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**Department of Defense
Fiscal Year (FY) 2015 Budget Estimates**

March 2014



Army

Justification Book

Research, Development, Test & Evaluation, Army

RDT&E – Volume III, Budget Activity 7

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RESEARCH, DEVELOPMENT, TEST AND EVALUATION, ARMY

APPROPRIATION LANGUAGE

For expenses necessary for basic and applied scientific research, development, test and evaluation, including maintenance, rehabilitation, lease, and operation of facilities and equipment, \$6,593,898,000, to remain available for obligation until September 30, 2016.

The following Justification Books were prepared at a cost of \$139,860.00: Aircraft (ACFT), Missile (MSLS), Weapons & Tracked Combat Vehicles (WTCV), Ammunition (AMMO), Other Procurement Army (OPA) 1 - Tactical & Support Vehicles, Other Procurement Army (OPA) 2 - Communications & Electronics, Other Procurement Army (OPA) 3 & 4 - Other Support Equipment & Spares, Research, Development, Test and Evaluation (RDTE) for: Budget Activity 1, Budget Activity 2, Budget Activity 3, Budget Activity 4, Budget Activity 5A, Budget Activity 5B, Budget Activity 6, and Budget Activity 7.

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Appropriation	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
Research, Development, Test & Eval, Army	8,010,810	7,122,681	13,500	7,136,181	6,593,898
Total Research, Development, Test & Evaluation	8,010,810	7,122,681	13,500	7,136,181	6,593,898

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Summary Recap of Budget Activities	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
Basic Research	384,636	436,493		436,493	424,176
Applied Research	910,391	954,451		954,451	862,611
Advanced Technology Development	961,060	1,063,636		1,063,636	917,791
Advanced Component Development & Prototypes	421,655	408,552	6,500	415,052	323,156
System Development & Demonstration	2,785,237	2,052,576	7,000	2,059,576	1,719,374
RDT&E Management Support	1,241,684	1,163,091		1,163,091	1,000,430
Operational Systems Development	1,306,147	1,043,882		1,043,882	1,346,360
Total Research, Development, Test & Evaluation	8,010,810	7,122,681	13,500	7,136,181	6,593,898
Summary Recap of FYDP Programs					
Strategic Forces	142,508	83,406		83,406	54,076
General Purpose Forces	610,249	575,129		575,129	963,970
Intelligence and Communications	383,165	208,332		208,332	170,244
Research and Development	6,821,245	6,199,708	13,500	6,213,208	5,329,383
Central Supply and Maintenance	53,461	56,106		56,106	76,225
Administration and Associated Activities	182				
Total Research, Development, Test & Evaluation	8,010,810	7,122,681	13,500	7,136,181	6,593,898

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Appropriation: 2040A Research, Development, Test & Eval, Army

Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
1	0601101A	In-House Laboratory Independent Research	01	18,836	21,792		21,792	13,464
2	0601102A	Defense Research Sciences	01	197,690	221,783		221,783	238,167
3	0601103A	University Research Initiatives	01	72,243	79,317		79,317	69,808
4	0601104A	University and Industry Research Centers	01	95,867	113,601		113,601	102,737
		Basic Research		384,636	436,493		436,493	424,176
5	0602105A	Materials Technology	02	54,578	55,569		55,569	28,006
6	0602120A	Sensors and Electronic Survivability	02	40,842	43,148		43,148	33,515
7	0602122A	TRACTOR HIP	02	20,638	36,273		36,273	16,358
8	0602211A	Aviation Technology	02	46,828	55,586		55,586	63,433
9	0602270A	Electronic Warfare Technology	02	13,838	17,575		17,575	18,502
10	0602303A	Missile Technology	02	43,277	59,500		59,500	46,194
11	0602307A	Advanced Weapons Technology	02	23,140	26,148		26,148	28,528
12	0602308A	Advanced Concepts and Simulation	02	21,075	24,051		24,051	27,435
13	0602601A	Combat Vehicle and Automotive Technology	02	62,267	64,555		64,555	72,883
14	0602618A	Ballistics Technology	02	55,113	75,263		75,263	85,597
15	0602622A	Chemical, Smoke and Equipment Defeating Technology	02	4,010	4,487		4,487	3,971
16	0602623A	Joint Service Small Arms Program	02	6,378	7,814		7,814	6,853
17	0602624A	Weapons and Munitions Technology	02	46,097	52,778		52,778	38,069
18	0602705A	Electronics and Electronic Devices	02	85,099	58,990		58,990	56,435
19	0602709A	Night Vision Technology	02	48,069	43,403		43,403	38,445
20	0602712A	Countermine Systems	02	28,875	30,563		30,563	25,939

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21	0602716A	Human Factors Engineering Technology	02	18,161	21,328		21,328	23,783
22	0602720A	Environmental Quality Technology	02	18,259	20,304		20,304	15,659
23	0602782A	Command, Control, Communications Technology	02	26,200	34,191		34,191	33,817
24	0602783A	Computer and Software Technology	02	8,886	10,434		10,434	10,764
25	0602784A	Military Engineering Technology	02	71,553	70,027		70,027	63,311
26	0602785A	Manpower/Personnel/Training Technology	02	15,979	17,645		17,645	23,295
27	0602786A	Warfighter Technology	02	53,206	31,529		31,529	25,751
28	0602787A	Medical Technology	02	98,023	93,290		93,290	76,068
		Applied Research		910,391	954,451		954,451	862,611
29	0603001A	Warfighter Advanced Technology	03	36,975	66,025		66,025	65,139
30	0603002A	Medical Advanced Technology	03	99,924	100,999		100,999	67,291
31	0603003A	Aviation Advanced Technology	03	57,364	81,037		81,037	88,990
32	0603004A	Weapons and Munitions Advanced Technology	03	69,788	73,885		73,885	57,931
33	0603005A	Combat Vehicle and Automotive Advanced Technology	03	128,463	146,992		146,992	110,031
34	0603006A	Space Application Advanced Technology	03	3,702	5,862		5,862	6,883
35	0603007A	Manpower, Personnel and Training Advanced Technology	03	8,756	7,796		7,796	13,580
36	0603008A	Electronic Warfare Advanced Technology	03	45,254	45,394		45,394	44,871
37	0603009A	TRACTOR HIKE	03	6,792	9,161		9,161	7,492
38	0603015A	Next Generation Training & Simulation Systems	03	15,404	13,620		13,620	16,749
39	0603020A	TRACTOR ROSE	03	8,762	10,662		10,662	14,483
40	0603105A	Military HIV Research	03	20,920				

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41	0603125A	Combating Terrorism - Technology Development	03	9,199	15,046		15,046	24,270
42	0603130A	TRACTOR NAIL	03	3,207	3,192		3,192	3,440
43	0603131A	TRACTOR EGGS	03	2,560	2,366		2,366	2,406
44	0603270A	Electronic Warfare Technology	03	19,561	25,335		25,335	26,057
45	0603313A	Missile and Rocket Advanced Technology	03	80,379	83,975		83,975	44,957
46	0603322A	TRACTOR CAGE	03	12,026	11,077		11,077	11,105
47	0603461A	High Performance Computing Modernization Program	03	202,969	220,565		220,565	181,609
48	0603606A	Landmine Warfare and Barrier Advanced Technology	03	24,448	22,794		22,794	13,074
49	0603607A	Joint Service Small Arms Program	03	5,478	5,027		5,027	7,321
50	0603710A	Night Vision Advanced Technology	03	33,328	44,387		44,387	44,138
51	0603728A	Environmental Quality Technology Demonstrations	03	12,398	11,739		11,739	9,197
52	0603734A	Military Engineering Advanced Technology	03	30,503	23,705		23,705	17,613
53	0603772A	Advanced Tactical Computer Science and Sensor Technology	03	22,900	32,995		32,995	39,164
		Advanced Technology Development		961,060	1,063,636		1,063,636	917,791
54	0603305A	Army Missile Defense Systems Integration	04	22,340	23,289		23,289	12,797
55	0603308A	Army Space Systems Integration	04	9,038	13,584		13,584	13,999
56	0603619A	Landmine Warfare and Barrier - Adv Dev	04	4,089				
57	0603627A	Smoke, Obscurant and Target Defeating Sys-Adv Dev	04	2,430				
58	0603639A	Tank and Medium Caliber Ammunition	04	27,114	30,596		30,596	29,334
59	0603653A	Advanced Tank Armament System (ATAS)	04	11,116	49,963		49,963	
60	0603747A	Soldier Support and Survivability	04	15,936	5,185	6,500	11,685	9,602

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61	0603766A	Tactical Electronic Surveillance System - Adv Dev	04	7,960	6,890		6,890	8,953
62	0603774A	Night Vision Systems Advanced Development	04	9,556	9,061		9,061	3,052
63	0603779A	Environmental Quality Technology - Dem/Val	04	4,060	2,631		2,631	7,830
64	0603782A	Warfighter Information Network-Tactical - DEM/VAL	04	161,505	122,319		122,319	
65	0603790A	NATO Research and Development	04	4,393	3,872		3,872	2,954
66	0603801A	Aviation - Adv Dev	04	7,227	5,015		5,015	
67	0603804A	Logistics and Engineer Equipment - Adv Dev	04	13,028	11,549		11,549	13,386
68	0603805A	Combat Service Support Control System Evaluation and Analysis	04	4,499				
69	0603807A	Medical Systems - Adv Dev	04	22,514	15,594		15,594	23,659
70	0603827A	Soldier Systems - Advanced Development	04	30,793	14,152		14,152	6,830
71	0603850A	Integrated Broadcast Service	04	96	79		79	
72	0604100A	Analysis Of Alternatives	04					9,913
73	0604115A	Technology Maturation Initiatives	04	12,636	11,110		11,110	74,740
74	0604120A	Assured Positioning, Navigation and Timing (PNT)	04					9,930
75	0604131A	TRACTOR JUTE	04	54				
76	0604319A	Indirect Fire Protection Capability Increment 2-Intercept (IFPC2)	04	25,710	79,190		79,190	96,177
77	0604785A	Integrated Base Defense (Budget Activity 4)	04	3,604	4,473		4,473	
78	0305205A	Endurance UAVs	04	21,957				
		Advanced Component Development & Prototypes		421,655	408,552	6,500	415,052	323,156
79	0604201A	Aircraft Avionics	05	60,472	76,547		76,547	37,246
80	0604220A	Armed, Deployable Helos	05	80,934	69,807		69,807	

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81	0604270A	Electronic Warfare Development	05	102,812	144,543		144,543	6,002
82	0604280A	Joint Tactical Radio	05		31,809		31,809	9,832
83	0604290A	Mid-tier Networking Vehicular Radio (MNVR)	05	2,556	23,328		23,328	9,730
84	0604321A	All Source Analysis System	05	5,601	4,837		4,837	5,532
85	0604328A	TRACTOR CAGE	05	11,297	23,829		23,829	19,929
86	0604601A	Infantry Support Weapons	05	83,224	85,054		85,054	27,884
87	0604604A	Medium Tactical Vehicles	05	2,908	2,139		2,139	210
88	0604611A	JAVELIN	05	4,540	5,000		5,000	4,166
89	0604622A	Family of Heavy Tactical Vehicles	05	17,975	21,310	7,000	28,310	12,913
90	0604633A	Air Traffic Control	05	10,140	514		514	16,764
91	0604641A	Tactical Unmanned Ground Vehicle (TUGV)	05	2,795				6,770
92	0604710A	Night Vision Systems - Eng Dev	05	29,352	43,382		43,382	65,333
93	0604713A	Combat Feeding, Clothing, and Equipment	05	1,901	1,938		1,938	1,335
94	0604715A	Non-System Training Devices - Eng Dev	05	40,470	18,971		18,971	8,945
95	0604716A	Terrain Information - Eng Dev	05	928				
96	0604741A	Air Defense Command, Control and Intelligence - Eng Dev	05	42,876	18,284		18,284	15,906
97	0604742A	Constructive Simulation Systems Development	05	25,828	17,004		17,004	4,394
98	0604746A	Automatic Test Equipment Development	05	10,307	6,697		6,697	11,084
99	0604760A	Distributive Interactive Simulations (DIS) - Eng Dev	05	12,427	12,569		12,569	10,027
100	0604780A	Combined Arms Tactical Trainer (CATT) Core	05	16,005	27,619		27,619	42,430
101	0604798A	Brigade Analysis, Integration and Evaluation	05	191,065	99,947		99,947	105,279

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102	0604802A	Weapons and Munitions - Eng Dev	05	12,999	15,712		15,712	15,006
103	0604804A	Logistics and Engineer Equipment - Eng Dev	05	45,135	41,682		41,682	24,581
104	0604805A	Command, Control, Communications Systems - Eng Dev	05	18,543	7,376		7,376	4,433
105	0604807A	Medical Materiel/Medical Biological Defense Equipment - Eng Dev	05	38,712	39,447		39,447	30,397
106	0604808A	Landmine Warfare/Barrier - Eng Dev	05	37,769	92,236		92,236	57,705
107	0604814A	Artillery Munitions - EMD	05	3,576	8,205		8,205	
108	0604818A	Army Tactical Command & Control Hardware & Software	05	50,279	22,945		22,945	29,683
109	0604820A	Radar Development	05	3,734	1,548		1,548	5,224
110	0604822A	General Fund Enterprise Business System (GFEBs)	05	24,742	226		226	
111	0604823A	Firefinder	05	18,303	20,210		20,210	37,492
112	0604827A	Soldier Systems - Warrior Dem/Val	05	28,358	18,467		18,467	6,157
113	0604854A	Artillery Systems - EMD	05	149,667	121,270		121,270	1,912
114	0604869A	Patriot/MEADS Combined Aggregate Program (CAP)	05	348,234				
115	0604870A	Nuclear Arms Control Monitoring Sensor Network	05	7,093				
116	0605013A	Information Technology Development	05	44,684	68,778		68,778	69,761
117	0605018A	Integrated Personnel and Pay System-Army (IPPS-A)	05	122,168	69,253		69,253	138,465
118	0605028A	Armored Multi-Purpose Vehicle (AMPV)	05		28,285		28,285	92,353
119	0605030A	Joint Tactical Network Center (JTNC)	05		68,112		68,112	8,440
120	0605031A	Joint Tactical Network (JTN)	05					17,999
121	0605035A	Common Infrared Countermeasures (CIRCM)	05					145,409
122	0605350A	WIN-T Increment 3 - Full Networking	05					113,210

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123	0605380A	AMF Joint Tactical Radio System (JTRS)	05		10,213		10,213	6,882
124	0605450A	Joint Air-to-Ground Missile (JAGM)	05	9,686	15,119		15,119	83,838
125	0605456A	PAC-3/MSE Missile	05	63,123	68,807		68,807	35,009
126	0605457A	Army Integrated Air and Missile Defense (AIAMD)	05	247,407	369,452		369,452	142,584
127	0605625A	Manned Ground Vehicle	05	570,121	100,147		100,147	49,160
128	0605626A	Aerial Common Sensor	05	108,566	10,377		10,377	17,748
129	0605766A	National Capabilities Integration (MIP)	05		21,132		21,132	15,212
130	0605812A	Joint Light Tactical Vehicle (JLTV) Engineering and Manufacturing Development Ph	05	59,205	84,185		84,185	45,718
131	0605830A	Aviation Ground Support Equipment	05					10,041
132	0210609A	Paladin Integrated Management (PIM)	05					83,300
133	0303032A	TROJAN - RH12	05	3,892	3,463		3,463	983
134	0304270A	Electronic Warfare Development	05	12,828	10,801		10,801	8,961
		System Development & Demonstration		2,785,237	2,052,576	7,000	2,059,576	1,719,374
135	0604256A	Threat Simulator Development	06	16,409	23,921		23,921	18,062
136	0604258A	Target Systems Development	06	12,583	13,481		13,481	10,040
137	0604759A	Major T&E Investment	06	45,057	46,647		46,647	60,317
138	0605103A	Rand Arroyo Center	06	18,892	18,909		18,909	20,612
139	0605301A	Army Kwajalein Atoll	06	162,089	193,555		193,555	176,041
140	0605326A	Concepts Experimentation Program	06	24,720	22,246		22,246	19,439
141	0605502A	Small Business Innovative Research	06	169,555				
142	0605601A	Army Test Ranges and Facilities	06	334,087	340,477		340,477	275,025

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143	0605602A	Army Technical Test Instrumentation and Targets	06	61,711	66,025		66,025	45,596
144	0605604A	Survivability/Lethality Analysis	06	40,865	43,256		43,256	33,295
145	0605606A	Aircraft Certification	06	5,258	6,022		6,022	4,700
146	0605702A	Meteorological Support to RDT&E Activities	06	6,668	7,345		7,345	6,413
147	0605706A	Materiel Systems Analysis	06	18,622	19,799		19,799	20,746
148	0605709A	Exploitation of Foreign Items	06	5,501	5,938		5,938	7,015
149	0605712A	Support of Operational Testing	06	64,458	55,475		55,475	49,221
150	0605716A	Army Evaluation Center	06	57,037	65,240		65,240	55,039
151	0605718A	Army Modeling & Sim X-Cmd Collaboration & Integ	06	1,375	1,282		1,282	1,125
152	0605801A	Programwide Activities	06	75,662	81,993		81,993	64,169
153	0605803A	Technical Information Activities	06	48,995	33,835		33,835	32,319
154	0605805A	Munitions Standardization, Effectiveness and Safety	06	50,838	58,309		58,309	49,052
155	0605857A	Environmental Quality Technology Mgmt Support	06	4,276	5,191		5,191	2,612
156	0605898A	Management HQ - R&D	06	16,844	54,145		54,145	49,592
157	0909999A	Financing for Cancelled Account Adjustments	06	182				
		RDT&E Management Support		1,241,684	1,163,091		1,163,091	1,000,430
158	0603778A	MLRS Product Improvement Program	07	110,860	96,424		96,424	17,112
159	0607141A	Logistics Automation	07		3,715		3,715	3,654
160	0607664A	Biometric Enabling Capability (BEC)	07					1,332
161	0607865A	Patriot Product Improvement	07	44,581	35,034		35,034	152,991
162	0102419A	Aerostat Joint Project Office	07	142,508	83,406		83,406	54,076

