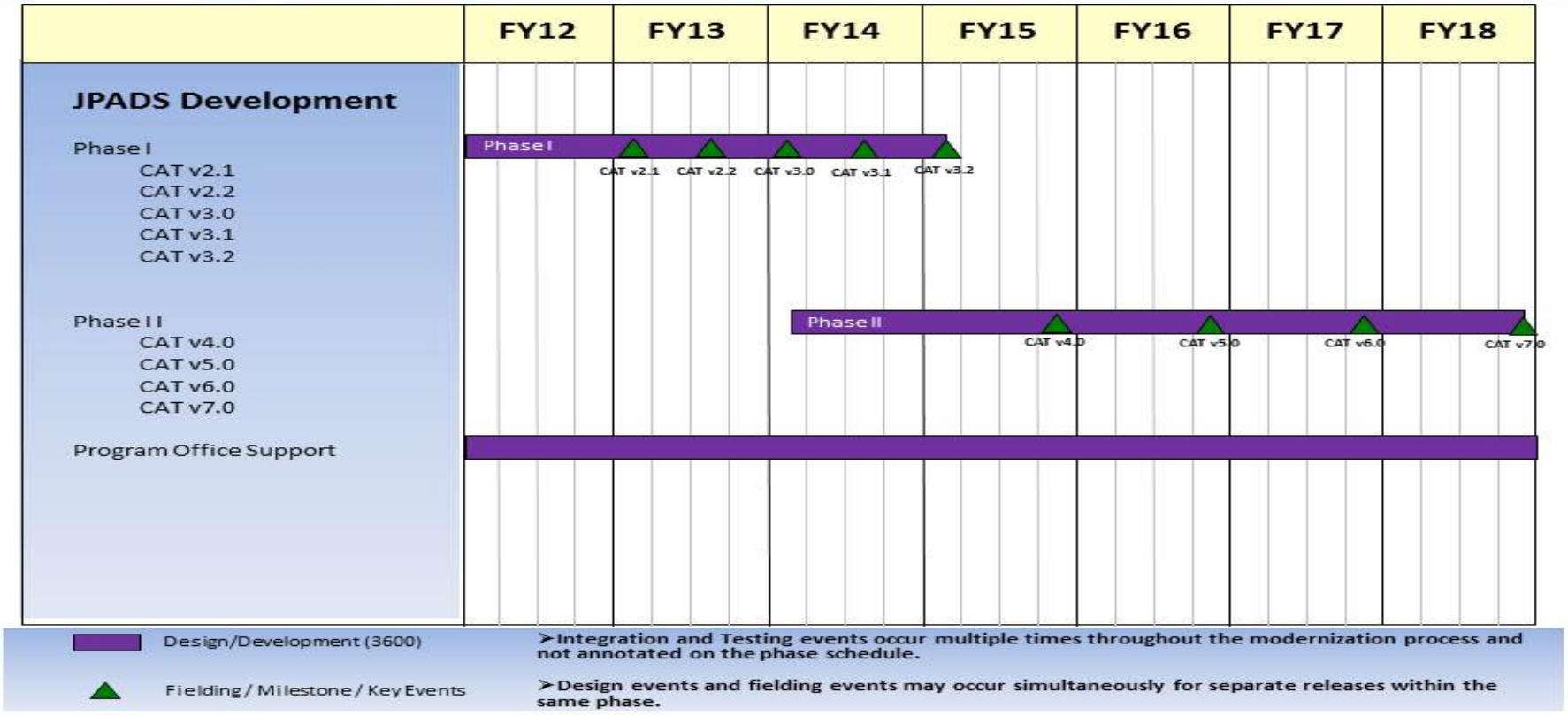


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0208006F: *Mission Planning Systems*	**PROJECT** 675302: *Precision Aerial Delivery Systems (PADS)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JPADS-MP CAT v2.1 Fielding	1	2013	1	2013
JPADS-MP CAT v2.2 Fielding	3	2013	3	2013
JPADS-MP CAT v3.0 Fielding	1	2014	1	2014
JPADS-MP CAT v3.1 Fielding	3	2014	3	2014
JPADS-MP CAT v3.2 Fielding	1	2015	1	2015
JPADS-MP CAT v4.0 Fielding	4	2015	4	2015
JPADS-MP CAT v5.0 Fielding	4	2016	4	2016
JPADS-MP CAT v6.0 Fielding	4	2017	4	2017
JPADS-MP CAT v7.0 Fielding	4	2018	4	2018
Program Office Support	1	2012	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 675380: *Mission Planning Systems (MPS) Modernization*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
675380: *Mission Planning Systems (MPS) Modernization*	-	49.648	57.426	59.029	-	59.029	79.569	74.574	65.552	64.775	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Project 675380 was renamed Mission Planning Systems (MPS) Modernization from Combat Air Forces (CAF) Planning Systems in FY13.

All MPS Modernization efforts will be centralized in project 675380 starting in FY14, including efforts previously found in project 673858.

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 weapons, cargo, passenger, and/or fuel delivery, calculate fuel requirement, 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 plan; and download pertinent flight information to on-board aircraft avionics. This project focuses on modernizing MPS to support Combat Air Forces (CAF) and Mobility Air Forces (MAF), including the development, test and sustainment of Mission Planning Environments (MPEs) to support the A-10, B-1B, C-5, C-17, C- 27, C-130, E-3, E-8, F-15, F-16, F-22A, KC-10, KC-46, KC-135, RC-135, other platforms, and all common component (CCs)software tools currently approved as necessary for mission requirements. Activities also include studies and analysis to support both current program planning and execution and future program planning. MPS modernization efforts are as follows:

a. MPS Increment IV Development: This effort continues update/development activities for platforms that previously transitioned to MPS (e.g. F-15, F-16, A-10, B-1B, and F-22A Increment 3.2A) to provide capabilities in accordance with the Increment IV Capability Development Document (CDD). In addition, it also upgrades several common components (CCs) that are utilized on a variety of CAF platforms. Starting in FY13, all MPS Increment IV Development efforts will reside in Project 673858, Mission Planning Systems (MPS) development.

b. CAF MPE Modernization: These efforts modernize CAF MPEs that were developed and delivered under MPS Increments II and IV. The modernization effort will provide new and improved mission planning capability for individual Operational Flight Program (OFP) requirements, such as new weapons, avionics upgrades, communications systems, etc. The OFPs requiring MPE updates under the CAF modernization effort in Fiscal Years 2011 through 2017 include but are not limited to those for A-10 (Suites 8, 9, 10, 11, and 12), B-1B (Sustainment Blocks 15, 16, 16a, 17 and 18), F-15 (Suites 7, 8, 9, and 10), F-16 Block 30 (System Capability Upgrade [SCU] 8, 9, and 10), F-16 Block 40/50 (M6.1, M6.5, M7.1, and M8.0) and F-22 (Increments 3.2B, 3.2C, and 4.0). CAF modernization also includes updates to mission planning capabilities supporting associated weapons, including small diameter bomb (SDB-II), joint direct attack munitions (JDAM) and the Joint air-to-surface standoff

missile (JASSM). Finally, CAF modernization will address required improvements to CAF related MPE CCs, including Precision-Guided Munitions Planning System (PGMPS), Electronic Warfare CC (EWCC), etc.

(Starting in FY14, CAF MPE Modernization is broken out into specific platforms as per the following.)

1) F-15 Modernization: This modernization program consists of multiple software development efforts driven by OFPs updates for F-15 Suites 7, 8, and 9. Suite 7 MPE capabilities include, but are not limited to, Digital Transfer Device (DTD) improvements, updates for new features in weapons such as Joint Direct Attack Munition (JDAM), Small Diameter Bomb (SDB), AIM-9X, AIM-120D, and Network Enable Weapon support elements (e.g. key handling, weapon data link, and Link 16). It will also include enhancements to the synthetic aperture radar planning tool (SAR-PT) and the global area reference tool as well as radar modernization updates (e.g. combat identification, radar planning tool enhancements). Development efforts for F-15 Suite 8 include, but are not limited to, integration of B61 Life Extension Program, feature updates for several weapons, and the expansion of Link-16 messages sets. F-15 Suite 9 MPE updates will include a variety of updates and enhancements for weapons and aircraft systems.

2) F-16 Block 30 Modernization: The F-16 Block 30 modernization effort will support new aircraft capabilities established in OFPs for the SCU8, SCU9, and SCU10. The effort will also migrate the F-16 Block 30 Mission Planning Environment (MPE) to the Windows 7 operating system and the current version of the MPS Framework. SCU8 system capabilities include the addition of Helmet Mounted Integrated Targeting (HMIT), Small Diameter Bomb (SDB), the AIM-120D missile variant and Center Display Unit (CDU) Integration. SCU9 capabilities include finishing HMIT and CDU integrations, support of Threat Symbology/Correlation (TS/C) file import (commonality with F-16 Block 40/50) and the addition of the Laser JDAM.

3) F-16 Block 40/50 Modernization: The F-16 Block 40/50 modernization efforts will provide the capability within the MPE to plan/utilize a number or OFP-driven capabilities in the platform. These capabilities include, but are not limited to, integrating the universal armament interface (UAI) with the most recent version of precision guided munitions planning software (PGMPS) to give the platform the ability to plan missions for any type of network enabled weapon (NEW). It will also provide for UAI compliance with the small diameter bomb (SDB; GBU-39) and the laser joint direct attack munition (LJDAM; GBU-54). The modernization effort will also provide for the use of the advanced identification friend or foe (AIFF) Mode 5 capability in the F-16 Blk 40/50. AIFF will allow use of enhanced authentication and verification of friendly signals, through the incorporation of cryptographically secured signals. It will also introduce Automatic Dependent Surveillance-Broadcast (ADS-B) technology and facilitate compliance with standards for the Next Generation Air Transportation System (NextGen). The development effort will also migrate the F-16 Block 40/50 MPE to the Windows 7 operating environment

4) F-22 Modernization: F-22 OFP-driven enhancements include, but are not limited to the addition of improved capabilities for the AIM-9X and AIM-120D, the incorporation of additional electronic protection tasks, the small diameter bomb target list manager, combat identification improvements, installation of the auto ground collision avoidance system, and incorporation of the synthetic aperture radar planning tool. Additionally, other new and emerging OFP-generated requirements will be addressed as identified by the operational user(s). Other common component updates will also be completed as required.

5) B-1 Modernization: The B-1 Modernization program includes OFP-driven software updates for Releases 7.0, 8.0, and 9.0. It will incrementally update the platform MPE and provide for integration with the Reliability and Maintainability Improvement Program (RMIP)/Inertial Navigation System Replacement (INSR), Laptop

Computer Targeting Pod Phase 2 (LCTP), Integrated Battle Station elements (including Fully Integrated Data Link/Visual Situation Display Upgrade (VSDU)), Central Integrated Test System Upgrade (CITS), and related follow on enhancements. Additionally it will migrate the B-1 MPE to the Windows 7 operating system and convert the B-1 Unit Planning Component (UPC) Visual Basic (VB) code to C# .NET.