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163	0203726A	Adv Field Artillery Tactical Data System	07	26,216	25,507		25,507	22,374
164	0203728A	Joint Automated Deep Operation Coordination System (JADOCs)	07					24,371
165	0203735A	Combat Vehicle Improvement Programs	07	189,396	177,437		177,437	295,177
166	0203740A	Maneuver Control System	07	60,948	36,475		36,475	45,092
167	0203744A	Aircraft Modifications/Product Improvement Programs	07	193,404	239,696		239,696	264,887
168	0203752A	Aircraft Engine Component Improvement Program	07	804	315		315	381
169	0203758A	Digitization	07	34,225	6,183		6,183	10,912
170	0203801A	Missile/Air Defense Product Improvement Program	07	17,863	1,577		1,577	5,115
171	0203802A	Other Missile Product Improvement Programs	07		62,067		62,067	49,848
172	0203808A	TRACTOR CARD	07	58,174	18,768		18,768	22,691
173	0205402A	Integrated Base Defense - Operational System Dev	07					4,364
174	0205410A	Materials Handling Equipment	07					834
175	0205412A	Environmental Quality Technology - Operational System Dev	07					280
176	0205456A	Lower Tier Air and Missile Defense (AMD) System	07					78,758
177	0205778A	Guided Multiple-Launch Rocket System (GMLRS)	07					45,377
178	0208053A	Joint Tactical Ground System	07	29,187	7,104		7,104	10,209
179	0208058A	Joint High Speed Vessel (JHSV)	07	32				
180	0301359A	Special Army Program	07					
181	0303028A	Security and Intelligence Activities	07	6,778	7,596		7,596	12,525
182	0303140A	Information Systems Security Program	07	14,314	9,351		9,351	14,175
183	0303141A	Global Combat Support System	07	108,506	41,203		41,203	4,527

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Department of the Army
 FY 2015 President's Budget
 Exhibit R-1 FY 2015 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

February 28, 2014

Appropriation: 2040A Research, Development, Test & Eval, Army

Line No	Program Element Number	Item	Act	FY 2013 (Base & OCO)	FY 2014 Base Enacted	FY 2014 OCO Enacted	FY 2014 Total Enacted	FY 2015 Base
184	0303142A	SATCOM Ground Environment (SPACE)	07	14,101	18,188		18,188	11,011
185	0303150A	WWMCCS/Global Command and Control System	07	13,208	14,208		14,208	2,151
186	0304348A	Advanced Geospatial Intelligence (AGI)	07					
187	0305204A	Tactical Unmanned Aerial Vehicles	07	28,466	33,515		33,515	22,870
188	0305208A	Distributed Common Ground/Surface Systems	07	38,673	27,607		27,607	20,155
189	0305219A	MQ-1C Gray Eagle UAS	07	68,694	10,895		10,895	46,472
190	0305232A	RQ-11 UAV	07	3,716	2,320		2,320	
191	0305233A	RQ-7 UAV	07	28,554	12,025		12,025	16,389
192	0307665A	Biometrics Enabled Intelligence	07	15,225	12,443		12,443	1,974
193	0310349A	Win-T Increment 2 - Initial Networking	07					3,249
194	0708045A	End Item Industrial Preparedness Activities	07	53,461	56,106		56,106	76,225
		Operational Systems Development		1,306,147	1,043,882		1,043,882	1,346,360
Total Research, Development, Test & Eval, Army				8,010,810	7,122,681	13,500	7,136,181	6,593,898

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159	07	0607141A	Logistics Automation.....	37
160	07	0607664A	Biometrics Enabling Capability.....	49
161	07	0607865A	Patriot Product Improvement.....	57
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165	07	0203735A	Combat Vehicle Improvement Programs.....	127
166	07	0203740A	Maneuver Control System.....	152
167	07	0203744A	Aircraft Modifications/Product Improvement Programs.....	162
168	07	0203752A	Aircraft Engine Component Improvement Program.....	198
169	07	0203758A	Digitization.....	207
170	07	0203801A	Missile/Air Defense Product Improvement Program.....	220
171	07	0203802A	Other Missile Product Improvement Programs.....	235
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***Budget Activity 07: Operational Systems Development
Appropriation 2040: Research, Development, Test & Evaluation, Army***

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174	07	0205410A	Materials Handling Equipment.....	250
175	07	0205412A	Environmental Information Tech Modernization.....	256
176	07	0205456A	Lower Tier Air and Missile Defense (AMD).....	260
177	07	0205778A	Guided Multiple-Launch Rocket System (GMLRS).....	267
178	07	0208053A	Joint Tactical Ground System.....	281
179	07	0208058A	Joint High Speed Vessel (JHSV).....	290
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Aircraft Engine Component Improvement Program	0203752A	168	07.....	198
Aircraft Modifications/Product Improvement Programs	0203744A	167	07.....	162
Biometrics Enabled Intelligence	0307665A	192	07.....	443
Biometrics Enabling Capability	0607664A	160	07.....	49
Combat Vehicle Improvement Programs	0203735A	165	07.....	127
Digitization	0203758A	169	07.....	207
Distributed Common Ground/Surface Systems	0305208A	188	07.....	399
End Item Industrial Preparedness Activities	0708045A	194	07.....	460
Environmental Information Tech Modernization	0205412A	175	07.....	256
Global Combat Support System	0303141A	183	07.....	329
Guided Multiple-Launch Rocket System (GMLRS)	0205778A	177	07.....	267
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Logistics Automation	0607141A	159	07.....	37
Lower Tier Air and Missile Defense (AMD)	0205456A	176	07.....	260
MLRS PRODUCT IMPROVEMENT PROGRAM	0603778A	158	07.....	1
MQ-1 Gray Eagle UAV	0305219A	189	07.....	418
Maneuver Control System	0203740A	166	07.....	152
Materials Handling Equipment	0205410A	174	07.....	250
Missile/Air Defense Product Improvement Program	0203801A	170	07.....	220
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Patriot Product Improvement	0607865A	161	07.....	57
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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0603778A / <i>MLRS PRODUCT IMPROVEMENT PROGRAM</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	110.860	96.424	17.112	-	17.112	76.172	47.942	78.020	108.397	Continuing	Continuing
090: <i>MLRS HIMARS</i>	-	2.817	-	-	-	-	-	-	-	-	-	2.817
093: <i>Multi-Launch Rocket System (MLRS)</i>	-	46.810	40.006	14.118	-	14.118	0.990	1.007	1.020	1.228	Continuing	Continuing
784: <i>Guided MLRS</i>	-	7.640	15.309	-	-	-	-	-	-	-	-	22.949
78G: <i>Gmlrs Alternative Warheads</i>	-	53.593	39.852	-	-	-	-	-	-	-	-	93.445
DX8: <i>HIMARS Product Improvement Program</i>	-	-	1.257	2.994	-	2.994	6.182	6.935	-	-	-	17.368
DZ8: <i>Long Range Precision Fires</i>	-	-	-	-	-	-	69.000	40.000	77.000	107.169	-	293.169

The FY 2015 OCO Request will be submitted at a later date.

Note

Adjustments for FY2013-2014: Funding adjusted to reflect changes to FY2013-2014 activities.
 Adjustments for FY2015: GMLRS Alternative Warhead (78G) and Guided MLRS (784) re-aligned to PE 025778A, Projects EG2 and EG3, respectively.
 Other Adjustments 1: Reduction in cost due to the completion of mission efforts.

A. Mission Description and Budget Item Justification

Projects 090/DX8. The M142 High Mobility Artillery Rocket System (HIMARS) is a full spectrum, combat proven, all weather, 24/7 lethal and responsive, precision strike weapon system that fully supports more deployable, affordable and lethal, Brigade Combat Teams (BCT), Fires Brigades, Modular Forces, and Joint Expeditionary Forces. The HIMARS launcher is a C-130 transportable, wheeled, indirect fire, rocket/missile launcher capable of firing all rockets and missiles in the current and future Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM) and Army Tactical Missile System (ATACMS) Family of Munitions (AFOM) engaging targets with precision out to ranges of 300 kilometers. HIMARS satisfies the Army's digitization requirements by interfacing with the Advanced Field Artillery Tactical Data System (AFATDS) fire support command and control system. The HIMARS product improvement program provides funding for research, development test, and integration efforts necessary for incorporation of advanced automotive, armor, armament, life cycle enhancements, system hardware and software technologies, including Common Operating Environment (COE) and Network Integrated Evaluation (NIE), obsolescence mitigation, reliability improvements and decreasing the logistics footprint. This effort includes performing technical assessments, concept studies, and risk reduction efforts for incorporation of future requirements. The HIMARS product improvement program maintains compliance with Intra-Army Interoperability and Digital Communications. HIMARS was deployed to Operation Iraqi Freedom (OIF) and is still supporting Operation Enduring Freedom (OEF) with great success by both US Army and Marine Corps units.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0603778A / <i>MLRS PRODUCT IMPROVEMENT PROGRAM</i>
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Project 093. MLRS is a full spectrum, combat proven, all weather, 24/7 lethal and responsive, Precision Strike weapon system that is organic/assigned to Fires Brigades supporting BCT. The MLRS launcher provides critical missile precision strike, operational shaping fires, counterfire, and close support destructive and suppressive fires. The launcher is complimented by the MFOM to include the Guided Multiple Launch Rocket System (GMLRS), engaging targets up to 60 kilometers (km). AFOM munitions are capable of engaging targets up to a range of 300 km. The MLRS product improvement program provides funding for research, development, test and integration efforts necessary for incorporation of advanced automotive, armament and system hardware and software technologies, including COE and NIE, obsolescence mitigation, reliability improvements, and decreasing the logistics footprint. This effort includes performing technical assessments, concept studies, and risk reduction efforts for incorporation of future requirements. The MLRS product improvement program maintains compliance with intra-army interoperability and digital communications via joint variable message format.

Projects 784/78G. GMLRS rockets are surface-to-surface artillery rockets fired from the MLRS and HIMARS launchers. GMLRS rockets provide 24/7, all-weather precision fires to engage both area and point targets at short, medium, and long ranges.

The GMLRS Program consists of three separate increments: GMLRS Dual Purpose Improved Conventional Munition (DPICM) cluster munition to engage area or imprecisely located targets; GMLRS Unitary utilizes a 200 lb high explosive warhead to engage point targets with limited collateral damage; and GMLRS Alternative Warhead (AW) is being developed as a non-cluster munition to replace GMLRS DPICM. GMLRS DPICM Production was terminated in response to the June 2008 Department of Defense (DoD) Cluster Munitions Policy. GMLRS Unitary is currently in full rate production. GMLRS AW is currently in the Engineering and Manufacturing Development (EMD) Phase and scheduled to enter full rate production in FY2015. The GMLRS AW rocket is 90% common with the Unitary variant.

Project DZ8. The Army G-3/5/7 has directed that GMLRS Increment 4 change its name to Long Range Precision Fires (LRPF) to better reflect the solution as an Army Tactical Missile System (ATACMS) replacement versus a follow-on increment to the GMLRS program.

No FY15 funds are requested.

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	143.005	110.576	90.607	-	90.607
Current President's Budget	110.860	96.424	17.112	-	17.112
Total Adjustments	-32.145	-14.152	-73.495	-	-73.495
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-32.145	-14.152	-55.413	-	-55.413
• Other Adjustments 1	-	-	-18.082	-	-18.082

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 090 / MLRS HIMARS
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
090: MLRS HIMARS	-	2.817	-	-	-	-	-	-	-	-	-	2.817
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

The FY 2015 OCO Request will be submitted at a later date.

Note

Funds realigned to new Project DX8 HIMARS Product Improvement Program.

A. Mission Description and Budget Item Justification

The M142 High Mobility Artillery Rocket System (HIMARS) is a full spectrum, combat proven, all weather, 24/7 lethal and responsive, precision strike weapon system that fully supports more deployable, affordable and lethal, Brigade Combat Teams, Fires Brigades, Modular Forces, and Joint Expeditionary Forces. The HIMARS launcher is a C-130 transportable, wheeled, indirect fire, rocket/missile launcher capable of firing all rockets and missiles in the current and future Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM) and Army Tactical Missile System (ATACMS) Family of Munitions (AFOM) engaging targets with precision out to ranges of 300 kilometers. HIMARS satisfies the Army's digitization requirements by interfacing with the Advanced Field Artillery Tactical Data System (AFATDS) fire support command and control system. The HIMARS product improvement program provides funding for research, development, test and integration efforts necessary for sustainment, obsolescence mitigation, reliability improvements, incorporation of advanced automotive, armor, armament and system hardware and software technologies including Common Operating Environment (COE) and Network Integrated Evaluation (NIE) and decreasing the logistics footprint. This effort includes performing technical assessments, concept studies, and risk reduction efforts for incorporation of future requirements. The HIMARS product improvement program maintains compliance with intra-Army interoperability and digital communications. HIMARS was deployed to Operation Iraqi Freedom (OIF) and is still supporting Operation Enduring Freedom (OEF) with great success by both US Army and Marine Corps units.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: MLRS Production Improvement Program-HIMARS	2.817	-	-
Articles:	-	-	-
Description: Improve system design and develop hardware and software integration with upcoming command and control initiatives to include the COE and the NIE. Perform technical assessments, concept studies, cost reduction, risk reduction, field issue resolution and required documentation concerning upgrades to enhanced command and control (C2), improved initialization, hardware and software obsolescence mitigation, tactical fire control, embedded training, launcher loader module electric drive, diagnostics/prognostics, alternate coupling, situational awareness, long range communication, automotive chassis life cycle enhancements and future munitions integration.			
FY 2013 Accomplishments:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / <i>MLRS PRODUCT IMPROVEMENT PROGRAM</i>	Project (Number/Name) 090 / <i>MLRS HIMARS</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
The focus of the FY2013 program was execution of enhancements to the fire control system and associated trainer updates as well as communications and battle command systems. Continued effort was required to maintain C4I/interoperability certification and network interoperability certification. Continued technical assessments and concept studies in the areas of automotive chassis life cycle enhancements, hardware/software technologies and improved transportability to support evolving mission requirements, technology insertion planning and obsolescence mitigation. Improved system design and developed hardware and software integration with upcoming command and control initiatives to include the COE and the NIE.			
Accomplishments/Planned Programs Subtotals	2.817	-	-

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• C03000000: <i>HIMARS Launcher</i>	12.051	-	-	-	-	-	-	-	-	-	12.051
• C67501000: <i>HIMARS Modifications</i>	6.068	6.105	6.073	-	6.073	3.318	2.621	3.411	6.495	Continuing	Continuing
• 0603778A-DX8: <i>HIMARS Product Improvement Program</i>	-	1.258	3.046	-	3.046	6.278	7.032	-	0.003	Continuing	Continuing

Remarks

D. Acquisition Strategy

HIMARS follow-on horizontal technology insertion efforts include automotive chassis life cycle enhancements, increased crew protection, enhanced C2, improved initialization, long range communications, fire control system obsolescence mitigation and associated enhancements to training devices.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 090 / MLRS HIMARS
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Program Management	Various	PFRMS Project Office : Redstone Arsenal, Alabama	9.470	0.102	Oct 2012	-		-		-		-	-	9.572	-
Subtotal			9.470	0.102		-		-		-		-	-	9.572	-

Remarks
PFRMS - Precision Fires Rocket and Missile Systems

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Battle Command	SS/CPFF	CECOM, PEO STRI, AMRDEC, Technizon, LMMFC : Various	20.629	2.077	Feb 2013	-		-		-		-	-	22.706	-
Other Government Agencies (OGA)	Various	AMCOM, GSA, RSA : Various	17.902	0.206	Feb 2013	-		-		-		-	-	18.108	-
Subtotal			38.531	2.283		-		-		-		-	-	40.814	-

Remarks
SS - Sole Source; CPFF - Cost Plus Fixed Fee; CECOM - US Army Communications Electronics Command; PEO STRI - Program Executive Office for Simulation, Training and Instrumentation; AMRDEC - Aviation and Missile Research, Development and Engineering Center; LMMFC - Lockheed Martin Missiles and Fire Control; AMCOM - US Army Aviation & Missile Life Cycle Management Command; GSA - General Services Administration; RSA - Redstone Arsenal Alabama

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Support Contract	C/CPFF	Camber Research, S3, TMI : Various	4.144	0.158	Feb 2013	-		-		-		-	-	4.302	-
Subtotal			4.144	0.158		-		-		-		-	-	4.302	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 090 / MLRS HIMARS
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Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks
C/CPFF - Competitive Cost-Plus Fixed-Fee, S3 - Systems, Studies, Simulation, Incorporated; TMI - Tec Masters, Incorporated

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support	Various	Fort Hood TX, ATEC, APG MD, WSMR, RTC RSA. : Various	43.777	0.274	Feb 2013	-		-		-		-	-	44.051	-
Subtotal			43.777	0.274		-		-		-		-	-	44.051	-

Remarks
ATEC - US Army Test and Evaluation Command; APG MD - Aberdeen Proving Grounds, Maryland; WSMR - White Sands Missile Range; RTC RSA - Redstone Test Center, Redstone Arsenal, Alabama

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	95.922	2.817	-	-	-	-	-	98.739	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 090 / MLRS HIMARS

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Central Technical Support Facility Certification	[REDACTED]																											
Enhanced Command and Control Development and Testing	[REDACTED]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / <i>MLRS PRODUCT IMPROVEMENT PROGRAM</i>	Project (Number/Name) 090 / <i>MLRS HIMARS</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Central Technical Support Facility Certification	1	2006	4	2013
Enhanced Command and Control Development and Testing	1	2006	4	2013

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM				Project (Number/Name) 093 / Multi-Launch Rocket System (MLRS)			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
093: Multi-Launch Rocket System (MLRS)	-	46.810	40.006	14.118	-	14.118	0.990	1.007	1.020	1.228	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Multiple Launch Rocket System (MLRS) is a full spectrum, combat proven, all weather, 24/7 lethal and responsive, Precision strike weapon system that is organic/ assigned to Fires Brigades supporting Brigade Combat Teams. The MLRS launcher provides critical missile precision strike, operational shaping fires, counterfire, and close support destructive and suppressive fires. The launcher is complemented by the MLRS Family of Munitions (MFOM) to include the Guided Multiple Launch Rocket System (GMLRS), and the Army Tactical Missile System (ATACMS) Family of Munitions (AFOM), capable of engaging targets up to a range of 300 kilometers. The MLRS product improvement program provides funding for research, development, test, and integration efforts necessary for incorporation of advanced automotive armament, and system hardware and software technologies, including Common Operating Environment (COE) and Network Integrated Evaluation (NIE), obsolescence mitigation, reliability improvements, and decreasing the logistics footprint. This effort includes performing technical assessments, concept studies, and risk reduction efforts for incorporation of future requirements. The MLRS product improvement program maintains compliance with intra-army interoperability and digital communications via joint variable message format.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: MLRS Product Improvement Program	46.810	40.006	14.118
Articles:	-	-	-
Description: The MLRS product improvement program ensures compliance as defined in the Department of Defense (DoD) Information Technology Standards. Funding is provided to several government agency laboratories each fiscal year in support of this program. Support efforts also include Enhanced Command and Control (C2), interoperability certifications, obsolescence mitigation, increased crew protection, automotive updates and hardware/software enhancements, and information assurance compliance. All efforts are directed toward preservation of platform viability and readiness to accept technology insertion as capability enhancements and obsolescence mitigations are developed.			
Perform Command, Control, Communications, Computers, and Intelligence (C4I)/interoperability certification tests, improve operational timeline, and conduct network Interoperability testing/certification. Perform technical assessments, concept studies, obsolescence mitigation, crew protection, automotive and hardware/software enhancements, and risk reduction.			
FY 2013 Accomplishments:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 093 / Multi-Launch Rocket System (MLRS)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Continued execution of Improved Armored Cab (IAC) for crew protection effort through Critical Design Review (CDR). Initiated modification to fire control system to alleviate obsolescence issues, including Preliminary Design Review (PDR) of modified design. Continued to maintain C4I/interoperability certification and network interoperability certification. Continued to conduct technical assessments and concept studies in the areas of automotive and hardware/software technologies to support evolving mission requirements, planning for technology insertion, and continued obsolescence mitigation. Improved system design and developed hardware and software integration with upcoming C2 initiatives to include the COE and the NIE. FY 2014 Plans: Increase crew protection and Fire Control System Update (FCS-U) activities. Continue execution of development and qualification of the IAC for crew protection and blast protection. Conduct CDR and continue development and begin qualification test activities for the FCS-U effort to mitigate obsolescence. Additional activities include the continuation to maintain C4I/interoperability certification and network interoperability certification. Continue to improve system design and development hardware and software integration with upcoming C2 initiatives to include the COE and the NIE. FY 2015 Plans: Continue IAC and FCS-U activities. Close out all development tasks for IAC. Additional activities include FCS-U qualification tests, C4I/interoperability and network interoperability certification and maintenance. Redesign subsystems as required to mitigate obsolescence. Continue to improve system design and development hardware and software integration with upcoming C2 initiatives to include the COE and the NIE.			
Accomplishments/Planned Programs Subtotals	46.810	40.006	14.118

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• C67500000: MLRS Mods	2.466	11.571	10.494	-	10.494	23.500	37.889	38.200	37.718	Continuing	Continuing
• CA0265000: MLRS Mod Initial Spares (CA0265)	1.064	1.083	1.087	-	1.087	1.076	1.095	1.108	1.122	Continuing	Continuing

Remarks

D. Acquisition Strategy

The MLRS product improvement program conducts concept studies to support obsolescence mitigation, automotive updates, and hardware/software enhancements. Development efforts underway include Enhanced C2 and efforts supporting interoperability certifications, information assurance compliance, IAC, and mitigating obsolescence of the Fire Control System through the FCS-U effort. The IAC effort enhances the level of crew protection. A contract was awarded following a competitive bid process (full and open competition) to ensure best value for the government. The FCS-U is driven by the need to mitigate obsolete electronic components that are

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / <i>MLRS PRODUCT IMPROVEMENT PROGRAM</i>	Project (Number/Name) 093 / <i>Multi-Launch Rocket System (MLRS)</i>

being sustained through life of type purchases. These purchased components will be exhausted, thus requiring an update to the design. This update to the design will preserve current and future capability of firing the complete set of MLRS family of munitions per the Operational Requirements Document (ORD). The FCS-U development effort began in FY13, utilizing the industrial Engineering Services contract that was previously sole source awarded. Contract efforts include finalizing design, testing, and qualification of the FCS-U with scheduled completion in FY15. Government activities to close out government efforts to continue in FY16. PDR occurred in FY13 and CDR will occur in 4Q FY14.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 093 / Multi-Launch Rocket System (MLRS)
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Program Management	Various	PFRMS Proj Ofc, Redstone Arsenal, Alabama : Redstone Arsenal, Alabama	6.581	0.468	Oct 2012	1.200		0.706	Oct 2014	-		0.706	Continuing	Continuing	Continuing
Subtotal			6.581	0.468		1.200		0.706		-		0.706	-	-	-

Remarks
PFRMS - Precision Fires Rocket and Missile Systems

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Other Government Agencies OGA	MIPR	FT SILL OK, CECOM-NJ AMRDEC-RSA AL, : various	16.245	-		-		-		-		-	Continuing	Continuing	Continuing
MLRS IAC	C/CPFF	Lockheed Martin : Grand Praire, TX	13.950	8.627	Nov 2012	5.761		2.160	Oct 2014	-		2.160	Continuing	Continuing	Continuing
MLRS FCS Development	SS/CR	Lockheed Martin : Grand Praire, TX	0.000	36.779	Mar 2013	26.244		9.840	Oct 2014	-		9.840	Continuing	Continuing	Continuing
Subtotal			30.195	45.406		32.005		12.000		-		12.000	-	-	-

Remarks
 C CPFF - Competitive Cost-Plus Fixed-Fee
 SS CR - Sole Source Cost
 AMRDEC - United States Army Aviation and Missile Research, Development, and Engineering Center
 RSA AL - Redstone Arsenal, Alabama Ft Sill OK - Oklahoma
 CECOM - United States Army Communication - Electronics Command
 MIPR - Military Interdepartmental Purchase Request
 LM - Lockheed Martin, Grand Praire, Texas

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army											Date: March 2014				
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM					Project (Number/Name) 093 / Multi-Launch Rocket System (MLRS)						

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Support Contract	Various	Multiple : Multiple	4.010	-		0.400		0.424	Dec 2014	-		0.424	Continuing	Continuing	Continuing
Subtotal			4.010	-		0.400		0.424		-		0.424	-	-	-

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support, Joint Interoperability Test Certificate	MIPR	CTSF, Ft. Hood : Texas	2.387	0.936	Dec 2012	6.401		0.988	Dec 2014	-		0.988	Continuing	Continuing	Continuing
Subtotal			2.387	0.936		6.401		0.988		-		0.988	-	-	-

Remarks
 CTSF - Central Technical Support Facility
 MIPR - Military Interdepartmental Purchase Request

Project Cost Totals	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
	43.173	46.810	40.006	14.118	-	14.118	-	-	-

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / <i>MLRS PRODUCT IMPROVEMENT PROGRAM</i>	Project (Number/Name) 093 / <i>Multi-Launch Rocket System (MLRS)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Comd, Cntrl, Com, Comp, and Intell (C4I)/Interop Cert Tests, Imp Oper Timeline	1	2010	4	2020
Software Interoperability Testing/Network Interoperability Testing/Certification	1	2010	4	2020
FCS-U Development	1	2013	1	2016
Fire Control System Update Production - Award 2Q FY16; 1st Del/install 2Q/FY17	2	2016	4	2020
Improved Armored Cab Development Award 3Q FY12; Testing Complete 3QFY15	3	2012	3	2015
Improved Armored Cab Production - 1st Delivery/Install 2Q FY16	2	2015	4	2020

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 784 / Guided MLRS
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
784: Guided MLRS	-	7.640	15.309	-	-	-	-	-	-	-	-	22.949
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Beginning in FY2015, Guided Multiple Launch Rocket System (GMLRS) will have its own separate Program Element, 0205778A, to include Projects EG2 (GMLRS Alternative Warhead) and EG3 (Guided MLRS), previously under Program Element 0603778A Project Codes 78G and 784, respectively.

A. Mission Description and Budget Item Justification

The United States (U.S.) Army continues to explore ways to enhance Guided Multiple Launch Rocket System (GMLRS) Unitary rockets and common components and to mitigate obsolescence issues under the 784-Guided MLRS project code. The Army requested funding for the following 784 GMLRS Research, Development, Test and Evaluation (RDT&E) activities: (1) evaluation of enhanced operational capabilities to provide more flexibility across the target set to include increased range and flight performance; (2) investigation of potential life cycle cost savings through obsolescence initiatives; (3) development of enhancements to the Multiple Launch Rocket System (MLRS) common test equipment; and (4) evaluation and development of technologies to enhance overall product performance, survivability, and Insensitive Munitions (IM) compliance.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
<p>Title: Assess and improve GMLRS rockets.</p> <p align="right">Articles:</p> <p>Description: Funding is provided for the following efforts</p> <p>FY 2013 Accomplishments: Continued to assess and improve GMLRS rockets.</p> <p>FY 2014 Plans: Continue to seek improvements in rocket reliability, collateral damage, and effectiveness.</p>	<p>1.146</p> <p>-</p>	<p>2.143</p> <p>-</p>	<p>-</p> <p>-</p>
<p>Title: Conduct development engineering for IM program.</p> <p align="right">Articles:</p> <p>Description: Funding is provided for the following efforts</p> <p>FY 2013 Accomplishments:</p>	<p>5.806</p> <p>-</p>	<p>8.879</p> <p>-</p>	<p>-</p> <p>-</p>

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 784 / Guided MLRS

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Continued IM improvements investigation and procure items for initial test.			
FY 2014 Plans: Continue to procure test articles to qualify improvements to satisfy JCIDS requirements.			
Title: Investigate obsolescence/cost reduction opportunities/second source suppliers.	0.688	1.072	-
Articles:	-	-	-
Description: Funding is provided for the following efforts			
FY 2013 Accomplishments: Continued the development engineering; performed integration of multi-mode fuzes and potential alternate warhead solutions while assessing the industry to mitigate obsolescence and investigated cost reductions through alternate sources of procurement.			
FY 2014 Plans: Continue to design and integrate enhanced operational capability and flexibility across the target set, as well as investigate obsolescence issues and cost reduction initiatives.			
Title: Conduct System Test and Evaluation activities.	-	3.215	-
Articles:	-	-	-
Description: Funding is provided for the following efforts			
FY 2014 Plans: Conduct IM System testing.			
Accomplishments/Planned Programs Subtotals	7.640	15.309	-

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• GMLRS: GMLRS	214.288	273.025	127.145	-	127.145	194.775	167.250	190.934	90.792	Continuing	Continuing
• Guided MLRS Alternative Warhead: Guided MLRS Alternative Warhead	53.593	39.852	33.898	-	33.898	0.319	-	-	-	Continuing	Continuing

Remarks
GMLRS Procurement funding includes C65404 and C65406.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / <i>MLRS PRODUCT IMPROVEMENT PROGRAM</i>	Project (Number/Name) 784 / <i>Guided MLRS</i>

D. Acquisition Strategy

Project 784 is intended to support, investigate, and develop alternative material changes to improve the GMLRS family of munitions as they are identified by the material developer or combat developer. This project also supports IM activities to improve the overall posture of the system all the way down to component level. Future initiatives could include a missile modernization program to extend the shelf life of the GMLRS rocket.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 784 / Guided MLRS
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Program Management	TBD	PFRMS Project Office, : RSA	27.696	-		0.130	Oct 2013	-		-		-	-	27.826	-
Subtotal			27.696	-		0.130		-		-		-	-	27.826	-

Remarks
TBD-To Be Determined; Cont.-Continuing; PFRMS - Precision Fires Rocket and Missile Systems; RSA-Redstone Arsenal, Alabama

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Unitary Contracts/Multiple	SS/CPFF	LMMFCS : Dallas, TX	278.462	6.164	Dec 2012	14.712	Dec 2013	-		-		-	-	299.338	-
Other Government Agencies	TBD	AMCOM/AMRDEC, : RSA	77.986	-		-		-		-		-	-	77.986	-
Subtotal			356.448	6.164		14.712		-		-		-	-	377.324	-

Remarks
SS/CPFF-Sole Source/Cost Plus Fixed Fee; Cont.-Continuing; LMMFCS - Lockheed Martin Missile and Fire Control System; TX - Texas; AMCOM-Aviation and Missile Command; TBD-To Be Determined; AMRDEC - U.S. Army Research, Development and Engineering Command; RSA - Redstone Arsenal, Alabama

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Support Contract	C/CPFF	Camber Research/ S3/TMI, : Alabama	20.684	-		-		-		-		-	-	20.684	-
Subtotal			20.684	-		-		-		-		-	-	20.684	-

Remarks
C/CPFF-Cost/Cost Plus Fixed Fee; Cont.-Continuing; S3-Systems Studies Simulation, Inc.; TMI-Tec Masters, Inc.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 784 / Guided MLRS
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Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support	TBD	WSMR, : NM	107.991	1.476	Dec 2012	0.467		-		-		-	-	109.934	-
Subtotal			107.991	1.476		0.467		-		-		-	-	109.934	-

Remarks
TBD-To Be Determined; Cont.-Continuing; WSMR, NM - White Sands Missile Range, New Mexico

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	512.819	7.640	15.309	-	-	-	-	535.768	-

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / <i>MLRS PRODUCT IMPROVEMENT PROGRAM</i>	Project (Number/Name) 784 / <i>Guided MLRS</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Technical Assessment/ Concept, Survivability	1	2011	4	2014
Obsolescence/ Cost Reduction Opportunities and Second Source Suppliers	1	2011	4	2014
IM/ Enhanced Technology Improvements	4	2010	4	2014
ISD Safety Analysis and Qualification Plan	3	2013	1	2014
ISD Developmental Test	4	2013	1	2014
ISD Qualification Testing	2	2014	4	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 78G / Gmlrs Alternative Warheads
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
78G: Gmlrs Alternative Warheads	-	53.593	39.852	-	-	-	-	-	-	-	-	93.445
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

The FY 2015 OCO Request will be submitted at a later date.

Note

Beginning in FY2015, Guided Multiple Launch Rocket System (GMLRS) will have its own separate Program Element, 0205778A, to include Projects EG2 (GMLRS Alternative Warhead) and EG3 (Guided MLRS), previously under Program Element 0603778A Project Codes 78G and 784, respectively.

A. Mission Description and Budget Item Justification

The United States (U.S.) Army is funding the development of the Guided Multiple Launch Rocket System (GMLRS) Alternative Warhead (AW) increment under the 78G-GMLRS AW project code. GMLRS AW is being developed as a non-cluster munition to replace GMLRS Dual Purpose Improved Conventional Munitions (DPICM) and service the same area and imprecisely-located targets. GMLRS DPICM Production was terminated in response to the June 2008 Department of Defense (DoD) Cluster Munitions Policy.

The GMLRS AW increment completed Milestone B (MS B) on February 19, 2012 and is currently in the Engineering and Manufacturing Development (EMD) Phase. The three-year EMD contract was awarded on March 30, 2012. Funding was requested in FY2013 for the second year of the EMD contract and for other government and contracted EMD activities to include engineering developmental testing and the Critical Design Review (CDR). GMLRS AW is scheduled for a combined Milestone C (MS C) and Full Rate Production (FRP) Decision in FY2015 and Initial Operational Capability (IOC) in FY2016.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Conduct Development Engineering, Design Component Testing, and Performance Analysis.	24.787	18.431	-
Articles:	-	-	-
Description: Funding is provided for the following efforts			
FY 2013 Accomplishments: Continued design optimization and analysis, Critical Design Review (CDR) in EMD Phase, procured test articles and conducted engineering testing.			
FY 2014 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 78G / Gmlrs Alternative Warheads		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Perform design optimization trade studies, qualification of manufacturing procedures, conduct Development Test/Operational testing.				
Title: Perform technical assessments and concept studies.		13.532	10.063	-
		Articles:	-	-
Description: Funding is provided for the following efforts				
FY 2013 Accomplishments: Evaluated CDR.				
FY 2014 Plans: Perform system integration trade studies, assessment of Manufacturing Readiness Levels (MRL).				
Title: Prepare Milestone Documentation, Risk Reduction, and Program Reviews.		2.278	1.694	-
		Articles:	-	-
Description: Funding is provided for the following efforts				
FY 2013 Accomplishments: IDR and CDR support.				
FY 2014 Plans: Assess EMD testing; begin milestone support documentation development.				
Title: Conduct System Test and Evaluation Activities.		12.996	9.664	-
		Articles:	-	-
Description: Funding is provided for the following efforts				
FY 2013 Accomplishments: Engineering Development Testing (EDT).				
FY 2014 Plans: Engineering Production Qualification Testing (PQT) , Development Test/Operational Test (DT/OT), ground testing, and system Insensitive Munitions (IM) testing.				
Accomplishments/Planned Programs Subtotals		53.593	39.852	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 78G / Gmlrs Alternative Warheads
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C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• GMLRS: <i>GMLRS</i>	214.288	273.025	127.145	-	127.145	194.775	167.250	190.934	90.792	Continuing	Continuing
• Guided MLRS: <i>Guided MLRS</i>	7.640	15.309	11.479	-	11.479	16.856	27.389	26.292	26.522	Continuing	Continuing
• Long Range Precision Fires: <i>Long Range Precision Fires</i>	-	-	-	-	-	69.000	40.000	77.000	107.169	Continuing	Continuing

Remarks

GMLRS Procurement funding includes C65404 and C65406.

D. Acquisition Strategy

The GMLRS AW rocket is a product improved version of the current GMLRS DPICM rocket. During EMD, GMLRS AW will undergo further development, integration, and testing under a Firm Fixed Price (FFP) contract.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 78G / Gmlrs Alternative Warheads
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Program Management	TBD	PFRMS Project Office, : RSA	6.749	3.067	Oct 2012	4.267	Oct 2013	-		-		-	-	14.083	-
Subtotal			6.749	3.067		4.267		-		-		-	-	14.083	-

Remarks
TBD-To Be Determined; Cont.-Continuing; PFRMS-Precision Fires Rocket and Missile Systems; RSA-Redstone Arsenal, Alabama

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
AWP Contracts (Multiple)	Various	ATK (Plymouth, MN) : LMMFCS (Dallas, TX), Systems Integrator	32.526	32.963	Dec 2012	22.665	Dec 2013	-		-		-	-	88.154	-
Other Government Agencies	TBD	AMCOM/AMRDEC, : RSA	14.166	5.579	Dec 2012	2.716	Dec 2013	-		-		-	-	22.461	-
Subtotal			46.692	38.542		25.381		-		-		-	-	110.615	-

Remarks
AWP-Alternative Warhead Program; Various-Competitive/Firm Fixed Price/Sole Source/Cost Plus Fixed Fee; TBD-To Be Determined; Cont.-Continuing; AMCOM-Army Materiel Command; AMRDEC-U.S. Army Research, Development and Engineering Command; RSA-Redstone Arsenal, Alabama; ATK-Alliant Techsystems, Inc.; MN-Minnesota; LMMFCS-Lockheed Martin Missile and Fire Control System; TX-Texas

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Support Contract	C/CPFF	Camber Research/ S3/TMI, : Alabama	0.546	0.213	Dec 2012	0.171	Dec 2013	-		-		-	-	0.930	-
Subtotal			0.546	0.213		0.171		-		-		-	-	0.930	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 78G / Gmlrs Alternative Warheads
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Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks
C/CPFF-Competitive/Cost Plus Fixed Fee; Cont.-Continuing; S3-Systems Studies Simulation, Inc.; TMI-Tec Master, Inc.