6) A-10 Modernization: The A-10 effort will continue to support aircraft OFP-driven capability enhancement for Suite 7B and Suite 8. Suite 7B capabilities include, but are not limited to, JPEG 2000 Maps, Situational Awareness Data Link (SADL) Crypto Upgrade, Electronic Warfare Threat Table Correlation, pre-planning combat search and rescue parameters and helmet mounted cueing system updates. Suite 8 capabilities include, but are not limited to, the addition of Mode 5 IFF, Combat Survivor Evader Locator (CSEL), Laser JDAM (Joint Direct Attack Munition), AGM-65L (Laser Code Entry), advanced targeting pod mission planning settings, and combat search and rescue post mission enhancements. The modernization effort will also migrate the A-10 Mission Planning Environment (MPE) to the Windows 7 operating system and the current version of the MPS framework.

c. MAF MPE Modernization: This effort modifies the common MAF MPE developed and deployed during previous mission planning increments. The modernization activities will provide new and improved mission planning capabilities for the MAF fleet as required to meet evolving OFP, fuel efficiency, and global planning netcentric requirements such as avionics upgrades, communication systems, interfaces with command and control systems, new chute types, etc. for various MAF platforms. The MPE updates under the MAF Modernization effort include but are not limited to those for Air Mobility Command--C-5, C-17, C-27, C-130s (multiple variants), KC-10, KC-46, and KC-135 and Special Mission Air Combat Command--E-3, E-8, E-4, HH-60, and RC-135. MAF modernization will also address required improvements to and integration of MAF related MPE CCs, including the Communications, Navigation Surveillance/Air Traffic Management (CNS/ATM) CC, Aeronautical Advisory and Notices to Airmen Tool (AANT), and Air Refueling Tool (ART) CC, etc. This effort also provides the capability to use the new Digital Aeronautical Information File (DAFIF) web services-based data structure being produced by NGA in this timeframe.

1) ACC Special Missions Modernization: The ACC Special Mission Modernization Program includes development and testing of mission planning software for the E-3/E-8 (v2.0, 3.0, and 3.1), RC-135 (v3.0), and EC-130 (v1.0) platforms. The main purpose of the E-3/E-8 v2.0 software is to provide Windows 7 capability to maintain SDC compliance. The purpose of the E-3/E-8 v3.0 development effort is to add requested enhancements, while v3.1 will deliver software that is fully compatible with the E-3 DRAGON avionics upgrade, including CNS/ATM certification. RC-135 v3.0 will include compatibility with potential aircraft avionics upgrades and maintain SDC and Windows compliance. EC-130 v1.0 will be the platform's first release on the JMPS software. Work will also commence on the Phase 2 program for these aircraft.

2) MAF MPS Modernization (AMC Transition): This effort modifies the common MAF MPE developed and deployed during previous mission planning increments. It will provide new and improved mission planning capabilities for the MAF fleet (e.g. C-5, C-130, KC-10, etc.) as required to meet OFP, fuel efficiency, and global planning net-centric requirements. It includes enhanced capabilities to accommodate avionics upgrades, improved communications systems, interfaces with command and control systems, new chutes, etc. for various MAF platforms. Development efforts also include integrating improvements to MAF related Common Components (CCs). Examples of these CCs include the Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) CC, Consolidated Airdrop Tool (CAT), Aeronautical Advisory and Notices to Airmen Tool (AANT), and Air Refueling Tool (ART). This effort also provides the capability to use the new Digital Aeronautical Information File (DAFIF) services-based data structure being produced by NGA.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 675380: *Mission Planning Systems (MPS) Modernization*

d. Mobility Air Force Automated Flight Planning Service (MAFPS): This effort includes development of a centralized/net-centric global mobility flight planning capability, which will provide significant fuel savings through automated flight route, airspeed, and altitude optimization utilizing aircraft performance, air traffic management, weather, and other data.

e. Test, Training and Certification: Continues all MPS-related integration, test, and certification activities for all CAF and MAF platforms.

f. Program Support: Continues all program office management operations and support activities to ensure the timely delivery of mission planning systems to the warfighter.

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

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: F-15 Modernization	9.407	10.295	6.762
Description: Continues the modernization of previously fielded F-15 MPEs to enable efficient use of new and improved capabilities being developed in the OFPs. ***FY 2012 Accomplishments:*** Completed testing and fielding of v3.0, which improves Digital Transfer Device performance and Weapons updates for new features, and v3.1, which adds the Image Capture Tool & LOS Planning Tool, changes to Common Components, and Updates to support Radar Modernization. Started development of v3.2, which integrates the Small Diameter Bomb II including Network Enable Weapons support elements, and ACC driven enhancements to planning tools. Starting development of v4.0, which integrates B61 Life Extension Program support, weapons updates, and expansion of Link-16 message sets. ***FY 2013 Plans:*** Continue development of v3.2 and v4.0, which include B61-LEP and additional OFP requirements. ***FY 2014 Plans:*** Will complete development and testing (DT/OT) of SDB II improvements. Will continue development of radar and other weapon updates (e.g. B61 LEP, key data loading). Will initiate development of OFP-driven updates for F-15 Suite 9.			
Title: F-16 Block 30 Modernization	7.276	4.973	2.881
Description: Continues the modernization of previously fielded F-16 Block 30 MPEs to enable efficient use of new and improved capabilities being developed in the OFPs. ***FY 2012 Accomplishments:***			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Completed development, flight test release and formal qualification testing of the SCU8 MPE, which adds Helmet Mounted Integrated Targeting (HMIT), Small Diameter Bomb (SDB), and the AIM-120D missile variant. Completed initial design activities for SCU9, which finishes HMIT integration, support of Threat Symbology/Correlation (TS/C) File import, and the addition of Laser JDAM. ***FY 2013 Plans:*** Complete software development/testing to migrate F-16 SCU8 to Windows 7 operating environment. Initiate development of F-16 SCU9 updates to incorporate Laser JDAM, threat symbology/correlation, and other capabilities. Initiate requirements planning and definitization for F-16 SCU10 updates. ***FY 2014 Plans:*** Will complete development and testing of F-16 SCU9 updates (e.g. Laser JDAM, threat symbology/correlation). Will initiate requirements definitization/planning and initial design activities for F-16 SCU10 updates.			
Title: F-16 Block 40/50 Modernization ***Description:*** Continues the modernization of previously fielded F-16 Block 40/50 MPEs to enable efficient use of new and improved capabilities being developed in the OFPs. ***FY 2012 Accomplishments:*** Completed the development of M6.1/M6.1+, which includes the Universal Armament Interface (UAI), Network Enabled Weapons (NEW), and Advanced Identification Friend or Foe (AIFF) Mode 5. Begins M7.1+ development. ***FY 2013 Plans:*** Continues the development of M6.5/M6.5+, which implements UAI Mission Planning 1 (MP1) completion, Weapons Data Link, and Common Weapons Employment Zone (CWEZ) Updates, will commence in support of that OFP. M7.1+ will continue development throughout FY13 and will include Mission Plannable Declutter, Pattern Management for UAI, and CWEZ. ***FY 2014 Plans:*** Will near completion of development of M6.5/M6.5+. The M7.1+ will continue development throughout FY14. Capabilities include, but are not limited to, UAI MP2 Completion, Weapons Data Link, and Common Weapons Employment Zone updates.	5.818	6.221	5.151
Title: F-22 Modernization ***Description:*** Continues the modernization of previously fielded F-22 MPEs to enable efficient use of new and improved capabilities being developed in the OFPs. ***FY 2012 Accomplishments:***	4.085	6.305	6.236

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Started F-22 JMPS modernization effort with start of v13.0 development. Version 13.0 adds the AIM-9X/AIM-120D capabilities, Electronic Protection Tasks, and the SDB Target List Manager. ***FY 2013 Plans:*** Initiate MPE integration and transition to Framework 1.5.1.x. Conduct Preliminary Design Reviews and developer evaluations in support of v13.0 development and user enhancements to tools, Framework, and common component updates. Implement correction of v12.0 deficiencies identified during Government testing. ***FY 2014 Plans:*** Will continue development of v13.0. Capabilities for v13.0 include, but are not limited to, addition of AIM-9X and AIM-120D, incorporation of additional Electronic Protection Tasks, Small Diameter Bomb Target List Manager, Combat Identification improvements, and installation of Auto Ground Collision Avoidance System and the Synthetic Aperture Radar Planning Tool.			
Title: A-10 Modernization ***Description:*** Continues the modernization of previously fielded A-10 MPEs to enable efficient use of new and improved capabilities being developed in the OFPs. ***FY 2012 Accomplishments:*** Continued development and evaluation of A-10 Suite 7B, which includes JPEG 2000 Maps, upgrades Situational Awareness Data Link (SADL) Crypto, and implements Electronic Warfare Threat Table Correlation, pre-planning Combat Search and Rescue parameters and Helmet Mounted Cueing System updates. Completed A-10 Suite 7B development and operational testing (DT/OT). ***FY 2013 Plans:*** Continue A-10 Suite 8 development. Capabilities include, but are not limited to, the addition of Mode 5 IFF, CSEL (Combat Survivor Evader Locator), Laser JDAM (Joint Direct Attack Munition), AGM-65L (Laser Code Entry), Advanced Targeting Pod Mission Planning Settings, and CSAR Post Mission Enhancements. ***FY 2014 Plans:*** Will complete A-10 Suite 8 DT/OT. Will initiate initial design reviews for A-10 Suite 9.	1.541	1.599	0.697
Title: B-1 Modernization ***Description:*** Continues the modernization of previously fielded B-1 MPEs to enable efficient use of new and improved capabilities being developed in the OFPs. ***FY 2012 Accomplishments:***	8.803	8.837	5.573