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support	TBD	WSMR, : NM	10.799	11.771	Dec 2012	10.033	Dec 2013	-		-		-	-	32.603	-
Subtotal			10.799	11.771		10.033		-		-		-	-	32.603	-

Remarks
TBD-To Be Determined; Cont.-Continuing; WSMR,NM-White Sands Missile Range, New Mexico

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	64.786	53.593	39.852	-	-	-	-	158.231	-

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) 78G / Gmlrs Alternative Warheads

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Engineering Development Testing (EDT)	2	2013	4	2013
Critical Design Review (CDR)	4	2013	4	2013
Production Qualification Testing (PQT)	4	2013	3	2014
Development Test/Operational Test (DT/OT)	3	2014	3	2014
Insensitive Munitions (IM) Testing	1	2014	3	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM				Project (Number/Name) DX8 / HIMARS Product Improvement Program			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DX8: HIMARS Product Improvement Program	-	-	1.257	2.994	-	2.994	6.182	6.935	-	-	-	17.368
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Project DX8 HIMARS Product Improvement Program previously funded on Project 090 MLRS HIMARS.

A. Mission Description and Budget Item Justification

The M142 High Mobility Artillery Rocket System (HIMARS) is a full spectrum, combat proven, all weather, 24/7 lethal and responsive, precision strike weapon system that fully supports more deployable, affordable and lethal, Brigade Combat Teams, Fires Brigades, Modular Forces, and Joint Expeditionary Forces. The HIMARS launcher is a C-130 transportable, wheeled, indirect fire, rocket/missile launcher capable of firing all rockets and missiles in the current and future Multiple Launch Rocket System (MLRS) Family of Munitions (MFOM) and Army Tactical Missile System (ATACMS) Family of Munitions (AFOM) engaging targets with precision out to ranges of 300 kilometers. HIMARS satisfies the Army's digitization requirements by interfacing with the Advanced Field Artillery Tactical Data System (AFATDS) fire support command and control system. The HIMARS product improvement program provides funding for research, development, test and integration efforts necessary for incorporation of advanced automotive, armor, armament, life cycle enhancements, system hardware and software technologies, including Common Operating Environment (COE) and Network Integrated Evaluation (NIE), obsolescence mitigation, reliability improvements, and decreasing the logistics footprint. This effort includes performing technical assessments, concept studies, and risk reduction efforts for incorporation of future requirements. The HIMARS product improvement program maintains compliance with intra-army interoperability and digital communications. HIMARS was deployed to Operation Iraqi Freedom (OIF) and is still supporting Operation Enduring Freedom (OEF) with great success by both US Army and Marine Corps units.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: MLRS Production Improvement Program (PIP)-HIMARS PIP	-	1.257	2.994
Articles:	-	-	-
Description: Improve system design and develop hardware and software integration with upcoming command and control initiatives to include the COE and the NIE. Perform technical assessments, concept studies, cost reduction, risk reduction, field issue resolution and required documentation concerning upgrades to enhanced command and control (C2), improved initialization, hardware and software obsolescence mitigation, tactical fire control, embedded training, launcher loader module electric drive, diagnostics/prognostics, alternate coupling, situational awareness, long range communication, automotive chassis life cycle enhancements and future munitions integration.			
FY 2014 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) DX8 / HIMARS Product Improvement Program

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
The focus of the FY2014 program is execution of enhancements to the fire control system and associated trainer updates as well as communications and battle command systems. Continued effort will be required to maintain C4I/interoperability certification and network interoperability certification. Continue technical assessments and concept studies in the areas of automotive chassis life cycle enhancements, hardware/software technologies and improved transportability to support evolving mission requirements, technology insertion planning and obsolescence mitigation. Improve system design and develop hardware and software integration with upcoming command and control initiatives to include the COE and the NIE. Begin analysis and development for integration of Fire Control System Update onto the HIMARS platform.			
<i>FY 2015 Plans:</i> The focus of the FY2015 program is execution of enhancements to the fire control system and associated trainer updates as well as communications and battle command systems. Continued effort will be required to maintain C4I/interoperability certification and network interoperability certification. Continue technical assessments and concept studies in the areas of automotive chassis life cycle enhancements, hardware/software technologies and improved transportability to support evolving mission requirements, technology insertion planning and obsolescence mitigation. Improve system design and develop hardware and software integration with upcoming command and control initiatives to include the COE and the NIE. Continue development for integration of Fire Control System Update onto the HIMARS platform.			
Accomplishments/Planned Programs Subtotals	-	1.257	2.994

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• C03000: HIMARS Launcher	12.051	-	-	-	-	-	-	-	-	-	12.051
• C67501: HIMARS Modifications	6.068	6.105	6.073	-	6.073	3.318	2.621	3.411	6.495	Continuing	Continuing

Remarks

D. Acquisition Strategy

The HIMARS product improvement program conducts concept studies to support obsolescence mitigation, automotive updates, and hardware/software enhancements. Development efforts underway include Enhanced C2 and efforts supporting interoperability certifications, information assurance compliance, and mitigating obsolescence of the fire control system on the M142 HIMARS. HIMARS follow-on technology insertion efforts include automotive chassis life cycle enhancements, fire control system obsolescence mitigation and associated enhancements to training devices as improvements when applicable.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) DX8 / HIMARS Product Improvement Program
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Program Management	C/TBD	PFRMS Project Office, Redstone Arsenal, Alabama : Various	0.000	-		0.050	Oct 2013	0.137	Oct 2014	-		0.137	0.366	0.553	-
Subtotal			0.000	-		0.050		0.137		-		0.137	0.366	0.553	-

Remarks
PFRMS - Precision Fires Rocket and Missile System; C - Competitive

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Other Government Agencies (OGA)	C/TBD	AMCOM, GSA, RSA : Various	0.000	-		0.075	Oct 2013	0.195	Oct 2014	-		0.195	0.540	0.810	-
Battle Command	SS/CPFF	CECOM, PEO STRI, AMRDEC, CGI, LMMFC : Various	0.000	-		0.956	Oct 2013	2.210	Oct 2014	-		2.210	6.861	10.027	-
Subtotal			0.000	-		1.031		2.405		-		2.405	7.401	10.837	-

Remarks
AMCOM - US Army Aviation & Missile Life Cycle Management Command; GSA - General Services Administration; RSA - Redstone Arsenal, Alabama; C - Competitive SS - Sole Source; CPFF - Cost Plus Fixed Fee; CECOM - US Army Communications Electronics Command; PEO STRI - Program Executive Office for Simulation, Training and Instrumentation; AMRDEC - Aviation and Missile Research, Development and Engineering Center; LMMFC - Lockheed Martin Missiles and Fire Control

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Support Contract	C/TBD	Camber Research, S3, TMI : Various	0.000	-		0.063	Oct 2013	0.165	Oct 2014	-		0.165	0.454	0.682	-
Subtotal			0.000	-		0.063		0.165		-		0.165	0.454	0.682	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) DX8 / HIMARS Product Improvement Program
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Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks
S3 - Systems, Studies, Simulation, Incorporated; TMI - Tec Masters, Incorporated

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support	C/TBD	Ft Hood, TX, ATEC, APG, MD, WSMR, RTC, RSA : Various	0.000	-		0.113	Oct 2013	0.287	Oct 2014	-		0.287	0.812	1.212	-
Subtotal			0.000	-		0.113		0.287		-		0.287	0.812	1.212	-

Remarks
ATEC - US Army Test and Evaluation Command; APG MD - Aberdeen Proving Grounds, Maryland; WSMR - White Sands Missile Range; RTC RSA - Redstone Test Center, Redstone Arsenal, Alabama

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-	1.257	2.994	-	2.994	9.033	13.284	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM	Project (Number/Name) DX8 / HIMARS Product Improvement Program

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Central Technical Support Facility Certification	[REDACTED]																											
Enhanced Command and Control Development and Testing	[REDACTED]																											
FCS-U Critical Design Review (CDR)	[REDACTED]																											
FCS-U Qualification Testing	[REDACTED]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0603778A / <i>MLRS PRODUCT IMPROVEMENT PROGRAM</i>	Project (Number/Name) DX8 / <i>HIMARS Product Improvement Program</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Central Technical Support Facility Certification	1	2014	4	2020
Enhanced Command and Control Development and Testing	1	2014	4	2020
FCS-U Critical Design Review (CDR)	4	2014	4	2014
FCS-U Qualification Testing	1	2015	1	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0603778A / MLRS PRODUCT IMPROVEMENT PROGRAM				Project (Number/Name) DZ8 / Long Range Precision Fires			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DZ8: Long Range Precision Fires	-	-	-	-	-	-	69.000	40.000	77.000	107.169	-	293.169
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Army G-3/5/7 has directed that Guided Multiple Launch Rocket System (GMLRS) Increment 4 change its name to Long-Range Precision Fires (LRPF) to better reflect the solution as an Army Tactical Missile System (ATACMS) replacement versus a follow-on increment to the GMLRS program.

The United States Army is funding the development of the LRPF under the DZ8-LRPF project code. LRPF is being developed as a non-cluster munition to provide Joint Force Command with a 24/7 all weather 300 kilometer long-range fires capability without placing aircraft and crews at risk.

The LRPF program currently has a Material Development Decision (MDD) scheduled for 1QFY14 with a tentative Milestone (MS) A scheduled for 2QFY15. Funding is being requested for in FY2016 to award Technology Maturation/Risk Reduction (TM/RR) contracts. LRPF will be developed via full and open competition carrying two or more contractors through the TM/RR Phase. LRPF is scheduled for a MS B in FY2018 and MS C in FY2021.

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

N/A

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

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0607141A / <i>Logistics Automation</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	-	3.715	3.654	-	3.654	3.661	3.665	3.667	3.672	Continuing	Continuing
DY1: <i>Logistics Information Warehouse (LIW)</i>	-	-	1.504	1.478	-	1.478	1.480	1.483	1.484	1.486	Continuing	Continuing
DY2: <i>Lead Material Integrator (LMI) (DST)</i>	-	-	2.211	2.176	-	2.176	2.181	2.182	2.183	2.186	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

Previously, these efforts were programmed and funded within the OSD PE 0303141 Global Combat Support System-Army (GCSS-A). In an effort to reflect only those funds supporting GCSS-A in that OSD PE, this OSD PE was established beginning in FY 2014.

A. Mission Description and Budget Item Justification

The Logistics Information Warehouse (LIW) has been designated by the Secretary of the Army as the primary system for the accessing, acquiring, and delivery of materiel data. This includes data from all sources designated as Authoritative, as well as, system derived data and appropriate reference data. This data will be used in support of materiel sourcing and distribution and other Materiel Enterprise missions. It enables Command visibility of business intelligence and resulting metrics for critical logistics components enabling enterprise-level analytics to be performed in support of the equipping mission within the Army's Force Generation (ARFORGEN) processes. LOGSA and its LIW suite of products and services provide the Army community with vital logistics data necessary for the planning, conducting and sustainment of war fighting capability worldwide. The LMI-DST directly supports Army Force Generation (ARFORGEN) by linking available equipment to the Generated Force model. Specifically, LMI-DST synchronizes an Army authoritative Demand Signal for manning, equipping, services & infrastructure and authoritative resourcing (money) information, resulting in an accurate prediction of a ready and properly equipped force.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0607141A / <i>Logistics Automation</i>
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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	3.717	3.717	-	3.717
Current President's Budget	-	3.715	3.654	-	3.654
Total Adjustments	-	-0.002	-0.063	-	-0.063
• Congressional General Reductions	-	-0.002			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-	-	-0.063	-	-0.063

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0607141A / <i>Logistics Automation</i>				Project (Number/Name) DY1 / <i>Logistics Information Warehouse (LIW)</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DY1: <i>Logistics Information Warehouse (LIW)</i>	-	-	1.504	1.478	-	1.478	1.480	1.483	1.484	1.486	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not Applicable.

A. Mission Description and Budget Item Justification

The Logistics Information Warehouse (LIW) is designated as the Army's authoritative materiel data repository. BENEFITS: As chartered by the Secretary of The Army, LIW will provide enterprise-accepted and trusted information for analysis, aggregation, and reuse in support of the Lead Materiel Integrator (LMI) mission. As an Army enterprise-level repository and retrieval system to facilitate accurate choices and rapid decision making. Specifically, LIW will provide all required data structured in a way that allows for querying and reporting; e.g., equipment authorizations, equipment on-hand, new procurement schedules, RESET production schedules and in-transit visibility from origin and distribution to final destination, in support of the information needs of the Army Materiel Command (AMC) and other command logistics managers. This includes data from all sources designated as authoritative, as well as system derived data and appropriate reference data. This data will be used in support of materiel sourcing and distribution and other Materiel Enterprise missions. LIW enables visibility of business intelligence and resulting metrics for critical logistics components enabling enterprise-level analytics to be performed in support of the equipping mission within the Army's ARFORGEN processes. LIW supports the tenants of Mission Command by logistically empowering the Commander to successfully integrate and synchronize logistics information with warfighter functions in time and space to maximize potential for mission success. ADDITIONAL CAPABILITIES: LIW provides the data and custom business intelligence environment to enable Command-specific analysis and presentation of business intelligence displays to satisfy unique command management requirements.

The Common CBM Data Warehouse (CCBMDW) is requesting RDT&E funds to develop a web interface that will allow users from RDECOM, the LCMC's, and the PEO's/PM to query, select, retrieve individual sensor files from the data base and designate a delivery mechanism (SFTP, HTTPS, Data service) in order that they can receive the selected files. This is a new capability that will replace the current manual method where an analyst calls LOGSA and request a data extract from the CCBMDW be sent to their location via pre-arranged methods. The new Web Interface will also serve as a platform to enable the user to extract individual data fields from the sensor files that are stored in the CCBMDW in the Army Bulk CBM Data (ABCD) format and download the individual data fields as opposed to the whole file or bundle of files.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

Title: LIW	FY 2013	FY 2014	FY 2015
	-	1.504	1.478
	Articles:	-	-
Description: Execution of tasks to create Army Logistics Repository.			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607141A / <i>Logistics Automation</i>	Project (Number/Name) DY1 / <i>Logistics Information Warehouse (LIW)</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<i>FY 2014 Plans:</i> Execute Priority Group 3 Sprint, continue Best of Breed.			
<i>FY 2015 Plans:</i> Execute Priority Group 3 Sprint, continue Best of Breed.			
Accomplishments/Planned Programs Subtotals	-	1.504	1.478

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

N/A

Remarks

D. Acquisition Strategy

Utilize contract services available through LITES contract vehicle in CHESS.

E. Performance Metrics

N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607141A / <i>Logistics Automation</i>	Project (Number/Name) DY1 / <i>Logistics Information Warehouse (LIW)</i>

FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Priority Group 3 Sprint, Best of Breed																												
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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607141A / <i>Logistics Automation</i>	Project (Number/Name) DY1 / <i>Logistics Information Warehouse (LIW)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Priority Group 3 Sprint, Best of Breed	4	2014	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607141A / <i>Logistics Automation</i>	Project (Number/Name) DY2 / <i>Lead Material Integrator (LMI) (DST)</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DY2: <i>Lead Material Integrator (LMI) (DST)</i>	-	-	2.211	2.176	-	2.176	2.181	2.182	2.183	2.186	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not Applicable.

A. Mission Description and Budget Item Justification

The Lead Materiel Integrator Decision Support Tool (LMI DST) is a software solution, resident within the Logistics Information Warehouse, that supports the Army Materiel Command in its mission as the Army Lead Materiel Integrator as well as materiel managers at Army Commands, Army Service Component Commands, Direct Reporting Units, Corps and Divisions with making informed equipping decisions. Capabilities to develop include: Dept. of the Army level equipment Divestiture Planner; Cross-Army Command Redistribution Candidate list (Readiness at Best Value to Army); Sandbox Course of Action Capability to enable users to analyze impact of potential Force and Authorization changes on equipment distribution; Equipment Modernization Level Reports to enable sourcing of the most modern equipment and divestiture of obsolete items; Readiness Cost Banding; Batch Move Planning; Synchronizing equipment moves to leverage the most cost effective transportation modes.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: LMI/DST	-	2.211	2.176
Articles:	-	-	-
Description: The Lead Materiel Integrator Decision Support Tool (LMI DST) is a software solution, resident within the Logistics Information Warehouse.			
FY 2014 Plans: Development of LMI DST Version 5.			
FY 2015 Plans: Development of LMI DST Version 5.			
Accomplishments/Planned Programs Subtotals	-	2.211	2.176

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

N/A

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army Date: March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607141A / <i>Logistics Automation</i>	Project (Number/Name) DY2 / <i>Lead Material Integrator (LMI) (DST)</i>
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D. Acquisition Strategy

The LMI DST Version 5 is a development effort to meet the Secretary of the Army intent in designating the Army Materiel Command as the Lead Materiel Integrator and the Logistics Information Warehouse (LIW) as the authoritative repository of Logistics domain data. The LMI DST integrates logistics domain data from the LIW with materiel demand requirements from the Readiness Enterprise to enable automated decision support for equippers throughout the Army. In August 2011, a sole-source contract was awarded to Pro Model Corporation to leverage their COTS modeling and simulation capability, the ProModel Application Framework, to develop the Lead Materiel Integrator Decision Support Tool, which is a GOTS product. Versions 1-3 were developed and released in six-month sprints under Pro Model. In January, 2013, the effort was moved under LOGSA's Information and Technology Services Contract, under which the latest version (V4) was released in June 2013. Requirements for additional major version releases are vetted and approved by a General Officer Steering Committee, comprised of representatives from ACOMs, ASCCs, and DRUs, and chaired by AMC HQ. Base year funding supports new development requirements approved by the GOSC.

E. Performance Metrics

N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607141A / <i>Logistics Automation</i>	Project (Number/Name) DY2 / <i>Lead Material Integrator (LMI) (DST)</i>
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	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Development of LMI DST Version 5	<div style="background-color: black; width: 100%; height: 15px; margin: 0 auto;"></div>
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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607141A / <i>Logistics Automation</i>	Project (Number/Name) DY2 / <i>Lead Material Integrator (LMI) (DST)</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Development of LMI DST Version 5	4	2014	4	2015

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0607664A / Biometrics Enabling Capability
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	-	-	1.332	-	1.332	11.156	7.825	3.064	3.072	Continuing	Continuing
EG4: Biometrics Enabling Capability	-	-	-	1.332	-	1.332	11.156	7.825	3.064	3.072	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Biometrics Enabling Capability (BEC) product office has full life-cycle management responsibility of the upgraded authoritative biometrics enterprise repository system, known as DoD Automated Biometrics Identification System (DoD ABIS). DoD ABIS is an information technology investment that supports identity superiority by providing the critical capability for Warfighters to identify known or suspected terrorists and third country nationals in the course of military operations. DoD ABIS is the authoritative biometrics enterprise system that provides matching, sharing and storing of biometrics data. The capability can receive multi-model biometrics submissions to include iris, face, palm and finger prints from biometrics collection devices, which will support the Warfighter in making, retain, capture or release decisions. The system has a direct impact on the availability of critical intelligence information that is of vital interest to DoD and other government agencies, including Department of Justice (DoJ), Federal Bureau of Investigation (FBI), Department of Homeland Security (DHS), and Department of State (DoS).

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	1.332	-	1.332
Total Adjustments	-	-	1.332	-	1.332
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-	-	1.332	-	1.332

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0607664A / <i>Biometrics Enabling Capability</i>				Project (Number/Name) EG4 / <i>Biometrics Enabling Capability</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EG4: <i>Biometrics Enabling Capability</i>	-	-	-	1.332	-	1.332	11.156	7.825	3.064	3.072	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Project 0607664A was created to clearly delineate between the Biometrics Enabling Capability and Family of Biometrics efforts beginning in FY 2015. Project 0607664A does not represent a New Start program, the funding in this PE was previously included in PE 0607665A.

A. Mission Description and Budget Item Justification

The Biometrics Enabling Capability (BEC) product office has full life-cycle management responsibility of the upgraded authoritative biometrics enterprise repository system, known as DoD Automated Biometrics Identification System (DoD ABIS). DoD ABIS is an information technology investment that supports identity superiority by providing the critical capability for Warfighters to identify known or suspected terrorists and third country nationals in the course of military operations. DoD ABIS is the authoritative biometrics enterprise system that provides matching, sharing and storing of biometrics data. The capability can receive multi-model biometrics submissions to include iris, face, palm and finger prints from biometrics collection devices, which will support the Warfighter in making, retain, capture or release decisions. The system has a direct impact on the availability of critical intelligence information that is of vital interest to DoD and other government agencies, including Department of Justice (DoJ), Federal Bureau of Investigation (FBI), Department of Homeland Security (DHS), and Department of State (DoS).

Justification:

FY2015 funding in the amount of \$1.332 million supports overall Program Management and government civilian salaries. The civilian resources provide critical system engineering and acquisition planning expertise in support of the DoD ABIS v1.2 development and acquisition planning efforts.

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

	FY 2013	FY 2014	FY 2015
Title: DoD ABIS v1.2	-	-	1.332
Description: Supports development and testing activities for the DoD ABIS v1.2.			
FY 2015 Plans: FY15 base RDTE funding will resource government civilian salaries to support systems engineering and testing activities in support of DoD ABIS v1.2.			
Accomplishments/Planned Programs Subtotals	-	-	1.332

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607664A / <i>Biometrics Enabling Capability</i>	Project (Number/Name) EG4 / <i>Biometrics Enabling Capability</i>

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>			<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• Other Procurement, Army Base: <i>Biometrics Enabling Capability-OPA</i>	-	3.800	-	-	-	6.701	3.750	3.745	3.809	Continuing	Continuing
• Operations and Maintenance: <i>Biometrics Enabling Capability-OMA</i>	-	7.250	6.602	-	6.602	6.735	6.629	6.829	6.958	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Army Acquisition Strategy for this program has changed based on an outdated Analysis of Alternatives (AoA). An update to the AoA will provide a new technological approach and inform the requirements document for JCIDS approval. Therefore, the Acquisition Strategy of the product office is to take on a bridging strategy for the interim DoD ABIS capability.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014				
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)								
2040 / 7				PE 0607664A / Biometrics Enabling Capability				EG4 / Biometrics Enabling Capability								
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
PM Management Services	C/FFP	Alexandria : Virginia	15.829	-		-		-		-		-	-	15.829	-	
Subtotal			15.829	-		-		-		-		-	-	15.829	-	
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Product Development	C/CPFF	Various : Various	81.349	-		-		-		-		-	-	81.349	-	
Subtotal			81.349	-		-		-		-		-	-	81.349	-	
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
PM Civilian Personnel	TBD	Alexandria : Virginia	3.358	-		-		1.332		-		1.332	Continuing	Continuing	Continuing	
Other Support Costs (Facility Related Expenses)	TBD	Alexandria : Virginia	0.794	-		-		-		-		-	-	0.794	-	
Subtotal			4.152	-		-		1.332		-		1.332	-	-	-	
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Test and Evaluation (System Testing)	MIPR	Army Test and Evaluation (ATEC); Joint Interopbility Test Command : Various Locations	0.792	-		-		-		-		-	-	0.792	-	
Subtotal			0.792	-		-		-		-		-	-	0.792	-	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army								Date: March 2014					
Appropriation/Budget Activity 2040 / 7			R-1 Program Element (Number/Name) PE 0607664A / <i>Biometrics Enabling Capability</i>				Project (Number/Name) EG4 / <i>Biometrics Enabling Capability</i>						
	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	102.122	-		-		1.332		-		1.332	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607664A / <i>Biometrics Enabling Capability</i>	Project (Number/Name) EG4 / <i>Biometrics Enabling Capability</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(1) Systems Engineering Support & Test Planning																												
(2) Operational Testing																												
(3) Data Center Consolidation																												
(4) Capability Drops & Technical Pace Plan																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607664A / <i>Biometrics Enabling Capability</i>	Project (Number/Name) EG4 / <i>Biometrics Enabling Capability</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
(1) Systems Engineering Support & Test Planning	1	2015	4	2015
(2) Operational Testing	1	2016	4	2016
(3) Data Center Consolidation	1	2017	2	2017
(4) Capability Drops & Technical Pace Plan	1	2017	4	2019

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Exhibit R-5, RDT&E Termination Liability: PB 2015 Army								Date: March 2014	
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0607664A / <i>Biometrics Enabling Capability</i>			Project (Number/Name) EG4 / <i>Biometrics Enabling Capability</i>	
Cost (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	
Program Termination Liability	-	-	-	1.132	-	-	-	-	

Notes

FY2015 Core funding in the amount of \$1.332 million supports overall Program Management and government civilian salaries. The civilian resources provide critical system engineering and acquisition planning expertise in support of the DoD ABIS v1.2 development and acquisition planning efforts.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0607865A / Patriot Product Improvement
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	44.581	35.034	152.991	-	152.991	143.939	186.072	162.462	206.821	Continuing	Continuing
DV8: Patriot Product Improvement	-	44.581	35.034	152.991	-	152.991	143.939	186.072	162.462	206.821	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

Increase in base dollars in FY 2015 addresses Upper-Tier Debris Mitigation (UTDM), continues Software Improvement for Threat Evolution, Radar Digital Processor (RDP) development and RDP Waveform Suite, THAAD/PATRIOT Interoperability efforts, Advanced Electronic Counter Measures (AECM), Tasks 2, 6, and 7 activities, Combat ID Enhancements, Common Warfighter-Machine Interface (CWMI) efforts, Launch on Remote, SIPRNet/NIPRNet Access Point/Troposcatter (SNAP TROPO) and Flat Panel Array Concept Development for the PATRIOT Product Improvement Program (PIP).

A. Mission Description and Budget Item Justification

PATRIOT is an advanced Surface-to-Air guided missile system with a high probability of kill, capable of operation in the presence of Electronic Countermeasures (ECM) and able to conduct multiple simultaneous engagements against high performance air breathing targets and ballistic missiles likely to be encountered by U.S. Forces. The PATRIOT Product Improvement Program provides for the upgrade of the PATRIOT System through individual materiel changes. The PATRIOT Product Improvement Program upgrades the PATRIOT system to address operational lessons learned, enhancements to joint force interoperability, and other system performance improvements to provide overmatch capability with the emerging threat. Efforts will be made to expedite PATRIOT materiel solutions (e.g. Radar Digital Processor, Communications Upgrades, address Tactical Ballistic Missile (TBM) capability, Combat ID, and Advanced ECM improvements) to both enhance capability and facilitate integration into the Integrated Air and Missile Defense (IAMD) architecture. Near term efforts are modifications and FY17 initiates competitive modernization through development of the Active Electronically Scanned Array (AESA) radar and Radar on the Net.

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	109.978	70.053	53.963	-	53.963
Current President's Budget	44.581	35.034	152.991	-	152.991
Total Adjustments	-65.397	-35.019	99.028	-	99.028
• Congressional General Reductions	-0.066	-0.019			
• Congressional Directed Reductions	-60.000	-35.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.392	-			
• Adjustments to Budget Years	-	-	99.028	-	99.028

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army		Date: March 2014			
Appropriation/Budget Activity		R-1 Program Element (Number/Name)			
2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>		PE 0607865A / <i>Patriot Product Improvement</i>			
• Other Adjustments	-3.939	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0607865A / <i>Patriot Product Improvement</i>				Project (Number/Name) DV8 / <i>Patriot Product Improvement</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DV8: <i>Patriot Product Improvement</i>	-	44.581	35.034	152.991	-	152.991	143.939	186.072	162.462	206.821	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Continues effort funded in PE 0203801A (Project 036).

A. Mission Description and Budget Item Justification

Software Improvement (modification) for threat evolution: Performs necessary analysis and development efforts to maintain PATRIOT system effectiveness against evolving threat technologies and specific threat capabilities. This effort identifies evolving threats and threat characteristics that might present a challenge to PATRIOT's current capabilities and develops initial concepts to maintain system effectiveness relative to these threats.

Upper-Tier Debris Mitigation (UTDM): Implements algorithms to mitigate system impacts of debris from Upper Tier intercepts associated with operating in the Ballistic Missile Defense System (BMDS) environment. Debris from Upper Tier intercepts can cause significant radar loading effects and the potential for erroneous engagements and missile wastage on debris.

Radar Digital Processor (RDP) Development: Incorporates improvements to mitigate radar hardware obsolescence, improves Reliability, Availability and Maintainability (RAM) and improves performance of the PATRIOT Radar Set against evolving threat sets. This program includes the implementation of Identification Friend or Foe (IFF) Mode 5 Level 1 / Level 2, and a Non-Cooperative Target Recognition (NCTR) Combat ID technique to mitigate potential fratricide risk, and the development of CONOPS to incorporate the new Combat ID capabilities into system operation. The RDP also provides the necessary radar processing capability to support follow-on EDP Tasks 6 and 7 to counter emerging threats and provide data necessary to support migration to IAMD. The RDP is a pre-requisite for migration to an IAMD Netted Sensor.

RDP Waveform Suite: Develops a comprehensive set of waveforms in the RDP to improve PATRIOT radar capabilities against current and evolving threats, including support to Task 6 and 7 efforts, and also implements advanced data collection enabled by the RDP to support further system improvements. The RDP implementation allows significant radar waveform improvements necessary to counter evolving threats.

SIPRNet/NIPRNet Access Point/Troposcatter (SNAP/TROPO): Provides hardware interfaces to support extended range communications within the battalion (TROPO) and Force Operations interfaces to satellite for access to SIPR/NIPR worldwide communication networks.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607865A / <i>Patriot Product Improvement</i>	Project (Number/Name) DV8 / <i>Patriot Product Improvement</i>
<p>THAAD/PATRIOT Interoperability: Implements improvements to THAAD/PATRIOT Interoperability and addresses Joint Defense Network (JDN) deficiencies that impact Tactical Ballistic Missile (TBM) battle management and force/engagement operations. Efforts will be concentrated on joint, collaborative force operations (defense design and planning) and enhanced Tactical Digital Information Link - Joint (TADIL J) interoperability.</p> <p>Advanced Electronic Counter Measures (AECM): This task investigates the implications of advanced technology Digital Radio Frequency Memory (DRFM) available on airborne platforms that enables new ECM techniques which could adversely affect Air and Missile Defense System effectiveness.</p> <p>Internet Protocol Commo Phase 1 Force Modification: Replacement of the current KG-194A encryptors in PATRIOT requires redesign of the basic PATRIOT shelter communications architecture to incorporate new hardware which interfaces the existing Integrated Digital Operator Control System (IDOCS) to new KIV-7M encryptors and provides an IP base backbone for range extension and over the air IP communications tunneling for Force Operations message traffic without impacting the Engagement Operations traffic.</p> <p>Task 2: Implements improved ground system and interceptor capabilities (PATRIOT Advanced Capability-2 / Guidance Enhanced Missiles(PAC-2/GEM), PATRIOT Advanced Capability-3 (PAC-3), and Missile Segment Enhancement (MSE) to counter stressing TBM threats.</p> <p>Task 6: Software improvements enhance discrimination of higher altitude TBM Re-entry Vehicles (RVs) from associated objects to support the full engagement capabilities of the interceptor. Longer-range detection and track, and improved high-altitude discrimination are required to achieve the required lethality performance against the RV and to mitigate missile wastage against separation debris. This task leverages the signal processing capabilities of the RDP, and supports the high altitude engagements required by the PATRIOT Advanced Capability-3 (PAC-3) and PAC-3 Missile Segment Enhancement (MSE) missiles.</p> <p>Task 7: Software improvements analyze existing and evolving TBM countermeasures and their effects on PATRIOT system effectiveness. Develop concepts to address countermeasure effects and ensure the PATRIOT system maintains its effectiveness. Develop detailed system requirements to implement concepts; design/code/test software implementation leveraging RDP, Modernized Adjunct Processor (MAP), Enhanced Weapons Control Computer - Emulator (EWCC-E) and Flight Solution Computer - Redesign (FSC-R) processing capabilities.</p> <p>Combat ID Enhancements: Develop and implement improvements to the RDP-C Combat ID capabilities and additional NCTR technique to further mitigate misclassification and fratricide risk, and to provide the Warfighter with improved situational awareness.</p> <p>Common Warfighter-Machine Interface (CWMI): Leverage modern manstation capabilities to implement CWMI concepts to improve training commonality and cost-efficiency, and to provide better situational awareness.</p> <p>PAC-3 Launch on Remote (LOR) is a software upgrade to the PATRIOT ground and missile systems that extends the capability of the PATRIOT system to engage Tactical Ballistic Missiles (TBM). LOR utilizes targeting data from existing fire control radars such as THAAD AN/TPY-2 and AEGIS AN/SPY-1 to launch a PAC-3 Missile Segment Enhancement (MSE) missile against challenging TBM threats before the PATRIOT radar can detect the incoming target. This allows for a significantly expanded PATRIOT defended area against TBMs when using the MSE missile and the Radar Digital Processor.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607865A / <i>Patriot Product Improvement</i>	Project (Number/Name) DV8 / <i>Patriot Product Improvement</i>
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Flat Panel Array Concept Development: This task provides studies for initial concepts and performance capabilities related to the implementation of an Active Electronically Scanned Array (AESA) transmitter/antenna into the PATRIOT radar. These assessments are needed to refine user community expectations and requirements, and to prepare a viable set of requirements to support a competitive modernization competition.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: PATRIOT Product Improvement	44.581	35.034	152.991
Articles:	-	-	-
Description: Software Improvement for Threat Evolution			
FY 2013 Accomplishments: Continued Software Improvement for Threat Evolution, Radar Digital Processor (RDP) development, THAAD/PATRIOT interoperability efforts, Advanced Electronic Counter Measures (AECM), Tasks 2 and 6, Actively Electronically Scanned Array (AESA) and Internet Protocol Commo Phase 1 Force Modernization.			
FY 2014 Plans: Continues Software Improvement for Threat Evolution. Radar Digital Processor (RDP) continues development to support U.S. FY 2016 fielding. Supports improvements for Advanced Electronic Counter Measures (AECM), SIPRNet/NIPRNet Access Point/Troposcatter (SNAP/TROPO), Combat ID Enhancements, and Task 6 efforts for PATRIOT Product Improvement Program.			
FY 2015 Plans: Continues Software Improvement for Threat Evolution. Radar Digital Processor development continues efforts to support U.S. FY 2016 fielding, providing the field with additional capability and growth potential to counter stressing threats. Begins RDP Waveform Suite development. Continues efforts and Advanced Electronic Counter Measures (AECM). Increase in base dollars in FY 2015 addresses Upper-Tier Debris Mitigation (UTDM), THAAD/PATRIOT Interoperability efforts, Tasks 2, 6, and 7 activities, Combat ID Enhancements, Common Warfighter-Machine Interface (CWMI) efforts, Flat Panel Array Concept Development and Launch on Remote (LOR) for the PATRIOT Product Improvement Program (PIP).			
Accomplishments/Planned Programs Subtotals	44.581	35.034	152.991

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

N/A

Remarks

The improvements/enhancements developed through the PATRIOT Product Improvement Program (PIP) are procured and installed under the MSLS (procurement) appropriation PATRIOT Mods (C50700).