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continued development of B-1 Release 7.0 (which provides mission planning collaboration capability, migration to Windows 7, conversion of B-1 UPC Visual Basic code to C-Sharp, Merge RMIP/INSR and LCTP Phase 2) will support Software Block (SB) 15 and 16 requirements. ***FY 2013 Plans:*** Completes B-1 Release 7.0 FQT and associated activities to field for support of SB16. Conducting initial design reviews and Full Qualification Testing (FQT) for Rel 8.0 (which will update de-clutter configuration tool and defensive threat rings) to support SB 16A requirements. ***FY 2014 Plans:*** Will complete operational test (OT) and field Release 8.0. Will conduct initial design reviews for Rel 9.0 which will update FIDL/ VSDU displays and provide for the initialization of ARC 210 radio with Beyond Line Of Site (BLOS) capabilities to support SB 17 requirements.			
Title: MAF MPS Modernization (AMC Transition) ***Description:*** Efforts include the start and continuation of activities for the modernization of the MAF MPE to include C-5, C-17, C-130s, C-27, KC-10, KC-135, and KC-46 platforms. ***FY 2013 Plans:*** Conduct development and test activities of Framework 1.5.300 to support MAF MPS modernization requirements. Ensure legacy capabililties for various tools are supported in the JMPS program. Such tools include, but are not limited to, the Drop Zone/ Landing Zone (DZLZ) database manager and Enterprise Administration and Synchronization Environment (EASE). ***FY 2014 Plans:*** Efforts will include the following: Development and integration of Global Mobility JMPS UPC/MPE releases; development, integration, and test of the Air Refueling Tool CC.	0.000	4.157	14.694
Title: ACC Special Missions Modernization ***Description:*** Continues the modernization of previously fielded mission planning software environments for the E-3, E-8, E-4, EC-130, and RC-135. ***FY 2012 Accomplishments:*** Continued development of E-3/E-8 MPE to transition software to latest SDC/Win 7 configuration. ***FY 2013 Plans:***	6.636	9.092	5.622

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Development of software for E-3/E-8, RC-135, and EC-130H to ensure SDC currency and upgrade capabilities based on aircraft platform OFP requirements. These include the Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) CC, cockpit upgrades, communication presets, mission/navagation database format changes, and FPM/TOLD updates. ***FY 2014 Plans:*** Will develop software for E-3/E-8, RC-135, and EC-130H to ensure SDC currency and to upgrade capabilities based on aircraft platform OFP requirements. These include the Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) CC, cockpit upgrades, communication presets, mission/navagation database format changes, and FPM/TOLD updates. These software updates will include compatibility with potential aircraft avionics upgrades and maintain SDC and Windows compliance.			
Title: MAF Automated Flight Planning Service (MAFPS) ***Description:*** Develops a centralized/net-centric global mobility flight planning capability, which will provide significant fuel savings through automated flight route, airspeed, and altitude optimization utilizing aircraft performance, air traffic management, weather, and other data. ***FY 2014 Plans:*** Will continue ongoing development efforts to update MAF MPE. Includes integration with MAF related CCs such as the Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) CC, Aeronautical Advisory and Notices to Airmen Tool (AANT), and Air Refueling Tool (ART) CC. Prior to FY2014, MAFPS efforts were funded solely by AMC.	0.000	0.000	4.200
Title: Program Management Administration ***Description:*** Ongoing program support to the various efforts within Project 675380, MPS Modernization. Prior to FY12, all Mission Planning Systems (MPS) program support resided in Project 675838, MPS Development. ***FY 2012 Accomplishments:*** Provided program support for the various efforts within Project 675380, MPS Modernization. ***FY 2013 Plans:*** Continues ongoing program support to various efforts within Project 675380, MPS Modernization. ***FY 2014 Plans:*** Will continue ongoing program support to the various efforts within Project 675380, MPS Modernization.	6.082	5.947	7.213
Accomplishments/Planned Programs Subtotals	49.648	57.426	59.029

Exhibit R-2A, RDT&E Project Justification: PB 2014 Air Force		DATE: April 2013
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA07: Line Item # 833170: *Mission Planning Systems*	8.820	6.808	5.678		5.678	8.011	8.761	9.127	9.291	Continuing	Continuing

Remarks

D. Acquisition Strategy

Mission Planning Systems (MPS) Modernization 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.

E. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Mission Planning Enterprise Contract II	C/Various	Various:Various,	-	20.992	Nov 2011	21.473	Nov 2012	22.300	Nov 2013	-		22.300	Continuing	Continuing	TBD
F-16 Modernization	PO	Organic:Hill AFB, UT	-	1.726	Nov 2011	6.769	Nov 2012	4.108	Nov 2013	-		4.108	Continuing	Continuing	
A-10 Modernization	PO	Organic:Hill AFB, UT	-	0.600	Nov 2011	1.042	Nov 2012	0.380	Nov 2013	-		0.380	Continuing	Continuing	TBD
EC-130H Modernization	PO	Organic:Robins AFB, GA	-	1.554	Nov 2011	1.290	Nov 2012	1.470	Nov 2013	-		1.470	Continuing	Continuing	TBD
Systems Engineering and Integration	C/CPAF	SAIC:McLean, VA	-	6.743	Nov 2011	5.593	Nov 2012	7.784	Nov 2013	-		7.784	Continuing	Continuing	TBD
Framework	C/FPIF	Northrop Grumman:Herndon, VA	-	1.133	Nov 2011	5.474	Nov 2012	1.603	Nov 2013	-		1.603	Continuing	Continuing	TBD
Common Components	C/Various	Various:Various,	-	5.561	Nov 2011	5.444	Nov 2012	8.781	Nov 2013	-		8.781	Continuing	Continuing	TBD
		Subtotal	0.000	38.309		47.085		46.426		0.000		46.426			

Remarks

Systems Engineering and Integration, Framework, and Common Components costs were programmed in project 673858, MPS Development, prior to FY12.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Engineering Institute (SEI)	C/T&M	SEI:Pittsburgh, PA	-	0.191	Nov 2011	0.130	Nov 2012	0.147	Nov 2013	-		0.147	Continuing	Continuing	TBD
Tecolote (Cost Estimating)	C/T&M	Tecolote Inc:Bedford, MA	-	0.275	Nov 2011	0.264	Nov 2012	0.300	Nov 2013	-		0.300	Continuing	Continuing	TBD
		Subtotal	0.000	0.466		0.394		0.447		0.000		0.447			

Remarks

Support costs were programmed in project 673858, MPS Development, prior to FY12.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Responsible Test Organization (RTO)	PO	46TW:Eglin AFB, FL	-	2.919	Nov 2011	2.329	Nov 2012	2.856	Nov 2013	-		2.856	Continuing	Continuing	TBD
Certification and Accreditation	MIPR	JITC:Indian Head, MD	-	0.128	Jan 2012	0.088	Jan 2013	0.109	Jan 2014	-		0.109	Continuing	Continuing	TBD
Type I Training	C/FP	Ogden Air Logistics Center:Hill AFB, UT	-	2.015	Nov 2011	1.230	Nov 2012	1.509	Nov 2013	-		1.509	Continuing	Continuing	TBD
Field Representative Hardware	C/Various	Various:Various,	-	0.195	Nov 2011	0.747	Nov 2012	0.916	Nov 2013	-		0.916	Continuing	Continuing	TBD
		Subtotal	0.000	5.257		4.394		5.390		0.000		5.390			

Remarks

Test and Evaluation costs were programmed in project 673858, MPS Development, prior to FY12.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC Support	RO	MITRE Corp:Bedford, MA	-	3.659	Oct 2011	2.662	Oct 2012	3.017	Oct 2013	-		3.017	Continuing	Continuing	TBD
Program Management Administration	Various	Various:Various,	-	1.957	Nov 2011	2.891	Nov 2012	3.749	Nov 2013	-		3.749	Continuing	Continuing	TBD
		Subtotal	0.000	5.616		5.553		6.766		0.000		6.766			

Remarks

Management Services costs were programmed in project 673858, MPS Development, prior to FY12.

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	49.648		57.426		59.029		0.000		59.029			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 675380: *Mission Planning Systems (MPS) Modernization*

Mission Planning Systems (MPS) Modernization Project 675380 (page 1 of 2)

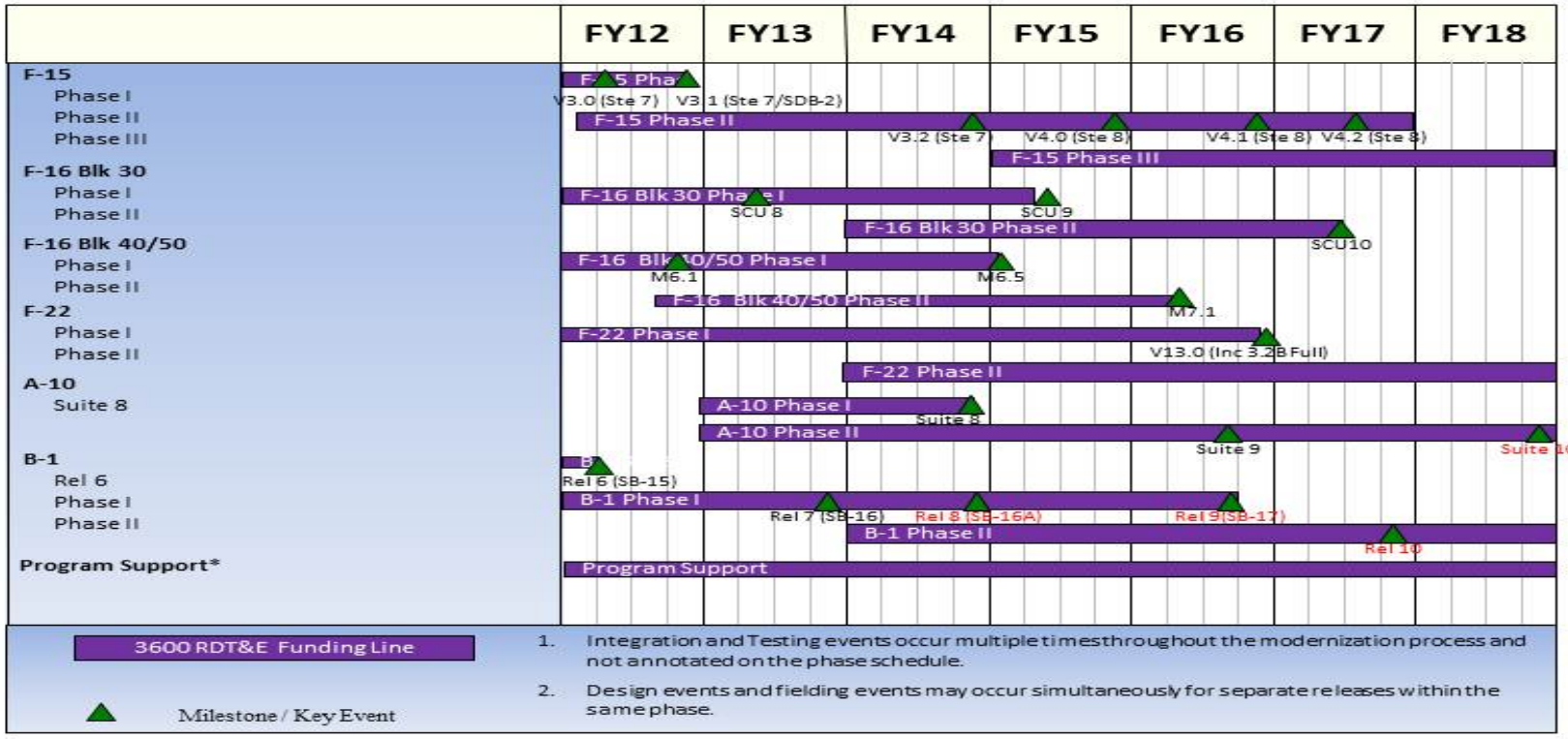


Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208006F: *Mission Planning Systems*	PROJECT 675380: *Mission Planning Systems (MPS) Modernization*