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607865A / Patriot Product Improvement	Project (Number/Name) DV8 / Patriot Product Improvement

D. Acquisition Strategy

The design objective of the PATRIOT system was to provide a baseline system capable of modification to cope with continuing threat evolution. This program minimizes technological risks and provides a means of enhancing system capability through planned upgrades of deployed systems. The PATRIOT Product Improvement Program upgrades the PATRIOT system to address operational lessons learned, enhancements to joint force interoperability and communications, and other system performance improvements to provide overmatch capability against the emerging threat. Upgrades are implemented through individual hardware and software materiel changes and fielded incrementally. This program encompasses several changes which will require the use of a variety of acquisition methods to develop, test, procure and field.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607865A / Patriot Product Improvement	Project (Number/Name) DV8 / Patriot Product Improvement
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Program Management	Various	RSA, AL : MIPR	0.000	0.538	Oct 2012	0.416	Oct 2013	0.320	Oct 2014	-		0.320	Continuing	Continuing	-
U.S. Contracts	C/FFP	Intuitive Research and Technology Corp. (IRTC) : Huntsville, AL	0.000	0.361	Jan 2013	0.250	Feb 2014	1.450	Feb 2015	-		1.450	Continuing	Continuing	-
Subtotal			0.000	0.899		0.666		1.770		-		1.770	-	-	-

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Software Improvement for Threat Evolution	Various	Multiple : Multiple	0.000	5.370	Jan 2013	8.600	Jan 2014	10.000	Jan 2015	-		10.000	Continuing	Continuing	-
Upper Tier Debris Mitigation (UTDM)	Various	Multiple : Multiple	0.000	-		-		4.800	Jan 2015	-		4.800	-	4.800	-
Radar Digital Processor (RDP) Development	Various	Multiple : Multiple	0.000	23.300	Jan 2013	18.800	Jan 2014	8.700	Jan 2015	-		8.700	-	50.800	-
SNAP/TROPO	Various	Multiple : Multiple	0.000	-		0.500	Feb 2014	-		-		-	-	0.500	-
RDP Waveform Suite	Various	Multiple : Multiple	0.000	-		-		6.500	Jan 2015	-		6.500	-	6.500	-
THAAD PATRIOT Interoperability	Various	Multiple : Multiple	0.000	1.200	Jan 2013	-		5.600	Jan 2015	-		5.600	-	6.800	-
Advanced Electronic Counter Measures (AECM)	Various	Multiple : Multiple	0.000	3.700	Jan 2013	3.000	Jan 2014	24.522	Jan 2015	-		24.522	Continuing	Continuing	Continuing
Internet Protocol Commo Phase 1 Force Modernization	Various	Multiple : Multiple	0.000	2.400	Jan 2013	0.300	Jan 2014	-		-		-	-	2.700	-
Task 2	Various	Multiple : Multiple	0.000	5.200	Jan 2013	-		14.184	Jan 2015	-		14.184	Continuing	Continuing	Continuing
Task 6	Various	Multiple : Multiple	0.000	2.100	Jan 2013	2.000	Feb 2014	18.944	Jan 2015	-		18.944	Continuing	Continuing	Continuing
Task 7	Various	Multiple : Multiple	0.000	-		-		17.310	Jan 2015	-		17.310	-	17.310	-
Combat ID Enhancements	Various	Multiple : Multiple	0.000	-		0.800	Feb 2014	28.464	Jan 2015	-		28.464	-	29.264	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607865A / Patriot Product Improvement	Project (Number/Name) DV8 / Patriot Product Improvement
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Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Common Warfighter-Machine Interface (CWMI)	Various	Multiple : Multiple	0.000	-		-		5.000		-		5.000	-	5.000	-
Launch on Remote (LOR)	Various	Multiple : Multiple	0.000	-		-		5.700	Jan 2015	-		5.700	-	5.700	-
Flat Panel Array Concept Development	Various	Multiple : Multiple	0.000	-		-		1.000	Jan 2015	-		1.000	-	1.000	-
Subtotal			0.000	43.270		34.000		150.724		-		150.724	-	-	-

Remarks
The contract method type Sole Source/Various is Fixed Price Level of Effort which includes Cost Plus Fixed Fee for material, ODC, and travel.

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
RDEC and Other Govt Agencies	Various	RSA, AL : MIPR	0.000	0.412	Jan 2013	0.368	Jan 2014	0.497	Jan 2015	-		0.497	Continuing	Continuing	-
Subtotal			0.000	0.412		0.368		0.497		-		0.497	-	-	-

			Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	44.581	35.034	152.991	-	152.991	-	-	-

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0607865A / <i>Patriot Product Improvement</i>	Project (Number/Name) DV8 / <i>Patriot Product Improvement</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Software Build	4	2005	4	2019
(1) PDB 7 Fielding Modern Adjunct Processor (MAP)	3	2013	2	2016
Radar Digital Processor Development	1	2012	4	2014
(2) PDB 8 Fielding Radar Digital Processor (RDP)	4	2014	2	2019
Product Improvement Program	1	2013	4	2019

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0102419A / <i>Aerostat Joint Project Office</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	142.508	83.406	54.076	-	54.076	50.167	39.590	2.566	0.003	-	372.316
E55: <i>Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS</i>	-	142.508	83.406	54.076	-	54.076	50.167	39.590	2.566	0.003	-	372.316

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) is a supporting program of the Army and Joint Integrated Air and Missile Defense, providing persistent, over the horizon surveillance and fire control quality data on Army and Joint networks enabling protection of the U.S. and coalition forces as well as geopolitical assets from Cruise Missiles, Aircraft, Unmanned Air Vehicles, Tactical Ballistic Missiles, Large Caliber Rockets, and Surface Moving Targets.

A JLENS Orbit consists of two systems: a fire control radar system and a wide-area surveillance radar system. Each radar system consists of a separate 74-meter tethered aerostat, mobile mooring station, radar and communications payload, processing station, and associated ground support equipment. The systems are designed to work together, but can operate independently. The JLENS Orbit is transportable by road, rail, sea and air.

JLENS uses advanced sensor and networking technologies to provide persistent, 360-degree, wide-area surveillance and precision tracking of Land Attack Cruise Missiles and other types of Air Breathing Threats. This information is distributed via joint service networks and provides fire control quality data to Surface to Air missile systems such as Army Patriot and Navy Aegis, increasing the weapons' capabilities by allowing systems to engage targets normally below, outside or beyond surface based weapons' field of view. JLENS also provides fire control quality data to fighter aircraft allowing them to engage hostile threats from extended ranges, and contributes to the development of a single integrated air picture.

JLENS Product Office (JPO) demonstrated the system's operational capability with the Weapon Systems Evaluation Program (WSEP) exercise using JLENS with an United States Air Force (USAF) operational aircraft and Norwegian Advanced Surface to Air Missile System (NASAMS) to track and neutralize targets in August 2013.

Guidance from the Senate Appropriations Committee - Defense (SAC-D) congressional marks language requires that the JLENS Research, Development, Test, and Evaluation (RDT&E) parent funding line be divided between two separate funding lines, Engineering and Manufacturing Development (EMD) and Combatant Command (COCOM) Exercise, which are summed under the parent funding line. The EMD line will be funded at \$60.000 million and the COCOM Exercise line will be funded at \$23.406 million for a total of \$83.406 million in Fiscal Year (FY) 2014. This guidance was not reflected in the FY 2015 President's Budget, and The Army Budget Office will not separate these funding lines in the P&R Form database until the FY 2016 President's Budget submission.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0102419A / <i>Aerostat Joint Project Office</i>
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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	190.422	98.450	46.600	-	46.600
Current President's Budget	142.508	83.406	54.076	-	54.076
Total Adjustments	-47.914	-15.044	7.476	-	7.476
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-30.500	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-4.455	-			
• Adjustments to Budget Years	-	-15.044	7.476	-	7.476
• Other Adjustments	-12.959	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0102419A / Aerostat Joint Project Office				Project (Number/Name) E55 / Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
E55: Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS	-	142.508	83.406	54.076	-	54.076	50.167	39.590	2.566	0.003	-	372.316
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) is a supporting program of the Army and Joint Integrated Air and Missile Defense, providing persistent, over the horizon surveillance and fire control quality data on Army and Joint networks enabling protection of the U.S. and coalition forces as well as geopolitical assets from Cruise Missiles, Aircraft, Unmanned Air Vehicles, Tactical Ballistic Missiles, Large Caliber Rockets, and Surface Moving Targets.

A JLENS Orbit consists of two systems: a fire control radar system and a wide-area surveillance radar system. Each radar system consists of a separate 74-meter tethered aerostat, mobile mooring station, radar and communications payload, processing station, and associated ground support equipment. The systems are designed to work together, but can operate independently. The JLENS Orbit is transportable by road, rail, sea and air.

JLENS uses advanced sensor and networking technologies to provide persistent, 360-degree, wide-area surveillance and precision tracking of Land Attack Cruise Missiles and other types of Air Breathing Threats. This information is distributed via joint service networks and provides fire control quality data to Surface to Air missile systems such as Army Patriot and Navy Aegis, increasing the weapons' capabilities by allowing systems to engage targets normally below, outside or beyond surface based weapons' field of view. JLENS also provides fire control quality data to fighter aircraft allowing them to engage hostile threats from extended ranges, and contributes to the development of a single integrated air picture.

JLENS Product Office (JPO) demonstrated the system's operational capability with the Weapon Systems Evaluation Program (WSEP) exercise using JLENS with an United States Air Force (USAF) operational aircraft and Norwegian Advanced Surface to Air Missile System (NASAMS) to track and neutralize targets in August 2013.

Guidance from the Senate Appropriations Committee - Defense (SAC-D) congressional marks language requires that the JLENS Research, Development, Test, and Evaluation (RDT&E) parent funding line be divided between two separate funding lines, Engineering and Manufacturing Development (EMD) and Combatant Command (COCOM) Exercise, which are summed under the parent funding line. The EMD line will be funded at \$60.000 million and the COCOM Exercise line will be funded at \$23.406 million for a total of \$83.406 million in Fiscal Year (FY) 2014. This guidance was not reflected in the FY 2015 President's Budget, and The Army Budget Office will not separate these funding lines in the P&R Form database until the FY 2016 President's Budget submission.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Engineering and Manufacturing Development (EMD) phase contract activity	95.823	-	-
Articles:	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0102419A / Aerostat Joint Project Office	Project (Number/Name) E55 / Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>Description: Continue EMD phase contract activities.</p> <p>FY 2013 Accomplishments: Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) successfully completed Early User Test (EUT) 1 in Dec 2012 and EUT-2 in Jun 2013. Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) conducted a live exercise with an United States Air Force (USAF) operational aircraft for the Integrated Fire Control (IFC) event in July 2013. Participated in the Weapon Systems Evaluation Program (WSEP) and successfully acquired and passed target information to an USAF operational aircraft and Norwegian Advanced Surface to Air Missile System (NASAMS) in Aug 2013. Engineering activities continued with implementation of corrective actions to correct technical issues from EUT and conducted a verification audit of the JLENS to verify contractual requirements are being met.</p>			
<p>Title: Government System Test and Evaluation (STE)</p> <p align="right">Articles:</p> <p>Description: Government STE program in support of EMD.</p> <p>FY 2013 Accomplishments: Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) successfully completed EUT 1 in Dec 2012 and EUT-2 in Jun 2013. Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) conducted a live exercise with an USAF operational aircraft for the IFC event in July 2013. Participated in the WSEP and successfully acquired and passed target information to an USAF Operational aircraft and NASAMS in Aug 2013. Engineering activities continued with implementation of corrective actions to correct technical issues from EUT and conducted a verification audit of the JLENS to verify contractual requirements are being met.</p> <p>FY 2014 Plans: Support closeout of EMD activities, provides support and materials for Identification Friend or Foe (IFF) Mode 5 certification, Cooperative Engagement Capability (CEC) testing, safety assessment for the Combatant Command (COCOM) Exercise, and shutdown of the testing facility at White Sands Missile Range, NM (WSMR). Perform technical assessments, studies, cost reduction, risk reduction, and complete required program documentation. All Government System Test and Evaluation costs will be accounted for under the EMD funding line.</p>	20.011 -	2.875 -	- -
<p>Title: Engineering and Manufacturing Development (EMD) Phase Other Contractor/Other Government Agencies (OGAs) Support</p> <p align="right">Articles:</p> <p>Description: Other contracts and OGAs support of Engineering and Manufacturing Development (EMD) phase activities. Perform technical assessments, concept studies, cost reduction, risk reduction and required documentation.</p>	19.585 -	7.643 -	- -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0102419A / Aerostat Joint Project Office	Project (Number/Name) E55 / Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p><i>FY 2013 Accomplishments:</i> Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) successfully completed Early User Test (EUT) 1 in Dec 2012 and EUT-2 in Jun 2013. Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) conducted a live exercise with an United States Air Force (USAF) operational aircraft for the Integrated Fire Control (IFC) event in July 2013. Participated in the Weapon Systems Evaluation Program (WSEP) and successfully acquired and passed target information to an USAF operational aircraft and Norwegian Advanced Surface to Air Missile System (NASAMS) in Aug 2013. Continued to support EMD activities. Continued engineering support, soldier training, and live fire tests. Supported implementation of corrective actions, verification of contract requirements and initiation of contract closeout. Performed technical assessments, studies, cost reduction, risk reduction, and completed required program documentation.</p> <p><i>FY 2014 Plans:</i> Support closeout of EMD activities, provides support and materials for Identification Friend or Foe (IFF) Mode 5 certification, Cooperative Engagement Capability (CEC) testing, safety assessment for the Combatant Command (COCOM) Exercise, shutdown of facilities at White Sands Missile Range, NM (WSMR), and the emplacement and checkout of the orbit at Aberdeen Proving Grounds, MD (APG) in preparation for the COCOM Exercise in the National Capital Region (NCR) in FY15. Perform technical assessments, studies, cost reduction, risk reduction, and complete required program documentation. All EMD Phase Other Contractor/OGAs Support costs will be accounted for under the EMD funding line.</p>			
<p><i>Title:</i> Software Maintenance and Engineering Support</p> <p align="right"><i>Articles:</i></p> <p><i>Description:</i> Contract and Government support for software maintenance and upgrades and engineering support.</p> <p><i>FY 2014 Plans:</i> Contract and Government support for software maintenance, tech refresh/upgrades, reliability improvements, and engineering support after conclusion of the EMD contract and transition to COCOM Exercise. Perform technical assessments, studies, cost reduction, risk reduction, and complete required program documentation. All Software Maintenance and Engineering Support costs will be accounted for under the EMD funding line.</p>	-	43.640	-
	-	-	-
<p><i>Title:</i> Government Program Management (PM) Support</p> <p align="right"><i>Articles:</i></p> <p><i>Description:</i> Provide Government PM support of Engineering and Manufacturing Development (EMD) activities.</p> <p><i>FY 2013 Accomplishments:</i> Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) successfully completed Early User Test (EUT) 1 in Dec 2012 and EUT-2 in Jun 2013. JLENS conducted a live exercise with an United States Air Force (USAF) operational</p>	2.319	5.590	-
	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0102419A / Aerostat Joint Project Office	Project (Number/Name) E55 / Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>aircraft for the Integrated Fire Control (IFC) event in July 2013. Participated in the Weapon Systems Evaluation Program (WSEP) and successfully acquired and passed target information to an United States Air Force (USAF) operational aircraft and Norwegian Advanced Surface to Air Missile System (NASAMS) in Aug 2013. Continued Government PM support of EMD activities. Managed implementation of corrective actions, verification of contract requirements and initiation of contract closeout.</p> <p>FY 2014 Plans: Provides PM oversight of the contract and government software maintenance, upgrades, and engineering support activities after conclusion of the EMD program and transition to Combatant Command (COCOM) Exercise, Support closeout of EMD activities, provides support and materials for Identification Friend or Foe (IFF) Mode 5 certification, Cooperative Engagement Capability (CEC) testing, safety assessment for the COCOM Exercise, shutdown of facilities at White Sands Missile Range, NM (WSMR), and the emplacement and checkout of the orbit at Aberdeen Proving Grounds, MD (APG) in preparation for COCOM Exercise in the National Capital Region (NCR) in FY15. Perform technical assessments, studies, cost reduction, risk reduction, and complete required program documentation. All Government PM Support costs will be accounted for under the EMD funding line.</p>			
<p>Title: Government Furnished Equipment (GFE) Integration</p> <p align="right">Articles:</p> <p>Description: The GFE will be provided to the Prime Contractor for hardware and system integration.</p> <p>FY 2013 Accomplishments: The GFE will continue to be provided to the Prime Contractor for hardware and system integration.</p> <p>FY 2014 Plans: The GFE will continue to be provided to the Prime Contractor for hardware and system integration. Perform technical assessments, studies, cost reduction, risk reduction, and complete required program documentation. All GFE Integration costs will be accounted for under the EMD funding line.</p>	4.770 -	0.252 -	- -
<p>Title: Combatant Command (COCOM) Exercise</p> <p align="right">Articles:</p> <p>Description: Planning and execution of the Secretary of Defense directed COCOM Exercise.</p> <p>FY 2014 Plans: Provides for pre-site development activities at Aberdeen Proving Ground, MD (APG) (wetlands mitigation, unexploded ordnance removal, bunker refurbishment, etc), establishment of a Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) Forward presence (personnel, facilities, etc), packing and shipment of an Orbit from Utah Test and Training Range (UTTR) to APG, the installation, checkout, and testing of the Surveillance Radar (SuR) at APG prior to initiation of the Exercise extended test program in FY15, and government program management support of the Operational Assessment and COCOM</p>	- -	23.406 -	54.076 -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0102419A / Aerostat Joint Project Office	Project (Number/Name) E55 / Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Exercise. Perform technical assessments, studies, cost reduction, risk reduction, and complete required program documentation. All COCOM Exercise costs will be accounted for under the COCOM Exercise funding line.			
FY 2015 Plans: Provides for the installation, checkout, and testing of the Fire Control Radar (FCR) at APG, new equipment training, execution of operations of the COCOM Exercise extended test program in support of North American Aerospace Defense Command (NORAD)/United States Northern Command (NORTHCOM), and government program management support of the COCOM Exercise. Perform technical assessments, studies, cost reduction, risk reduction, and complete required program documentation. All COCOM Exercise costs will be accounted for under the COCOM Exercise funding line.			
Accomplishments/Planned Programs Subtotals	142.508	83.406	54.076

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• PE 0604869A, Proj M06: <i>Proj M06, Patriot/MEADS Combined Aggregate Program (CAP)</i>	348.234	-	-	-	-	-	-	-	-	-	348.234
• PE 0605456A, Proj PA3: <i>Proj PA3, PAC-3/MSE Missile</i>	63.123	68.807	35.009	-	35.009	2.271	-	-	-	Continuing	Continuing
• SSN C53101: <i>MSE Missile</i>	8.249	690.401	384.605	-	384.605	419.791	422.527	458.724	497.553	Continuing	Continuing
• PE 0205456, Proj EF9: <i>Proj EF9, System Integration and Test</i>	-	-	78.758	-	78.758	64.628	67.461	65.734	117.666	Continuing	Continuing
• SSN C50016: <i>Lower Tier Air and Missile Defense (AMD)</i>	-	-	110.300	-	110.300	116.416	131.549	114.678	113.281	Continuing	Continuing
• PE 0604319A Proj DU3: <i>Proj DU3, IFPC2 (FY 20011/2012 PE0603305A IFPC II-Intercept)</i>	25.710	79.190	96.177	-	96.177	156.523	90.980	58.214	27.663	Continuing	Continuing
• PE 0605457A, Proj S40: <i>Proj S40, Army Integrated Air and Missile Defense (AIAMD)</i>	233.892	369.452	142.584	-	142.584	215.659	228.791	170.828	154.565	Continuing	Continuing
• SSN ZBZ5075: <i>Army IAMD Battle Command System (IBCS)</i>	-	-	-	-	-	21.091	206.300	298.990	379.981	Continuing	Continuing
• PE 0604820A, Proj E10: <i>Proj E10, SENTINEL</i>	3.734	1.548	5.224	-	5.224	12.213	11.389	10.906	12.132	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0102419A / Aerostat Joint Project Office	Project (Number/Name) E55 / Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS

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

Line Item	FY 2013	FY 2014	FY 2015	FY 2015	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	Cost To	
			Base	OCO	Total					Complete	Total Cost
• PE 0604741A, Proj 126, 146, 149: Air Defense C2I Eng Dev	42.876	18.284	15.906	-	15.906	20.248	19.632	19.878	20.165	Continuing	Continuing

Remarks

This is a supporting program of the Army Integrated Air and Missile Defense (IAMD) architecture.