Mission Planning Systems (MPS) Modernization
Project 675380
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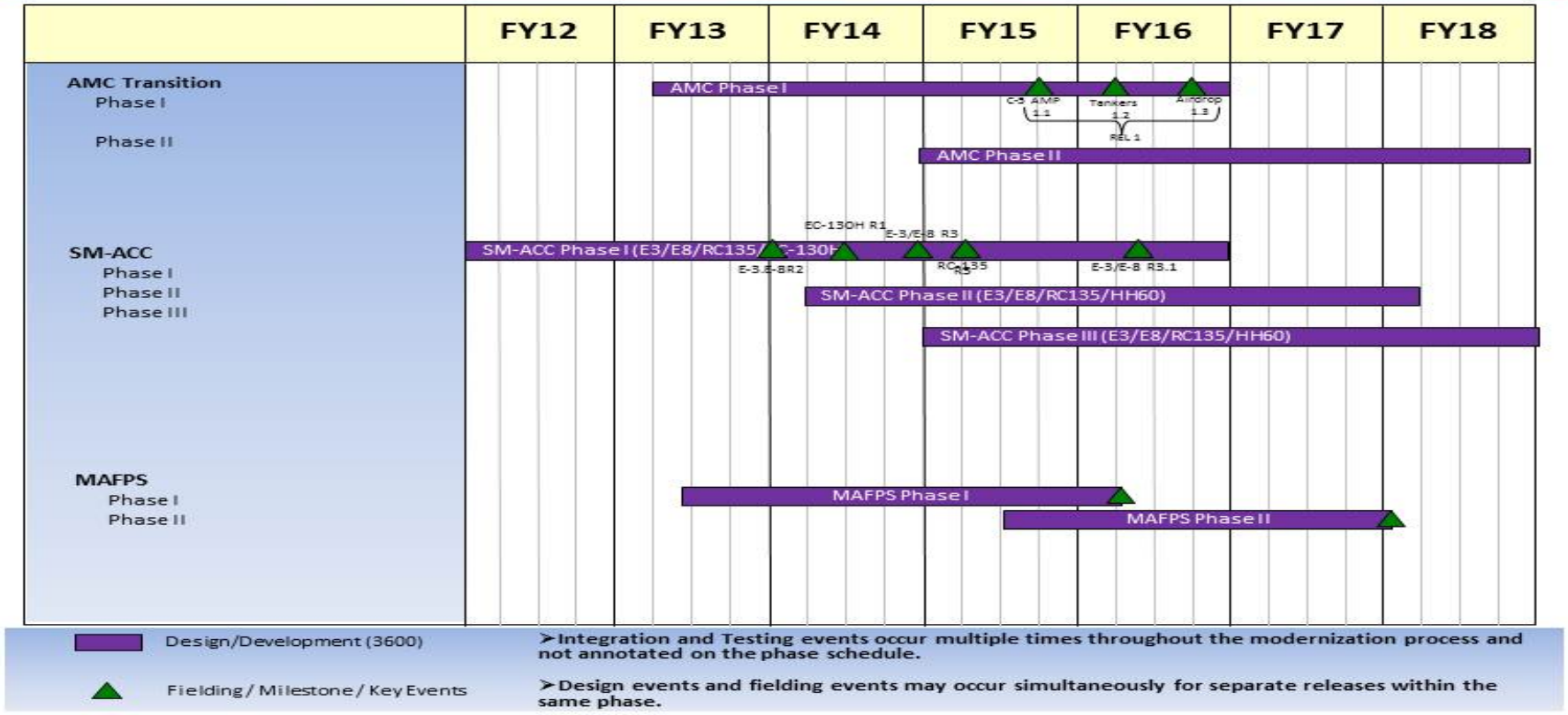


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0208006F: *Mission Planning Systems*	**PROJECT** 675380: *Mission Planning Systems (MPS) Modernization*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
F-15 v3.0 Fielding	2	2012	2	2012
F-15 v3.1 Fielding	4	2012	4	2012
F-16 Blk 30 SCU 8 Fielding	2	2013	2	2013
F-16 Blk 30 SCU 9 Fielding	2	2015	2	2015
F-16 Blk 30 SCU 10 Fielding	2	2017	2	2017
F-16 Blk 40/50 M6.1 Fielding	4	2012	4	2012
F-16 Blk 40/50 M6.5 Fielding	1	2015	1	2015
F-16 Blk 40/50 M7.1 Fielding	2	2016	2	2016
F-22 v13.0 Fielding	4	2016	4	2016
A-10 Suite 8 Fielding	4	2014	4	2014
A-10 Suite 9 Fielding	3	2016	3	2016
A-10 Suite 10 Fielding	4	2018	4	2018
B-1 Release 6 Fielding	2	2012	2	2012
B-1 Release 7 Fielding	3	2013	3	2013
B-1 Release 8 Fielding	4	2014	4	2014
B-1 Release 9 Fielding	3	2016	3	2016
B-1 Release 10 Fielding	4	2017	4	2017
AMC Modernization C-5 AMP Release 1 Fielding	3	2015	3	2015
AMC Modernization Tankers Release 1 Fielding	1	2016	1	2016
AMC Modernization Airdrop Release 1 Fielding	3	2016	3	2016
SM-ACC E-3 / E-8 Release 2 Fielding	1	2014	1	2014
SM-ACC E-3 / E-8 Release 3 Fielding	4	2014	4	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
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	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
SM-ACC RC-135 Release 3 Fielding	2	2015	2	2015
SM-ACC E-3 / E-8 Release 3.1 Fielding	2	2016	2	2016
SM-ACC EC-130H Release 1 Fielding	3	2014	3	2014
MAFPS Release 1 Fielding	2	2016	2	2016
MAFPS Release 2 Fielding	1	2018	1	2018
Program Support	1	2012	4	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0208021F: *Information Warfare Support*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	2.105	7.159	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
670374: *TECH and SPT*	-	2.105	7.159	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY2014, 670374, Tech & Spt, efforts transferred to PE 0305221F, Network Centric Collaborative Targeting, 675197, NCCT Core Technology, in order to better support and align with the Suter Program System (SPS).

A. Mission Description and Budget Item Justification

This Program Element funds research and development of strategy, assessment, and information operations (IO) capabilities required in support of Air Operation Center (AOC) command and control processes and supported combatant commanders. Programs currently supported include the Information Warfare Planning Capability (IWPC) - the Joint Forces Air Component Commander's (JFACC) system of record for strategy, operational assessment and network mapping/network nodal analysis. IWPC is a full-spectrum, offensive and defensive, planning capability. IWPC is an AOC weapon system component which enables operators to develop courses of action for the JFACC, create Air Operations Directives (AODs) and Joint Air Operations 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 and upgrade, testing and evaluation, and installation and training 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 Command and Control (C2) systems such as the Theater Battle Management Core System (TBMCS), Joint Targeting Toolbox, and other AOC tools. This PE funds development and continued research to identify existing military and commercial efforts which can satisfy unfulfilled operational requirements for IO analysis, targeting, planning, and integration. Activities also include studies and analysis to support both current program planning and execution and future program planning.

FY13 funding also supports the National Technical Nuclear Forensics (NTNF) program. The NTNF program provides the US Government's framework to identify the source of a nuclear detonation in US or allied territory. AF contributions to this effort, include, but are not limited to collection of airborne particulate material following an incident. Currently, collection would be accomplished via a WC-135 Constant Phoenix aircraft, which is a limited availability asset (only one primary aircraft in the fleet). The Defense Threat Reduction Agency (DTRA) is developing a harvester pod with the potential of being mounted on an aircraft that will provide additional capacity to conduct this mission. Funding will provide integration and testing of that pod.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0208021F: *Information Warfare Support*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	2.314	7.159	0.000	-	0.000
Current President's Budget	2.105	7.159	0.000	-	0.000
Total Adjustments	-0.209	0.000	0.000	-	0.000
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	-0.145	0.000			
• SBIR/STTR Transfer	-0.064	0.000			
• Other Adjustments	0.000	0.000	0.000	-	0.000

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: IWPC	2.105	2.205	0.000
Description: Information Warfare Planning Capability (IWPC) Installation/Training/Upgrades ***FY 2012 Accomplishments:*** Funding provided maintenance that allowed IWPC program to meet continued warfighter requirements. This project also provided training and upgraded the IWPC suite of planning and decision support tools. ***FY 2013 Plans:*** Funding continues development of IWPC capabilities to meet continued warfighter requirements.			
Title: NTNF	0.000	4.954	0.000
Description: Funding provides integration and testing of collection pod (harvester pod) on the C-130J and MQ-9 platforms. It also provides support for Concept of Operations (CONOPS) and Tactics, Techniques, and Procedures (TTP) development. ***FY 2013 Plans:*** This funding supports the NTNF program. The Defense Threat Reduction Agency (DTRA) will develop a pod (Harvester pod)capable of collecting airborne particulate material following a nuclear detonation. Funding will provide the integration and testing of the pod.			
Accomplishments/Planned Programs Subtotals	2.105	7.159	0.000

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208021F: *Information Warfare Support*

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. Acquisition Strategy

Beginning in FY12, the majority of IWPC funding was used to support a new network mapping application to improve C4I nodal analysis and the integration of kinetic and non-kinetic capabilities. In FY14, IWPC program funds are being redirected to Big Safari (645 AESG) for continued support of this improved capability.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208021F: *Information Warfare Support*	PROJECT 670374: *TECH and SPT*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
IWPC Prime Contract	SS/FFP	General Dynamics:San Antonio, TX	-	1.194	Oct 2011	1.089	Oct 2012	0.000		-		0.000	Continuing	Continuing	TBD
NTNF	TBD	DTRA:,	-	0.000		4.954		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	1.194		6.043		0.000		0.000		0.000			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support	Various	Various:San Antonio, TX	-	0.375	Oct 2011	0.379	Oct 2012	0.000		-		0.000	Continuing	Continuing	
Congressional Add	Various	Various:Lackland AFB, TX	-	0.000		0.000		0.000		-		0.000	0.000	0.000	
		Subtotal	0.000	0.375		0.379		0.000		0.000		0.000			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
IWPC 46 Test Support	C/CPAF	46th TS:Eglin AFB, FL	-	0.100	Feb 2012	0.200	Oct 2012	0.000		-		0.000	Continuing	Continuing	TBD
IWPC 605th Test Support	C/CPAF	605th:Eglin AFB, FL	-	0.100	Oct 2011	0.067	Oct 2012	0.000		-		0.000	Continuing	Continuing	TBD
NTNF Test Support	TBD	TBD:TBD,	-	0.000		0.000		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.200		0.267		0.000		0.000		0.000			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208021F: *Information Warfare Support*	PROJECT 670374: *TECH and SPT*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Acquisition Support	C/CPAF	Various:San Antonio, TX	-	0.336	Nov 2011	0.470	Nov 2012	0.000		-		0.000	Continuing	Continuing	TBD
		Subtotal	0.000	0.336		0.470		0.000		0.000		0.000			

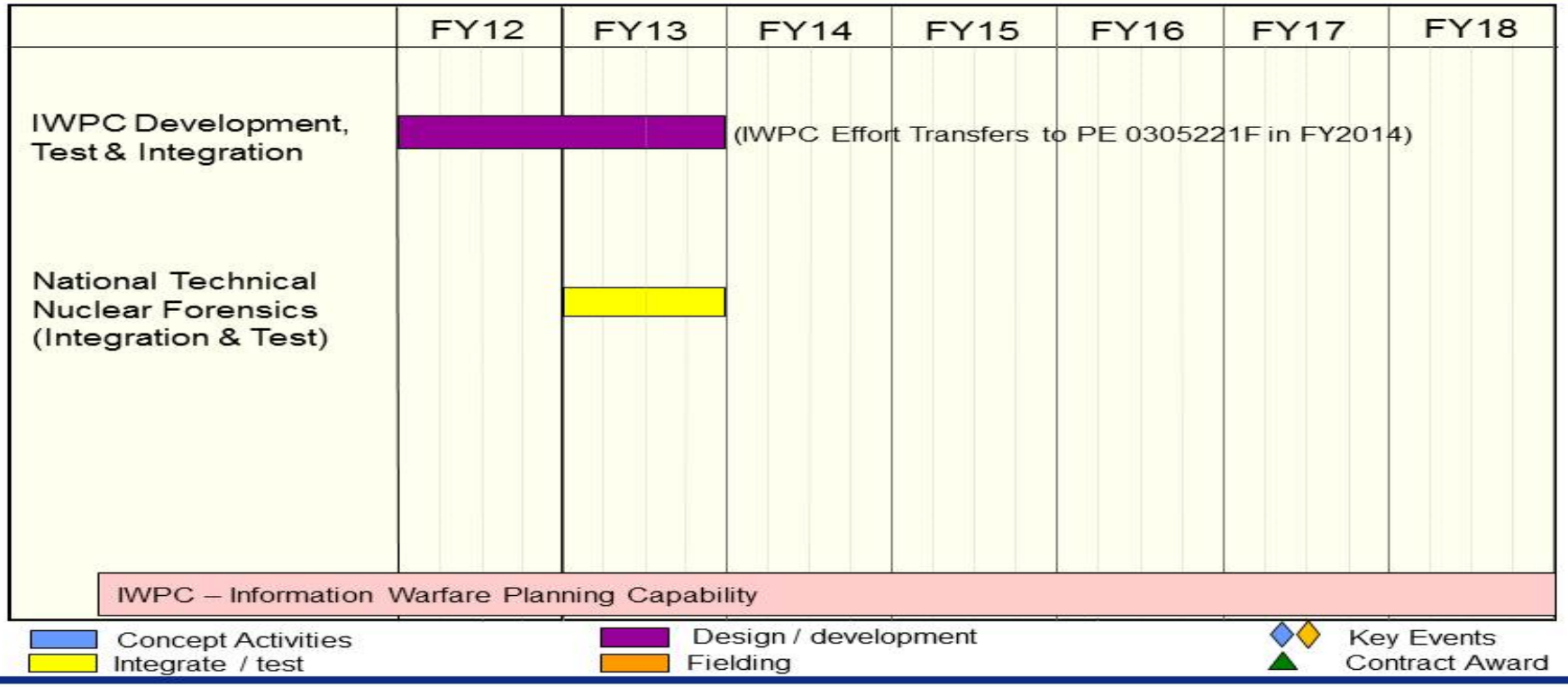
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	2.105		7.159		0.000		0.000		0.000			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208021F: *Information Warfare Support*	PROJECT 670374: *TECH and SPT*

U.S. AIR FORCE

IWPC Program Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208021F: *Information Warfare Support*	PROJECT 670374: *TECH and SPT*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
IWPC Development Test & Integration	1	2012	4	2013
NTNF Program Integration & Test	1	2013	4	2013

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0208059F: *CYBER COMMAND ACTIVITIES*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.680	66.888	68.099	-	68.099	67.893	74.643	72.420	73.724	Continuing	Continuing
676002: *CYBER SYSTEMS MODERNIZATION*	-	0.680	66.888	68.099	-	68.099	67.893	74.643	72.420	73.724	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY 2013, 676002, Cyber Systems Modernization, efforts were transferred from PE 0307141F, NASS, IO Tech Integration & Tool Dev, 674871, Information Operations Technology, in order to align all CYBERCOM funding into one PE.

A. Mission Description and Budget Item Justification

Mission: The US Cyber Command (USCYBERCOM) responsibilities include planning, integrating, and coordinating cyberspace capabilities; operational and tactical level planning and day-to-day employment of assigned and attached Offensive Cyber Operations (OCO) forces; integration of OCO forces with Defensive Cyber Operations (DCO) forces and planning and coordination of cyber capabilities that have trans regional effects or that directly support national objectives; providing OCO/DCO support for assigned missions and OCO/DCO planning and integration in support of other Combatant Commanders (CCMD) as directed. Also coordinating Computer Network Operations (CNO) capabilities in order to achieve national security objectives. The capabilities directly support execution of offensive cyber operations against adversary networks, directly support Combatant Commands (COCOMs), and coordinate with defensive operations to defend and protect the Department of Defense (DoD) network. USCYBERCOM's operations provide mission assurance for US Forces while denying the same to national adversaries.

USCYBERCOM will develop defensive cyber strategies and capabilities to ensure force flow during campaign operations and to expand DoD Offensive Cyber Operations (OCO) capabilities. USCYBERCOM will research, develop, and test technologies and capabilities that allow Cyber forces to conduct future offensive and defensive cyber operations in support of CCMDs to include title 10 infrastructures, and cross cutting technologies. Activities also include studies and analysis to support current program planning and execution. USCYBERCOM will also provide the resources for other COCOMs to conduct CNO Offensive Cyber Operations/ Defensive Cyber Operations (OCO/DCO) planning. An in-house development team (Special Projects Vulnerability Assessment Team) will perform research, small scale prototyping and integration as required to support the mission. Further detail is classified and can be provided upon request. Additionally, this team will re-tool existing offensive and defensive capabilities to satisfy immediate USCYBERCOM operational needs. Finally, USCYBERCOM will delegate resources to the Army, Navy, and Air Force Cyber Service Components to develop deconflicted offensive cyber capabilities in accordance with USCYBERCOM Operational Directive 12-001.

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

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0208059F: *CYBER COMMAND ACTIVITIES*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.702	66.888	68.400	-	68.400
Current President's Budget	0.680	66.888	68.099	-	68.099
Total Adjustments	-0.022	0.000	-0.301	-	-0.301
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.022	0.000			
• Other Adjustments	0.000	0.000	-0.301	-	-0.301

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Cyber Command Activities	0.680	23.988	23.299

Description: USCYBERCOM will fund research, development, testing and systems modifications of the technologies and capabilities that allow USCYBERCOM to plan, facilitate coordination and integration, deconflict and synchronize DoD cyberspace activities and capabilities. Activities also include studies and analysis to support current program planning and execution.

FY 2012 Accomplishments:
Funding provided tool development through technology partnership with Service Cyber Commands enabling COCOMs to confidently, legally, safely, and securely apply OCO capabilities.

FY 2013 Plans:
Conducted prototyping, and testing of various tools critical to successful cyber operations to include research, studies, and analysis of cyberspace operational methodologies and tactics. Accomplishments include funding to field 4 cyber capability projects across DoD (AFCYBER, MARFORCYBER, and ARCYBER). 47 Technical Assurance (TA)Evaluated Level of Assurance (ELA) Evaluations were conducted. Including 19 Quick Response Assessments to support J3 10 Developer Consulting Support Efforts that support the Services (Army, Navy) learning how to prepare for ELA evaluations 11 Capabilities were developed to support 9 J3 efforts

Continue USCYBERCOM RDT&E modification, studies and analyis activites in partnership with Service Cyber Commands.

FY 2014 Plans:

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0208059F: *CYBER COMMAND ACTIVITIES*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Supports development, prototyping, and testing of various tools critical to successful cyber operations to include research, studies, and analysis of cyberspace operational obstacles. Continues USCYBERCOM RDT&E, modifications, studies and analysis activities in partnership with Service Cyber Commands.			
Title: Defensive / Offensive Cyber Capability Development ***Description:*** Initiate development of Offensive CYBER Operations capability development to support COCOM mission needs, enabling COCOMs to confidently, legally, safely, and securely apply OCO capabilities. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** Funding supports development of OCO/DCO tools to support CCMD cyberspace requirements to include PACOM and or CENTCOM specific capabilities. Continue OCO capability development in partnership with Service Cyber Commands and mission partners. ***FY 2014 Plans:*** Funding supports development of OCO/DCO tools to support CCMD cyberspace requirements to include PACOM and or CENTCOM specific capabilities. Continues OCO capability development in partnership with Service Cyber Commands and mission partners.	0.000	40.000	40.000
Title: CYBER Situational Awareness ***Description:*** Architecture and data strategy development based on Analysis of Alternatives to develop Common Operating Pictures for cyber situational awareness for the services and CCMDs. FY12 was budgeted under the IOT Program Group (0307141F) and will transfer to CYBERCOM PE 28059F in FY13. ***FY 2012 Accomplishments:*** N/A ***FY 2013 Plans:*** Funding supports engineering, data strategy management and SME support to Estimate of Alternatives (EOA)	0.000	2.900	4.800

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0208059F: *CYBER COMMAND ACTIVITIES*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Continue CYBER Situational Awareness capability development in partnership with Service Cyber Commands and mission partners. ***FY 2014 Plans:*** Supports engineering, data strategy management and SME support to Estimate of Alternatives (EOA) Continues CYBER Situational Awareness capability development in partnership with Service Cyber Commands and mission partners.			
Accomplishments/Planned Programs Subtotals	0.680	66.888	68.099