D. Acquisition Strategy

The Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) Operational Requirements Document (ORD) calls for initial fielding to Block I requirements (tethered aerostat platforms for Fire Control and Surveillance radars), followed by fielding of Block II (untethered platforms for Fire Control and Surveillance radars), and Block III (both radars on a single untethered platform). There is currently no funding beyond Block I.

On 28 Jun 05, the Defense Acquisition Board (DAB) approved the JLENS program for entry into Engineering and Manufacturing Development (EMD) as recommended by the Army Acquisition Executive. The DAB elected to maintain oversight of JLENS as an Acquisition Category (ACAT) 1D program as stated in the Acquisition Decision Memorandum (ADM) signed on August 5, 2005.

On 24 May 2012, the Acting Defense Acquisition Executive (DAE) signed the JLENS Nunn-McCurdy (NM) ADM certifying the restructured JLENS Program, and signed a memorandum rescinding the Milestone B approval for the JLENS program, granted on August 5, 2005. The ADM directs the Army to restructure the JLENS program to consist of two EMD orbits; complete scheduled EMD test and evaluation to include the Naval Integrated Fire Control-Counter Air demonstration, Limited User Test, Developmental Test 2, and Developmental Test 3 that concludes in 4th Quarter Fiscal Year 2013 (4QFY2013); and to assist in site selection and planning for the employment of one JLENS orbit to support an operational Continental United States based exercise when a location is determined and orders are approved by the National Command Authority. Letters were provided to Congress notifying them that the NM review was complete and program was certified and restructured as detailed above.

The Joint Requirements Oversight Council (JROC) reviewed the results of the Army's 60 Day Deep-Dive employment assessment of JLENS for Homeland Defense. The JROC concurs with the proposed JLENS employment to Aberdeen Proving Ground, MD for an operational exercise duration Fiscal Year 2014-2017.

The JLENS Acquisition Program Baseline (APB) was reset by the Nunn-McCurdy Process in accordance with 10 U.S.C. § 2435(d). The proposed APB was signed by the Army Acquisition Executive (AAE) on 10 July 2013 and the DAE on 8 August 2013. The new APB reclassifies JLENS as an ACAT IC program and removes all Nunn-McCurdy unit cost breaches and reporting requirements.

Guidance from the Senate Appropriations Committee - Defense (SAC-D) congressional marks language requires that the JLENS Research, Development, Test, and Evaluation (RDT&E) parent funding line be divided between two separate funding lines, Engineering and Manufacturing Development (EMD) and Combatant Command (COCOM) Exercise, which are summed under the parent funding line. The EMD line will be funded at \$60.000 million and the COCOM Exercise line will be funded at

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0102419A / <i>Aerostat Joint Project Office</i>	Project (Number/Name) <i>E55 / Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS</i>

\$23.406 million for a total of \$83.406 million in Fiscal Year (FY) 2014. This guidance was not reflected in the FY 2015 President's Budget, and The Army Budget Office will not separate these funding lines in the P&R Form database until the FY 2016 President's Budget submission.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0102419A / Aerostat Joint Project Office	Project (Number/Name) E55 / Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Engineering and Manufacturing Development (EMD) Government Program Management	Various	PEO Missiles and Space : Various	22.835	2.319	Dec 2012	5.590		-		-		-	-	30.744	-
Subtotal			22.835	2.319		5.590		-		-		-	-	30.744	-

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Technology Development (TD) Phase Contracts and Government	Various	Various : Multiple	301.083	-		-		-		-		-	-	301.083	-
Contractor Engineering and Manufacturing Development (EMD) Hardware/Software	SS/CPIF	Raytheon Systems Co. : Andover, MA	1,608.816	74.627	Dec 2012	-		-		-		-	-	1,683.443	1,688.627
EMD Other Government Agency System Engineering/Logistics	Various	Multiple : Various	48.700	17.272	Dec 2012	6.725		-		-		-	-	72.697	-
Lightweight X-Band Radar Antenna	Various	Various : Various	7.811	-		-		-		-		-	-	7.811	-
EMD System Engineering/Logistics Contracts	Various	Multiple : Various	150.800	2.313	Dec 2012	0.918		-		-		-	-	154.031	-
EMD Government Furnished Equipment (GFE) Various	Various	Multiple : Various	23.446	0.548	Dec 2012	0.227		-		-		-	-	24.221	-
EMD GFE - Cooperative Engagement Transmission Processing Set (CETPS)	Various	Multiple : Various	41.622	4.222		0.025		-		-		-	-	45.869	-
EMD Organizational Support Equipment	Various	Multiple : Various	18.650	-		-		-		-		-	-	18.650	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0102419A / Aerostat Joint Project Office	Project (Number/Name) E55 / Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS
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Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Software maintenance and upgrades and engineering support - Contracts and Government	Various	Multiple : Various	0.000	-		43.640		-		-		-	-	43.640	-
Subtotal			2,200.928	98.982		51.535		-		-		-	-	2,351.445	1,688.627

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
TD Phase Miscellaneous Support	Various	Various : Multiple	2.084	-		-		-		-		-	-	2.084	-
Subtotal			2.084	-		-		-		-		-	-	2.084	-

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Technology Development (TD) Phase Test Bed Maintenance	SS/CPFF	Clark and Stender (CAS), Inc. : TX/NM	3.056	-		-		-		-		-	-	3.056	3.056
Engineering and Manufacturing Development (EMD) Contractor System Test and Evaluation	SS/CPFF	Raytheon Systems Co. : MA/CA/FL/TX	105.119	21.196		-		-		-		-	-	126.315	141.100
EMD Government System Test and Evaluation	Various	Multiple : Various	119.026	20.011	Dec 2012	2.875		-		-		-	-	141.912	-
Combatant Command (COCOM) Exercise-Operations & Maintenance Contract	Various	Multiple : Various	0.000	-		14.392	Aug 2014	33.303		-		33.303	60.120	107.815	-

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0102419A / Aerostat Joint Project Office	Project (Number/Name) E55 / Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS
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	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Site Design, Construction, and System Checkout	██████████																											
Site 1 (Surveillance Radar (SuR))					██████████																							
Site 2 (Fire Control Radar (FCR))					██████████																							
Operations					██																							
Surveillance System (SuS) Initial Capability Delivery (ICD)					████																							
Fire Control System (FCS) Initial Capability Delivery (ICD)									████																			
Orbit Initial Capability Delivery (ICD)									████																			
Combatant Command (COCOM) Assessment									████████████████																			
Enduring Operations Decision Point													████															
Operational Exercise													██															
Training	██																											
Initial Training	██████████																											
New Equipment Training I					██████████																							
Crew Certification									████																			
New Equipment Training II									██████████																			
New Equipment Training III													████															

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0102419A / Aerostat Joint Project Office	Project (Number/Name) E55 I Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Engineering & Manufacturing Development (EMD)	1	2013	3	2014
Testing	3	2013	4	2014
Early User Test II	3	2013	3	2013
Fighter Integrated Fire Control (IFC)	3	2013	4	2013
Weapon Systems Evaluation Program (WSEP)	4	2013	4	2013
Engineering & Manufacturing Development (EMD) Key Events	1	2013	3	2014
Acquisition Decision Memorandum (ADM)/Acquisition Program Baseline (APB)	4	2013	4	2013
Defense Acquisition Executive (DAE) Exercise Update	4	2013	4	2013
White Sands Missile Range, NM (WSMR) Closure	1	2014	1	2014
Functional Configuration Audit (FCA)	1	2014	1	2014
Orbit Verification and Validation (V&V) Start	3	2014	3	2014
Orbit Verification and Validation (V&V) End	4	2014	4	2014
Utah Test & Training Range, UT (UTTR) Drawdown	4	2014	4	2014
Combatant Command (COCOM) Exercise	4	2012	1	2018
Joint Requirements Oversight Council Memorandum (JROCOM)	2	2013	2	2013
Military Construction (MILCON) Planning	1	2013	2	2014
Planning	1	2013	2	2014
Funds Available	2	2014	2	2014
Military Construction Contract Award	2	2014	2	2014
Site Design, Construction, and System Checkout	1	2013	1	2014
Site 1 (Surveillance Radar (SuR))	2	2014	4	2014
Site 2 (Fire Control Radar (FCR))	3	2014	1	2015

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0102419A / Aerostat Joint Project Office	Project (Number/Name) E55 / Jnt Land Atk Msl Def Elevated Netted Sensor-JLENS
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Events	Start		End	
	Quarter	Year	Quarter	Year
Operations	3	2014	1	2018
Surveillance System (SuS) Initial Capability Delivery (ICD)	4	2014	4	2014
Fire Control System (FCS) Initial Capability Delivery (ICD)	1	2015	1	2015
Orbit Initial Capability Delivery (ICD)	1	2015	1	2015
Combatant Command (COCOM) Assessment	1	2015	4	2015
Enduring Operations Decision Point	4	2015	4	2015
Operational Exercise	1	2016	1	2018
Training	1	2013	4	2015
Initial Training	1	2013	4	2013
New Equipment Training I	2	2014	3	2014
Crew Certification	4	2014	4	2014
New Equipment Training II	1	2015	2	2015
New Equipment Training III	1	2016	1	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203726A / <i>Adv Field Artillery Tactical Data System</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	26.216	25.507	22.374	-	22.374	41.034	31.420	29.512	33.637	Continuing	Continuing
322: <i>Adv Field Artillery Tactical Data System(AFA)</i>	-	22.851	18.947	-	-	-	-	-	-	-	-	41.798
DU5: <i>AFATDS Increment II</i>	-	-	-	22.374	-	22.374	41.034	31.420	29.512	33.637	-	157.977
F19: <i>JADOCS</i>	-	3.365	6.560	-	-	-	-	-	-	-	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

AFATDS Increment 2 is the automated Command and Control (C2) system (0203728A) for the ground Fires Warfighting Function. AFATDS Increment 2 will permit the management and targeting analysis of the collective and coordinated target acquisition data, effective selection of munitions-target pairing from indirect fire weapons (land and sea based), as well as fixed and rotary wing aircraft against targets located throughout an area of operations. AFATDS Increment 2 will develop a new software architecture by providing three distinct applications to support role-based functionality: Fire Support, Fire Control, and Fire Direction. It leverages the Common Operating Environment (COE) and Command Post Computing Environment (CP CE) products and capabilities. AFATDS Increment 2 provides a less complicated AFATDS software package to the Warfighter and is fully compliant with the Joint Command and Control Common User Interface (JC2 CUI) architectures.

Project DU5 funds development of AFATDS Increment 2. Decomposition of the baseline software (AFATDS version 6.8.1) will be required prior to development of the code for AFATDS Increment 2 (version 7.0). A software development contract will be awarded to develop the Fires Common Core, the foundation upon which the three functional applications will operate. Contracting actions will be completed in FY2015 to award multiple software development contracts for the primary functions of the software: Fire Control; Fire Direction; and Fire Support. A contract for software integration may also be necessary, subject to the completion of the analysis for the development of the contracting strategy. The Fires Common Core software development activity will begin in FY2015, in order to allow developers of the other three applications to subsequently initiate their development.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203726A / <i>Adv Field Artillery Tactical Data System</i>
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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	32.556	30.940	35.314	-	35.314
Current President's Budget	26.216	25.507	22.374	-	22.374
Total Adjustments	-6.340	-5.433	-12.940	-	-12.940
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-6.340	-5.433	-12.940	-	-12.940

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203726A / Adv Field Artillery Tactical Data System				Project (Number/Name) 322 / Adv Field Artillery Tactical Data System(AFA)			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
322: Adv Field Artillery Tactical Data System(AFA)	-	22.851	18.947	-	-	-	-	-	-	-	-	41.798
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Project code 322 funding was transferred to program element 0203728A project code EF8 due to OSD Major Automated Information System (MAIS) transparency requirements.

A. Mission Description and Budget Item Justification

There are two developmental efforts that are being executed concurrently on this budget item. They are Advanced Field Artillery Tactical Data System Increment 1 (AFATDS Inc 1)203728A and Network Assisted Global Positioning System (GPS) for Precision Fires.

AFATDS Increment 1 provides Army, Navy, and Marine Corps automated fire support command, control and communications and functions as the land component's automated Fire Support Command and Control (FSC2) system. AFATDS is used in the Fires Warfighting Function to plan, execute, and deliver lethal and non-lethal fires within the overall Mission Command and Control (MC2) enterprise. The system interoperates and integrates with: over 80 different battlefield systems from Army, Marine Corps, Navy, and Air Force; and the German, French, Turkish, and Italian fire support command and control systems. AFATDS fuses the essential situational awareness data, intelligence information and targeting data, in near real time, in order to effectively manage target selection and target engagement in accordance with the Maneuver Commanders guidance and priorities and to safely execute against friendly situational picture. AFATDS pairs targets to weapons to provide optimum use of fire support assets and timely execution of fire missions. AFATDS automates the planning, coordinating, and controlling of all fire support assets (field artillery, mortars, close air support, naval gunfire, attack helicopters, offensive electronic warfare, fire support meteorological systems, forward observers, and fire support radars). AFATDS automatically implements detailed commander's guidance in the automation of operational planning, movement control, targeting, target value analysis, and fire support planning. AFATDS is being used in operations in Afghanistan. Project 322 funds development of AFATDS Version 6.8.1. AFATDS 6.8.1 fires capabilities are being enhanced to meet JADOCs ground fires requirements in order to remove JADOCs from the ground forces inventory. With the completion of AFATDS Version 6.8.1, the program office will complete the AFATDS Increment 1 development and will start the Increment 2 development in 4Q FY2014. Final engineering reviews will be conducted and Government Confidence Testing, Information Assurance testing, and Certification testing will be completed.

Network Assisted GPS for Precision Fires is a developmental effort to improve performance of GPS-guided munitions (0203728A). It requires pre-launch loading of target location and sufficient GPS satellite-related data at the weapon platform level to enable flight path and delivery of precision capable fires. This hot start capability allows for rapid post-launch time-to-first-fix of GPS signal and maximum utilization of Precision Guided Munition (PGM) maneuver authority to ensure required target engagement performance. This is especially critical for short flight times and steer-early solutions such as mortar and cannon based PGMs. Local GPS Satellite visibility challenges due to vertical terrain/complex environment issues during normal combat operations can prohibit precision capable fires when using GPS Satellite

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / Adv Field Artillery Tactical Data System	Project (Number/Name) 322 / Adv Field Artillery Tactical Data System(AFA)		
data generated exclusively at the firing weapon platform (0203728A). A system-of-systems Network Assisted GPS capability will be developed, integrated, and validated to overcome local GPS Satellite masking problems through the sharing of sufficient timely required GPS Satellite data via Wide-Area Network (WAN) and Local-Area Network (LAN) based materiel solutions that effectively and efficiently leverage mature technologies and taxpayer investments of existing acquisition programs.				
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Title: Program Support Costs for AFATDS software development		0.719	0.715	-
		Articles:	-	-
Description: Provide program support for AFATDS software development efforts for Versions 6.8 and 6.8.1.				
FY 2013 Accomplishments: Program support for AFATDS Increment 1 software development efforts				
FY 2014 Plans: Program support for AFATDS Increment 1 software development efforts				
Title: AFATDS software development efforts cost		14.557	12.623	-
		Articles:	-	-
Description: Development of AFATDS Increment 1 requirements - including Version 6.8 and 6.8.1				
FY 2013 Accomplishments: Complete development of AFATDS Version 6.8. Continued development of AFATDS 6.8.1.				
FY 2014 Plans: Continue development of AFATDS Version 6.8.1.				
Title: Network Assisted GPS for Precision Fires		5.000	3.000	-
		Articles:	-	-
Description: Define system architecture and standardize tactical GPS Satellite data exchange solutions. Initiate WAN and LAN based system-of-systems Network Assisted GPS capability for PGMs.				
FY 2013 Accomplishments: Initiate development of Network Assisted GPS for Precision Fires.				
FY 2014 Plans: Continue development of Network Assisted GPS for Precision Fires.				
Title: Testing		2.575	2.609	-
		Articles:	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / Adv Field Artillery Tactical Data System	Project (Number/Name) 322 / Adv Field Artillery Tactical Data System(AFA)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: Conduct and support test activities for AFATDS development of Increment 1 requirements			
FY 2013 Accomplishments: Conduct and support test activities for AFATDS Increment 1 software.			
FY 2014 Plans: Conduct and support test activities for AFATDS Increment 1 software.			
Accomplishments/Planned Programs Subtotals	22.851	18.947	-

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• B28620: MOD OF IN-SVC EQUIP, AFATDS	36.966	17.702	8.163	-	8.163	8.435	3.912	3.971	4.049	-	83.198

Remarks

D. Acquisition Strategy

AFATDS version 6.8 was fielded only to the International Security Assistance Force (ISAF) in June 2013. Program Manager (PM) will universally field AFATDS Version 6.8 in March 2014 to ensure compatibility with JADOCs Version 1.0.5.2. AFATDS Version 6.8.1 is under development. PM expects Full Materiel Release in 3Q FY2015. With the completion of AFATDS Version 6.8.1, AFATDS Increment 1 will have achieved Full Operational Capability (FOC).