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. 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 managed by various Service Component contracting offices, COCOM contracting offices and NSA.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208059F: *CYBER COMMAND ACTIVITIES*	PROJECT 676002: *CYBER SYSTEMS MODERNIZATION*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Cyber Command Activities	Various	Service Partners:Various,	-	0.645	Nov 2011	17.472	Nov 2012	16.483	Nov 2013	-		16.483	Continuing	Continuing	TBD
Defensive / Offensive Cyber Capability Development	Various	Other partners:Various,	-	0.000	Nov 2011	40.000	Nov 2012	40.000	Nov 2013	-		40.000	Continuing	Continuing	TBD
Cyber Situational Awareness Development	Various	Other partners:Various,	-	0.000		2.900	Oct 2012	4.800	Oct 2013	-		4.800	Continuing	Continuing	TBD
		Subtotal	0.000	0.645		60.372		61.283		0.000		61.283			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA - FFRDC	C/CPAF	Various:Ft Meade, Md	-	0.035	Oct 2011	6.516	Oct 2012	6.816	Oct 2013	-		6.816	Continuing	Continuing	
		Subtotal	0.000	0.035		6.516		6.816		0.000		6.816			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208059F: *CYBER COMMAND ACTIVITIES*	PROJECT 676002: *CYBER SYSTEMS MODERNIZATION*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Remarks In FY12 this FFRDC, Program Management, Other Direct Cost, and Overhead were funded out of PE 37141F and 35193F. Both of these PEs merged in FY13 to become 28059F USCYBERCOM under one contract.															

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.680		66.888		68.099		0.000		68.099			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208059F: *CYBER COMMAND ACTIVITIES*	PROJECT 676002: *CYBER SYSTEMS MODERNIZATION*

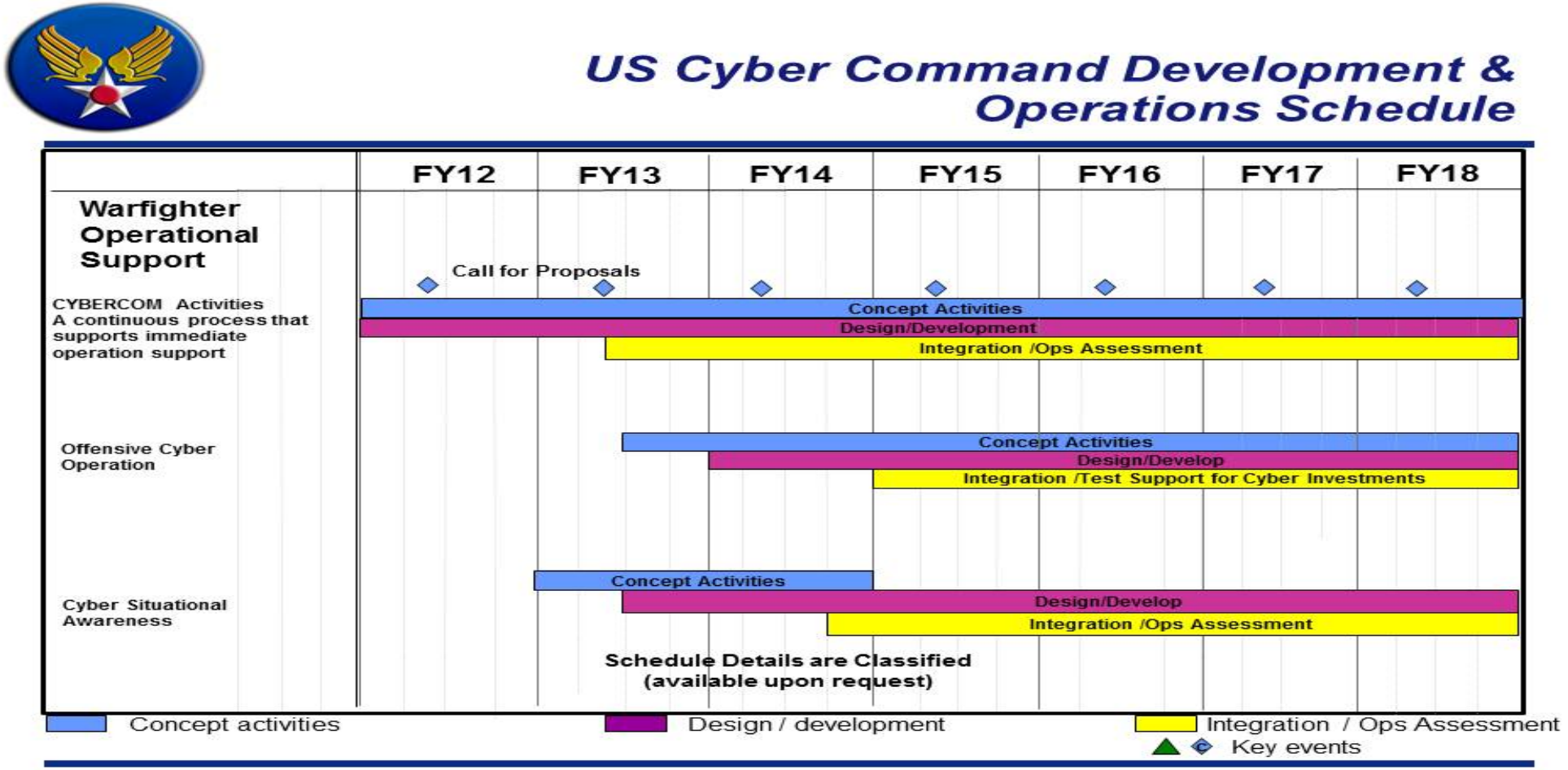


Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0208059F: *CYBER COMMAND ACTIVITIES*	**PROJECT** 676002: *CYBER SYSTEMS MODERNIZATION*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Cyber Command Activities	1	2012	4	2018
Offensive Cyber Operations	3	2013	4	2018
Cyber Situational Awareness	1	2013	4	2018

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0208087F: *AF Offensive Cyberspace Operations*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.000	0.000	14.047	-	14.047	13.521	14.121	14.367	14.626	Continuing	Continuing
670375: *Network Warfare Systems and Support*	-	0.000	0.000	14.047	-	14.047	13.521	14.121	14.367	14.626	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY2014, 670374, Tech & Spt, efforts will transfer from PE 0305887F, Electronic Combat Intel Support, to PE 0208087F, Offensive Cyber Operations, 670375, Network Warfare Systems and Support, in order to align offensive cyber programs and projects under one program element.

A. Mission Description and Budget Item Justification

This program rapidly develops operations-ready information and cyberspace superiority capabilities from laboratory, industry, and academia via studies, rapid prototyping, technology demonstrations, and other Research, Development, Testing, and Evaluation (RDT&E) efforts. This program consists of a portfolio of small programs and projects called the Offensive Cyber Product Line (OCPL). The OCPL establishes a level of effort to support a balanced and rapid acquisition of cyber operational capabilities. OCPL effectiveness comes from consciously balancing funding into four capability areas required for effective operations: Common Mission Framework (CMF), platforms, access, and capabilities. The program office provides advanced OCPL cyber warfare capabilities to the 24th Air Force in direct support of USCYBERCOM, AF major commands (MAJCOMs), unified commands, and national IO agencies. In accordance with AF Policy, the program office develops capabilities in following information and cyberspace superiority core areas: influence operations, electronic warfare operations, and network warfare operations. OCPL efforts also directly support the Joint Network Attack Initial Capabilities Document (ICD), the National Military Strategy for Cyberspace Operations (NMS-CO), the USCYBERCOM Operational Directive 12-001, and the AF Space Command (AFSPC) Offensive Cyberspace Operations System Flight Plan. Planned areas of study, prototyping, and technology demonstration will be used to provide warfighters access, platforms, Offensive Cyber Operations (OCO) production (e.g. test and budgets), infrastructure (e.g. mission planning, intelligence, Command and Control/Situational Awareness (C2SA)), and tools needed to exploit enemy networks, telephony, Integrated Air Defense Systems (IADS), electronic warfare operations, and Command and Control systems. These advancements will be used to develop and deliver cutting-edge technologies to the warfighter. This capability area utilizes cyber technology investments by the Defense Advanced Research Projects Agency (DARPA), the National Security Agency (NSA), Air Force Research Labs, and DOD national laboratories. Program activities are protected under AF Network Warfare Special Access Program(s).

This program is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to mature systems to full operational capability or sustain fielded systems.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208087F: *AF Offensive Cyberspace Operations*

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	14.047	-	14.047
Total Adjustments	0.000	0.000	14.047	-	14.047
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	14.047	-	14.047

Change Summary Explanation

In FY2014, 670374, Tech & Spt, efforts were transferred from PE 0305887F, Electronic Combat Intel Support, to PE 0208087F, 670375, Network Warfare Systems and Support, in order to align offensive cyber programs and projects under one program element.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Common Mission Framework	0.000	0.000	5.537
Description: The Common Mission Framework (CMF) is an offensive cyber operations architecture that enables mission planning, generation, synchronization, de-confliction, execution, and assessment by integrating OCPL-developed capabilities into a common framework. ***FY 2014 Plans:*** In FY14, the program office will continue to develop the CMF via necessary upgrades, modifications, equipment modernization, market research, integration, and follow-on OCO platform(s). The effort will standardize current and future cyberspace operations capabilities by designing and delivering a common user interface and reusable, modular components. This funding will also continue to provide the program office manpower required for oversight required to integrate numerous acquisition programs into the CMF architecture. These activities are protected under AF Network Warfare Special Access Programs.			
Title: Platforms	0.000	0.000	0.900
Description: The platforms capability area provides the hardware/software host for offensive cyber operations capabilities. This capability area facilitates key upgrades and modifications to the Network Attack System (NAS), the AF program of record for network attack. Additional programs under development include Enabling Common Cyberspace Operations (ECCO) and Black Cat (BC).			

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208087F: *AF Offensive Cyberspace Operations*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
FY 2014 Plans: In FY14, the program office will continue to maintain the current platforms via necessary upgrades, modifications, equipment modernization, market research, integration, and follow-on OCO platform(s). This funding will also continue to provide the program office manpower required to develop or maintain offensive cyber platforms. These activities are protected under AF Network Warfare Special Access Programs.			
Title: Access ***Description:*** Access capabilities provide operators with the means to enable offensive cyber operations. Specific details are classified and available upon request. ***FY 2014 Plans:*** In FY14, the program office will continue to maintain the current access programs via necessary upgrades, modifications, equipment modernization, market research, integration, and follow-on access programs. This funding will also continue to provide the program office manpower required to develop or maintain offensive cyber access programs. These activities are protected under AF Network Warfare Special Access Programs.	0.000	0.000	0.640
Title: Cyber Capabilities ***Description:*** The cyber capabilities area enables the cyber warfighter a set of tools to deliver desired effects to the target. Specific details are classified and available upon request. ***FY 2014 Plans:*** In FY14. the program office will continue support of anticipated CENTCOM JUON(s), CYBERCOM JUON(s), Weapons System(s) modernization, and AFSPC UON(s) and Cyber Need Forms and will continue transition of Offensive Cyber Operations technologies to meet capability gaps required by major commands, unified commands, and capabilities documents. These activities are protected under AF Network Warfare Special Access Program(s).	0.000	0.000	0.733
Title: Program Management Administration (PMA) - FFRDC ***Description:*** PMA for MITRE Corporation's Federally Funded Research and Development Center (FFRDC) provides unique engineering and in-depth technical expertise to assist in resolving near-term and far-term cyber challenges. ***FY 2014 Plans:*** FY14 funding will continue to provide program office specialized engineering/technical manpower support required for oversight of OCPL acquisition programs. These activities are protected under AF Network Warfare Special Access Program(s).	0.000	0.000	1.439
Title: Program Management Administration (PMA) - Engineering & Technical Support	0.000	0.000	1.242

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0208087F: *AF Offensive Cyberspace Operations*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: PMA for Engineering and Technical acquisition-related support to the program office (includes Systems Engineers, Logisticians, Configuration Management and Scheduler. ***FY 2014 Plans:*** FY14 funding will continue to provide program office engineering, technical, logistical, configuration management and scheduling manpower support required for oversight and management of OCPL acquisition programs/projects. These activities are protected under AF Network Warfare Special Access Program(s).			
Title: Advisory & Assistance Support (A&AS) Other Support Costs ***Description:*** Other support costs include Specialized Security and IT Support; Advisory and Assistance Support (A&AS) for acquisition and managerial program office operations; cost estimating support; facility security protection; and other miscellaneous costs (i.e., travel, supplies, facility lease, alarms, and communication lines). ***FY 2014 Plans:*** FY14 will continue to fund other support costs to include Specialized Security and IT Support, Advisory and Assistance Support (A&AS), cost estimating support, facility security protection and other miscellaneous costs (i.e., travel, supplies, facility lease, alarms and communication lines). These activities are protected under AF Network Warfare Special Access Program(s).	0.000	0.000	1.972
Title: Test & Evaluation 46TS Det 2 ***Description:*** OCPL Test and Evaluation: 46TS Det 2 and 346TS provide both developmental testing of new tool development and secure environment for such testing. ***FY 2014 Plans:*** FY14 funding will continue to provide the required developmental testing for new tool development prior to future fielding to the operational platform. This funding provides for the secure environment for such testing.	0.000	0.000	1.584
Accomplishments/Planned Programs Subtotals	0.000	0.000	14.047

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA03: 834320: *Offensive Cyber Operations*	0.000	0.000	9.890		9.890	10.606	10.527	11.029	11.252	Continuing	Continuing

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208087F: *AF Offensive Cyberspace Operations*

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPAF: BA03: 834010: *Information and Cyber Workforce Training*	0.000	0.000	1.815		1.815	1.720	1.634	1.656	1.686	Continuing	Continuing

Remarks

In FY2014, O&M funding in PE 0305887F, Information Assurance efforts transferred to PE 0208087F, Information Assurance.

E. Acquisition Strategy

The Offensive Cyberspace Operations program office will utilize Concept, Development, Risk Management, or Production and Deployment Plans as part of a phased approach to acquisition planning. All plans will contain sufficient information for the Milestone Decision Authority (MDA) to determine readiness to enter into the applicable phase of the acquisition process. Offensive Cyberspace Operations will look at existing vehicles such as Government-Wide Acquisition Contract (GWAC) vehicles (Alliant, Encore II, Solutions for Enterprise-Wide Procurement IV (SEWP IV), etc), and General Services Administration (GSA) Federal Supply Schedules. The use of multiple award vehicles will provide a wide range of commercially-available products and services that should be able to meet many requirements related to Offensive Cyberspace Operations. These multiple-award vehicles have already met the statutory requirements of the Competition in Contracting Act (CICA) and require that Offensive Cyber Operations provide a fair opportunity to all contract holders, in accordance with Federal Acquisition Regulation (FAR) 16.505, unless an exception to fair opportunity applies.

In addition, OCPL will also use Broad Agency Announcements (BAAs) which allow us to constantly accept, analyze, and acquire promising new commercial capabilities.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208087F: *AF Offensive Cyberspace Operations*	PROJECT 670375: *Network Warfare Systems and Support*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Common Mission Framework (CMF)	C/CPAF	Various:,	-	0.000		0.000		5.537	Nov 2013	-		5.537	Continuing	Continuing	
Platforms	C/Various	Various:,	-	0.000		0.000		0.900	Nov 2013	-		0.900	Continuing	Continuing	
Access	C/Various	Various:,	-	0.000		0.000		0.640	Nov 2013	-		0.640	Continuing	Continuing	
Cyber Capabilities	C/Various	Various:,	-	0.000		0.000		0.733	Nov 2013	-		0.733	Continuing	Continuing	
		Subtotal	0.000	0.000		0.000		7.810		0.000		7.810			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
46TS Det 2	MIPR	TASC:San Antonio, TX	-	0.000		0.000		1.290	Oct 2013	-		1.290	Continuing	Continuing	
346TS	MIPR	MacCauly-Brown:,	-	0.000		0.000		0.295	Mar 2014	-		0.295	Continuing	Continuing	
		Subtotal	0.000	0.000		0.000		1.585		0.000		1.585			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA - FFRDC (MITRE)	C/CPFF	Various:San Antonio, TX	-	0.000		0.000		1.439	Oct 2013	-		1.439	Continuing	Continuing	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208087F: *AF Offensive Cyberspace Operations*	PROJECT 670375: *Network Warfare Systems and Support*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA - Engineering & Technical Assistance Support Services (ETASS)	C/FFP	Jacobs Technology:San Antonio, TX	-	0.000		0.000		1.242	Dec 2013	-		1.242	Continuing	Continuing	
PMA - Acquisition Support	C/Various	Various:San Antonio, TX	-	0.000		0.000		1.971	Nov 2013	-		1.971	Continuing	Continuing	
		Subtotal	0.000	0.000		0.000		4.652		0.000		4.652			

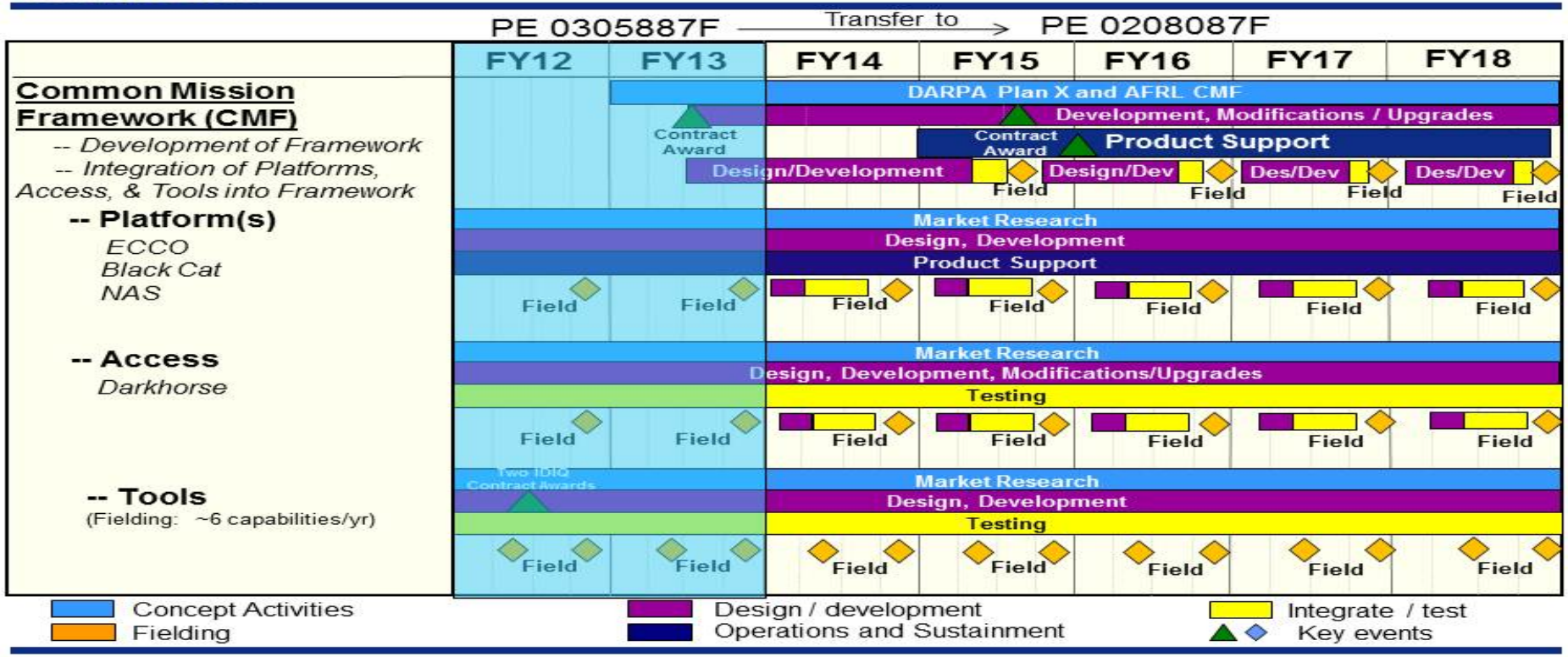
	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		0.000		14.047		0.000		14.047			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208087F: *AF Offensive Cyberspace Operations*	PROJECT 670375: *Network Warfare Systems and Support*

Offensive Cyber Operations Schedule

U.S. AIR FORCE



20 Feb 2013

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0208087F: *AF Offensive Cyberspace Operations*	**PROJECT** 670375: *Network Warfare Systems and Support*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Common Mission Framework (CMF)	1	2014	4	2018
Platforms	1	2014	4	2018
Access	1	2014	4	2018
Cyber Capabilities (Tools)	1	2014	4	2018

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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*					R-1 ITEM NOMENCLATURE PE 0208088F: *AF Defensive Cyberspace Operations*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.000	0.000	5.853	-	5.853	5.961	6.181	6.290	6.404	Continuing	Continuing
677820: *Computer Security RDTE: Firestarter*	-	0.000	0.000	5.853	-	5.853	5.961	6.181	6.290	6.404	Continuing	Continuing
Quantity of RDT&E Articles		0	0	0		0	0	0	0	0		

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

In FY2014, 0208088F, 677820, AF Defensive Cyberspace Operations were transferred from PE 0303140F, Information Systems Security Program, 677820, Firestarter, in order to consolidate Firestarter efforts into the Air Force Defensive Cyberspace Operations PE 0208088F.

A. Mission Description and Budget Item Justification

The Firestarter program provides new/improved capabilities and technical transition opportunities for Cyber Defense and Information Assurance (IA) technologies and tools needed to defend Air Force Command, Control, Communications, Computer, and Intelligence (C4I) systems from Cyber-attacks, while ensuring recovery in the event of an attack. Also provides defensive Cyber Command and Control/Situational Awareness (C2/SA), which enables cyber commanders to monitor Air Force network status and execute courses of action to mitigate threats. The emphasis of the program is directed toward defensive cyberspace capabilities; computer and network systems security; damage assessment and recovery; cyber threat recognition, attribution, and mitigation; and active response methodologies in response to evolving threats and changes to cyber environment. These areas of emphasis are realized through research and development, test and acquisition in the areas of: proactive defense, defensive counter cyberspace, cyberspace intelligence, surveillance and reconnaissance & situational awareness, persistent network operations, as well as decision support, recovery, and digital forensics. Current Air Force systems, such as the AFNET NIPRNet Gateways, SIPRNet Modernization program, and Host Based Security System leverage this technology to meet their information assurance and defensive cyberspace needs/requirements.

This program utilizes cyber and IA technology investments by US Cyber Command, the Defense Advanced Research Projects Agency (DARPA), the National Security Agency (NSA), Director of National Intelligence (DNI), Intelligence Advanced Research Projects Activity (IARPA), and the Department of Homeland Security (DHS) to jump-start its development of solutions to existing Air Force cyber and IA requirements. This program supports AF Space Commands Cyberspace strategic direction in support of Cyber Defense which provides capabilities to 24th AF, as AF component to Cyber Command (CYBERCOM)), Defense Information Systems Agency (DISA), National Security Agency (NSA), and other services to ensure Global Information Grid (GIG) cyber and IA requirements are being met. Activities performed include those designed to identify, analyze, test, rapidly acquire, and integrate emerging IA and cyber technology and defensive cyberspace weapons systems and capabilities into all regions of the GIG - terrestrial, airborne, and space systems. Activities include studies and analysis to support both current program planning and execution and future program planning.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0208088F: *AF Defensive Cyberspace Operations*

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.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.000	0.000	0.000	-	0.000
Current President's Budget	0.000	0.000	5.853	-	5.853
Total Adjustments	0.000	0.000	5.853	-	5.853
• Congressional General Reductions	-	0.000			
• Congressional Directed Reductions	-	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	-	0.000			
• Congressional Directed Transfers	-	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	5.853	-	5.853

Change Summary Explanation

In FY2014, Information Systems Security Program 667820 RDTE: Firestarter efforts transferred to PE 0208088F, AF Defensive Cyberspace Operations, 667820, Computer Security RDTE: Firestarter, in order to align defensive cyber programs and projects.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Cyber Forensic Tools & Methodologies	0.000	0.000	1.940
Description: Cyber forensic tools & methodologies. Includes: Initial metrics for reliable info assurance; secure coalition cyber data management, collaboration and visualization; analysis of cyber security bots. ***FY 2014 Plans:*** Will continue the development of methods and technologies to enhance "real time" cyber network forensic analysis.			
Title: Cyber Threat Recognition	0.000	0.000	1.257
Description: Enhancing cyber platform technology to identify zero-day threats in real time. ***FY 2014 Plans:*** Will continue development of technologies to detect and attribute distributed computer network attacks over time and distance to specific adversaries.			
Title: Cyber Threat Attribution & Mitigation	0.000	0.000	1.362

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force	DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0208088F: *AF Defensive Cyberspace Operations*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: Cyber Threat Attribution and Mitigation. Includes: risk mitigation techniques for wireless networks and systems; active response, dynamic policy enforcement and computer/net attack attribution efforts. ***FY 2014 Plans:*** Will continue development of technologies to detect and attribute distributed computer network attacks, over time and distance, to specific adversaries.			
Title: Transition of Cyber and IA Technologies ***Description:*** Transition cyber defense technologies that support AFSPC's Defense architecture. Includes: space systems cyber solutions; terrestrial net defense technology development; airborne IP network cyber and IA tools; IA / cyber modeling & sim; secure interoperable distributed agent computing, and others that relate to defending the AF networks. ***FY 2014 Plans:*** Will continue enhancing and transitioning customer funded cyber and IA technology to operational USAF components in accordance with rapid requirements documentation provided by AFSPC.	0.000	0.000	0.894
Title: Program Management and Administration ***Description:*** Program management support, to include FFRDC support, travel and laboratory infrastructure. ***FY 2014 Plans:*** Program management support to include FFRDC, travel and laboratory infrastructure support.	0.000	0.000	0.400
Accomplishments/Planned Programs Subtotals	0.000	0.000	5.853

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

E. Acquisition Strategy

All major contracts within this project are awarded after full and open competition utilizing evolutionary capability and incremental development.

F. Performance Metrics

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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208088F: *AF Defensive Cyberspace Operations*	PROJECT 677820: *Computer Security RDTE: Firestarter*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC (MITRE)	C/CPFF	Various:Various,	-	0.000		0.000		0.427	Jan 2014	-		0.427	Continuing	Continuing	
Multiple Contractors	C/CPFF	Various:Various,	-	0.000		0.000		3.850	Jan 2014	-		3.850	Continuing	Continuing	
Multiple Universities	C/CPFF	Various:Various,	-	0.000		0.000		1.176	Jan 2014	-		1.176	Continuing	Continuing	
		Subtotal	0.000	0.000		0.000		5.453		0.000		5.453			

Remarks

Multiple contractors and multiple universities reflect on-going efforts with over a dozen contractors and universities. Each has a different contract date depending on when that particular contract was awarded.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000	0.000

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA	C/CPFF	Various:Various,	-	0.000		0.000		0.400	Jan 2013	-		0.400	Continuing	Continuing	
		Subtotal	0.000	0.000		0.000		0.400		0.000		0.400			

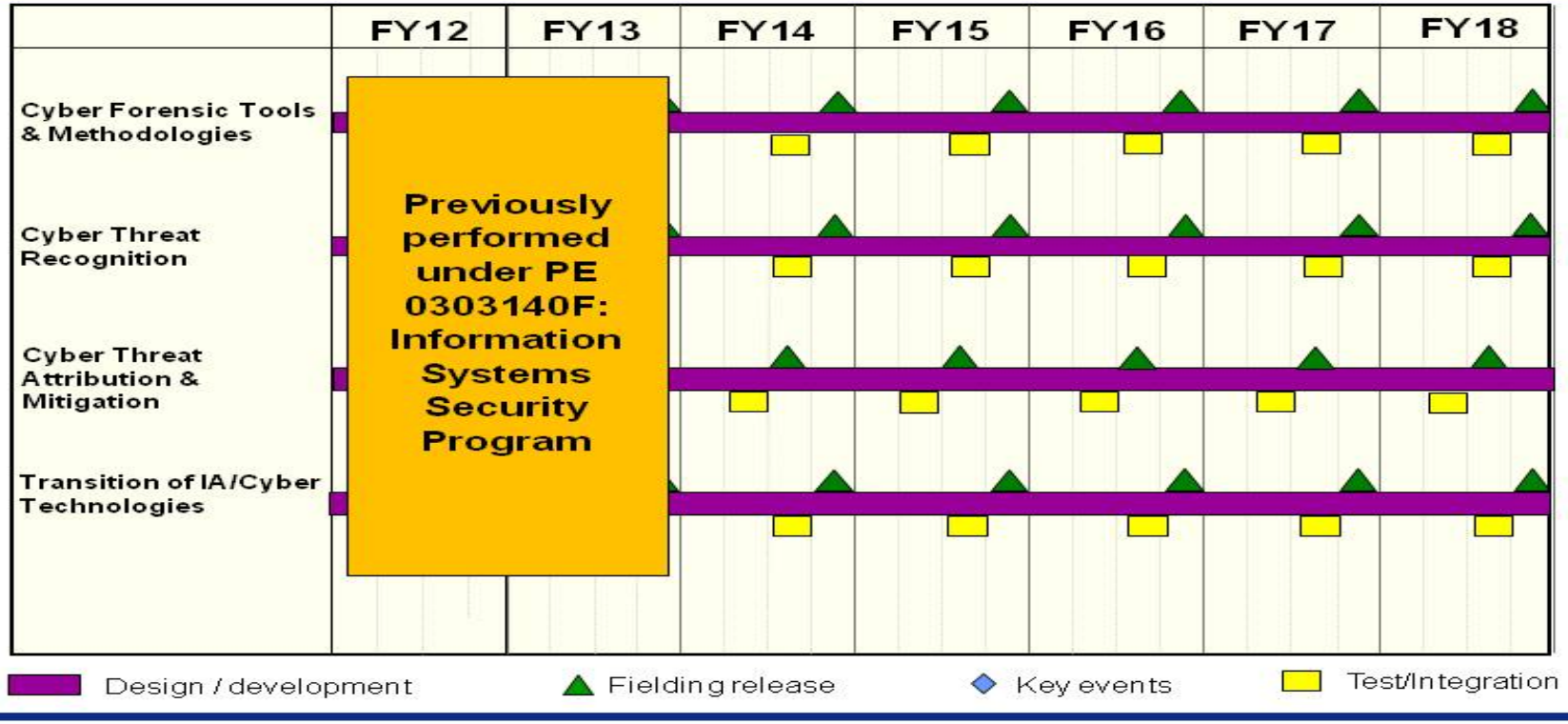
Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Air Force			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208088F: *AF Defensive Cyberspace Operations*	PROJECT 677820: *Computer Security RDTE: Firestarter*	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		0.000		5.853		0.000		5.853			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	R-1 ITEM NOMENCLATURE PE 0208088F: *AF Defensive Cyberspace Operations*	PROJECT 677820: *Computer Security RDTE: Firestarter*

Firestarter Schedule



1

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*	**R-1 ITEM NOMENCLATURE** PE 0208088F: *AF Defensive Cyberspace Operations*	**PROJECT** 677820: *Computer Security RDTE: Firestarter*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Cyber Forensic Tools & Methodologies	1	2014	4	2018
Cyber Threat Recognition	1	2014	4	2018
Cyber Threat Attribution & Mitigation	1	2014	4	2018
Transition of Cyber/IA Technologies	1	2014	4	2018

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