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / Adv Field Artillery Tactical Data System	Project (Number/Name) 322 / Adv Field Artillery Tactical Data System(AFA)
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management for Increment 1 Support	SS/BA	PM Mission Command (MC) : APG, MD	17.099	0.629	Dec 2012	0.560		-		-		-	-	18.288	18.838
Subtotal			17.099	0.629		0.560		-		-		-	-	18.288	18.838

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Software Development of AFATDS Increment 1 Requirements	SS/CPAF	Raytheon Systems Corp. : Ft. Wayne, IN	311.020	-		-		-		-		-	-	311.020	-
Software Development of AFATDS Version 6.8	SS/CPAF	Raytheon Systems Corp. : Ft. Wayne, IN	38.476	-		-		-		-		-	-	38.476	310.361
Software Development of AFATDS Version 6.8.1	C/CPFF	Raytheon Systems Corp. : Ft. Wayne, IN	8.614	14.557	Feb 2013	12.623		-		-		-	-	35.794	33.188
Network Assisted GPS for Precision Fires Development	C/CPFF	PM Combat Ammunition Systems (PM CAS), PM Mission Command, and various Army agencies : Various Locations	0.000	5.000	Mar 2013	3.000		-		-		-	-	8.000	-
Subtotal			358.110	19.557		15.623		-		-		-	-	393.290	343.549

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Information Assurance and Engineering Support for AFATDS Increment 1 requirements	C/T&M	CSC : Eatontown, NJ	0.420	-		-		-		-		-	-	0.420	0.375

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0203726A / Adv Field Artillery Tactical Data System				322 / Adv Field Artillery Tactical Data System(AFA)							
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Information Assurance and Engineering Support for AFATDS Increment 1 requirements	C/CPFF	CSC : Aberdeen, MD	0.000	0.090	Nov 2013	0.155		-		-		-	-	0.245	0.405
Subtotal			0.420	0.090		0.155		-		-		-	-	0.665	0.780
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Support for AFATDS Increment 1 requirements	C/T&M	Titan and various contractors : Various Locations	4.163	-		-		-		-		-	-	4.163	5.055
Test Support for AFATDS Increment 1 requirements	C/CPFF	Engility and various : Various Locations	0.730	1.375	May 2013	0.825		-		-		-	-	2.930	5.030
Limited User Test/ Government Confidence Demo for AFATDS Increment 1 requirements	SS/BA	Army Test & Evaluation Command (ATEC)/Fires Test Directorate (FTD) : Various Locations	14.277	1.200	Jan 2013	1.784		-		-		-	-	17.261	17.232
Subtotal			19.170	2.575		2.609		-		-		-	-	24.354	27.317
Project Cost Totals			394.799	22.851		18.947		-		-		-	-	436.597	390.484
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / Adv Field Artillery Tactical Data System	Project (Number/Name) 322 / Adv Field Artillery Tactical Data System(AFA)

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Development and Testing V6.8	■																											
Materiel Release V6.8 (ISAF only)			■																									
Fielding Release V6.8 (ISAF only)			■																									
Fielding V6.8 (Universal)							■																					

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / Adv Field Artillery Tactical Data System	Project (Number/Name) 322 / Adv Field Artillery Tactical Data System(AFA)

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Development and Testing V6.8	1	2011	1	2013
Materiel Release V6.8 (ISAF only)	3	2013	3	2013
Fielding Release V6.8 (ISAF only)	3	2013	3	2013
Fielding V6.8 (Universal)	2	2014	3	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / Adv Field Artillery Tactical Data System	Project (Number/Name) DU5 / AFATDS Increment II
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DU5: AFATDS Increment II	-	-	-	22.374	-	22.374	41.034	31.420	29.512	33.637	-	157.977
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

AFATDS Increment 2 is the automated Command and Control (C2) system for the ground Fires Warfighting Function. AFATDS Increment 2 will permit the management and targeting analysis of the collective and coordinated target acquisition data, effective selection of munitions-target pairing from indirect fire weapons (land and sea based), as well as fixed and rotary wing aircraft against targets located throughout an area of operations. AFATDS Increment 2 will develop a new software architecture by providing three distinct applications to support role-based functionality: Fire Support, Fire Control, and Fire Direction. It leverages the Common Operating Environment (COE) and Command Post Computing Environment (CP CE) products and capabilities. AFATDS Increment 2 provides a less complicated AFATDS software package to the Warfighter and is fully compliant with the Joint Command and Control Common User Interface (JC2 CUI) architectures.

AFATDS Increment 2 will provide three distinct applications—Fire Support, Fire Control, and Fire Direction—that communicate with other systems via the Army's Lower Tactical Internet and Warfighter Information Network Tactical (WIN-T) communications network. AFATDS Increment 2 will leverage the Command Post Computing Environment's common core database and core system functions/management that resides on the battle command server. Using the web-based tools, the Brigade Combat Team (BCT) commander and his Fires staff can access other command centers via search wizards over WIN-T and internet gateways to the Global Information Grid (GIG). AFATDS Increment 2 will meet the operational need to provide Fires data to a central database repository within the BCT. That repository will be accessible using web services or web-enabled search wizards to locate information within a BCT, adjacent BCTs or higher headquarters, thus supporting unified battle command. AFATDS Increment 2 will be used to actively plan offensive operations and exploit electronic attack weapon systems through the use of planning tools for lethal and non-lethal effects and the status and readiness of the systems that can best support the commander's intent. AFATDS Increment 2 will provide the supported maneuver commander the capability to plan, coordinate, rehearse, and execute integrated networked fires. Networked fires include lethal and non-lethal platforms. Net-centricity will enable the BCT commander to view targets that adjacent BCTs have encountered or engaged in their area of operations. This capability enables the commander to: exploit under-tasked air support assets; view/task weapons platforms based on coordinated command-supported relationships; and search target data files and repositories for enemy patterns that can be used in targeting and planning.

Project DU5 funds development of AFATDS Increment 2. Initial AFATDS Inc 2 (version 7.0) development entails decomposing the AFATDS Increment 1 (v6.8.1) baseline.

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

	FY 2013	FY 2014	FY 2015
Title: Program Support Costs for AFATDS software development	-	-	2.223
Description: Provide program support for AFATDS software development efforts for Version 7.0			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / Adv Field Artillery Tactical Data System	Project (Number/Name) DU5 / AFATDS Increment II

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
FY 2015 Plans: Provide program support for AFATDS software development efforts for Version 7.0			
Title: Software Development and Engineering Description: Remaining funding in excess of current FY acquisition plan for AFATDS Increment 2.	-	-	20.151
FY 2015 Plans: Software Development (excess)			
Accomplishments/Planned Programs Subtotals	-	-	22.374

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

N/A

Remarks

D. Acquisition Strategy

AFATDS Increment 2 development supports the use of Interim DoDI 5000.02 (November 2013) systems acquisition instruction for Information Technology (IT) acquisition programs (using the IT Box requirements construct). AFATDS Increment 2 capabilities will be developed over three distinct software versions - Versions 7.0, 7.1 and 7.2. AFATDS v7.0 will modernize and re-architect the AFATDS software to align with the requirements of the Inc 2 CDD. The Joint Requirements Oversight Council (JROC) issued a memorandum in June 2011 approving the Capability Development Document (CDD) for AFATDS Increment 2. The JROC validated the Key Performance Parameters, assigned oversight authority to the Fires Center of Excellences Fire Support Command and Control Tactical Software Governance Board, and set a funding ceiling.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / Adv Field Artillery Tactical Data System	Project (Number/Name) DU5 / AFATDS Increment II
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management for Increment 2 Support	SS/BA	PM Mission Command (MC) : APG, MD	0.000	-		-		2.223		-		2.223	Continuing	Continuing	Continuing
Subtotal			0.000	-		-		2.223		-		2.223	-	-	-

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Software Development and Engineering	SS/TBD	N/A : N/A	0.000	-		-		20.151		-		20.151	-	20.151	-
Subtotal			0.000	-		-		20.151		-		20.151	-	20.151	-

Remarks
 Require \$2.233M for program management support on AFATDS Increment 2 acquisition efforts.
 \$20.15M identified as excess (in Software Development and Engineering)

Project Cost Totals	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
	0.000	-	-	22.374	-	22.374	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / Adv Field Artillery Tactical Data System	Project (Number/Name) DU5 / AFATDS Increment II

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Matériel Development Decision (MDD)																												
Risk Reduction & Solution Refinement for Increment 2																												
Build Decision (Milestone B)																												
Implementation & Deployment for V.7.0																												
Partial Deployment Decision (PDD) for V.7.0																												
Initial operational capability (IOC) for V.7.0																												
Full Deployment Decision (FDD) for V.7.0																												
Fielding V.7.0																												
Full Operational Capability for V.7.0																												
Implementation & Deployment for V.7.1																												
Partial Deployment Decision (PDD) for V.7.1																												
Full Deployment Decision (FDD) for V.7.1																												
Implementation & Deployment for V.7.2																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / Adv Field Artillery Tactical Data System	Project (Number/Name) DU5 / AFATDS Increment II

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Matériel Development Decision (MDD)	2	2014	2	2014
Risk Reduction & Solution Refinement for Increment 2	1	2014	2	2015
Build Decision (Milestone B)	3	2015	3	2015
Implementation & Deployment for V.7.0	3	2014	3	2018
Partial Deployment Decision (PDD) for V.7.0	4	2017	4	2017
Initial operational capability (IOC) for V.7.0	1	2018	1	2018
Full Deployment Decision (FDD) for V.7.0	3	2018	3	2018
Fielding V.7.0	3	2018	4	2018
Full Operational Capability for V.7.0	4	2018	4	2018
Implementation & Deployment for V.7.1	4	2017	4	2019
Partial Deployment Decision (PDD) for V.7.1	2	2019	2	2019
Full Deployment Decision (FDD) for V.7.1	4	2019	4	2019
Implementation & Deployment for V.7.2	4	2018	4	2020

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / Adv Field Artillery Tactical Data System	Project (Number/Name) F19 / JADOCS
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
F19: JADOCS	-	3.365	6.560	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Project code F19 funding was transferred to program element 0203728A project code EF6 due to OSD Major Automated Information System (MAIS) transparency requirements.

A. Mission Description and Budget Item Justification

Joint Automated Deep Operations Coordination System (JADOCS) software provides joint fire support management, and common operational picture (COP) capabilities. JADOCS complements the Mission Command architecture with joint and collaborative capabilities that can be employed and tailored based on the unit mission and operational situation. JADOCS software provides integration between multiple joint command and control (C2) systems of the uniformed services involved in the targeting process at US Air Force (USAF), US Navy (USN), and US Marine Corps (USMC) Air Operations Centers (AOCs), Marine Expeditionary Forces (MEFs), Fleet Maritime Operations Centers (MOCs), and staff sections at the regional Combatant Commands (COCOMs), Special Operations Command (SOCOM), and Army Battlefield Coordination Detachments (BCDs), Army Service Component Commands (ASCC), Corps and Divisions.

Project F19 funds capability maintenance for v1.0.5.2 and begins development of JADOCS Version 2.0 which is the final version of JADOCS to be developed with new functionality. JADOCS V2.0 is required to incorporate critical Joint requirements into JADOCS. These requirements include modification and updates for joint interfaces, updates to databases, and creation of non kinetic fires targeting. JADOCS V2.0 development is slated to be performed by a government developer with work beginning in FY2014.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: JADOCS Software Development Efforts costs.	0.865	4.300	-
Articles:	-	-	-
Description: Complete capability maintenance of version 1.0.5.2. Initiate development of JADOCS Increment 1 (JADOCS Version 2.0 software).			
FY 2013 Accomplishments: Continue the capability maintenance of JADOCS 1.0.5.2 software. Implement the Software Technical Implementation Guide (STIG) Category 1 fixes; provide JAVA 7 updates; using an Engineering Build of the JADOCS 1.0.5.2 software, conduct testing with GCCS-J 4.3 and partial pull of the MIDB at Eglin AFB.			
FY 2014 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / Adv Field Artillery Tactical Data System	Project (Number/Name) F19 / JADOCS		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Complete capability maintenance and testing of version 1.0.5.2. Implement KJCCS fixes requested from Korea; add CENTRIX data tagging; ensure AGM 10 and IAVA patches are done throughout the development process. Enter into a Memorandum of Agreement (MOA) with an existing government agency for the software development effort; Initiate development of JADOCS Increment 1 (JADOCS Version 2.0 software).				
Title: Program Support Costs for JADOCS Software Development Efforts				
Articles:		0.300	0.260	-
		-	-	-
Description: Program support for JADOCS software development efforts for version 1.0.5.2, 1.0.5.2.1 and JADOCS software version 2.0.				
FY 2013 Accomplishments: Continues the program support for JADOCS software version 1.0.5.2 development efforts.				
FY 2014 Plans: Continues the program support for JADOCS software version 1.0.5.2 development efforts plus the JADOCS version 2.0 software development efforts, scheduled to start at the end of 2QFY14.				
Title: Testing				
Articles:		0.200	0.300	-
		-	-	-
Description: Conduct and Support Army and Joint Testing Activities.				
FY 2013 Accomplishments: Continued support of Army and Joint testing activities.				
FY 2014 Plans: Continued support of Army and Joint testing activities for JADOCS 1.0.5.2 software; conduct Independent Validation and Verification (IV&V) of the JADOCS version 2.0 software.				
Title: Contractor Management Services and Support.				
Articles:		2.000	1.700	-
		-	-	-
Description: Funds Systems Engineering and Technical Assistance support provided by Liaison Officers and JADOCS training managers.				
FY 2013 Accomplishments: Continues program support for JADOCS training activities.				
FY 2014 Plans:				

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / <i>Adv Field Artillery Tactical Data System</i>	Project (Number/Name) F19 / JADOCS

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Continues program support for JADOCS training activities.			
Accomplishments/Planned Programs Subtotals	3.365	6.560	-

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

N/A

Remarks

D. Acquisition Strategy

Joint Automated Deep Operations Coordination System (JADOCS) began as a Defense Advanced Research Projects Agency technology demonstration, and has evolved through a series of Army-led Joint Advanced Concept Technology Demonstrations (ACTDs), culminating in a joint and combined deployed operational capability. The Vice Chief of Staff of the Army approved JADOCS for acquisition program status under the Capabilities Development for Rapid Transition (CDRT) process. The approved JADOCS Capability Production Document (CPD) dated 16 April 2012, documents the current JADOCS threshold capabilities that are in the field today. As the lead agency for managing JADOCS capabilities within the Department of Defense, the Fires Center of Excellence, tailored the JADOCS CPD to incorporate Field Artillery tasks not included in the currently fielded version (v 1.0.5.1) of the software. JADOCS retirement will occur when system capabilities are individually or collectively incorporated into Army, Service, or Joint programs or are no longer needed as determined by its multi-Service users.

JADOCS Inc 1 is a software only development effort that will produce JADOCS v2.0 software, which will resolve technical requirements generated by the Joint Services that align with the CPD capabilities. JADOCS v2.0 will be the last major version of JADOCS software and will be the follow-on version to the development and fielding of the JADOCS 1.0.5.2 software versions. JADOCS v2.0 will be interoperable with AFATDS Increments 1 and 2.

The current fielded version of JADOCS software is 1.0.5.1. The targeting and fires functionality of this version are being incorporated into the AFATDS v6.8.1 software baseline. The fielding of the AFATDS v6.8.1 software (planned for Fiscal Year (FY) 15) will represent the initial merge of the JADOCS/AFATDS capabilities. This software will be provided to users to evaluate AFATDS software's ability to adequately perform the functions provided by the JADOCS software. Any changes, improvements, or further enhancements identified by the Services will be made to the AFATDS software. The JADOCS Joint fires and targeting features will continue to be incorporated into the AFATDS software and will be provided to users with the initial fielding of AFATDS Inc 2, v7.0 software (planned to start in FY18 timeframe). JADOCS v2.0 software (planned for fielding in the 4QFY17 timeframe). Users will continue to use JADOCS v2.0 until AFATDS v7.0 meets the total Joint Users requirements (expected with the full fielding of AFATDS v7.0 in FY18).

Program Executive Officer, Command, Control, Communications -Tactical (PEO C3T) signed the JADOCS Milestone C Acquisition Decision Memorandum (ADM) on 2 December 2013. The ADM approved MS C and authorized entrance into the Production and Deployment phase. The ADM also approved the acquisition strategy, APB and established the MS C exit criteria.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / <i>Adv Field Artillery Tactical Data System</i>	Project (Number/Name) F19 / <i>JADOCs</i>

E. Performance Metrics
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / Adv Field Artillery Tactical Data System	Project (Number/Name) F19 / JADOCs
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Business/Technical Services	Various	Chenega Federal Systems : Various	3.254	2.000	Jan 2012	1.700	Mar 2014	-		-		-	-	6.954	-
Subtotal			3.254	2.000		1.700		-		-		-	-	6.954	-

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Software Development & Test	C/CPFF	Oberon Associates INC. : Manassas, Virginia	13.032	0.865	Mar 2013	-		-		-		-	-	13.897	-
Software Development & Test	TBD	MOA with a Government : TBD	0.000	-		4.300		-		-		-	-	4.300	-
Subtotal			13.032	0.865		4.300		-		-		-	-	18.197	-

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management - Government	Various	PM Mission Command (MC) : APG, MD	0.755	0.300	Jan 2013	0.260		-		-		-	-	1.315	-
Subtotal			0.755	0.300		0.260		-		-		-	-	1.315	-

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Army and Joint Test Support	Various	Joint Service Testing : Various	2.697	0.200	Dec 2012	0.300		-		-		-	-	3.197	-
Subtotal			2.697	0.200		0.300		-		-		-	-	3.197	-

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203726A / <i>Adv Field Artillery Tactical Data System</i>	Project (Number/Name) F19 / JADOCs

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Software Capability Maintenance and Testing - V1.0.5.2 (CS 11-12)	4	2012	2	2014
Acquisition Decision Memorandum (ADM) signed by Army Acquisition Executive	3	2013	3	2013
Final Integration Test - V1.0.5.2 (CS 11-12)	4	2013	1	2014
MIDB Tech Testing - V1.0.5.2 (CS 11-12)	4	2013	4	2013
Government Confidence Demonstration (GCD) V1.0.5.2 (CS 11-12)	4	2013	4	2013
Army Interoperability Certification 11.9 - V1.0.5.2 (CS 11-12)	1	2014	1	2014
Milestone C	1	2014	1	2014
Materiel Release - V1.0.5.2 (CS 11-12)	2	2014	2	2014
Award - Memorandum of Agreement (MOA) for SW Development - V2.0	2	2014	2	2014
Fielding - V1.0.5.2 (CS 11-12)	3	2014	3	2014
Software Development and Testing - V2.0	3	2014	4	2017

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	-	-	24.371	-	24.371	16.522	6.083	3.655	3.456	Continuing	Continuing
EF6: JADOCS	-	-	-	15.441	-	15.441	13.002	2.496	-	-	-	30.939
EF7: Pocket-Sized Forward Entry Device (PFED) Increment 2	-	-	-	3.505	-	3.505	3.520	3.587	3.655	3.456	Continuing	Continuing
EF8: AFATDS Increment 1	-	-	-	5.425	-	5.425	-	-	-	-	-	5.425

The FY 2015 OCO Request will be submitted at a later date.

Note

Project code EF6 (JADOCS) and EF8 (AFATDS Incr I) were previously funded under AFATDS PE 0203726A (PB2014 BLIN 161).

Project code EF7 - PFED Increment 2 is a new start in PB2015 (\$3.505 million) to justify Pocket-sized Forward Entry Device (Increment 2) software development.

A. Mission Description and Budget Item Justification

There are three developmental efforts that are being executed concurrently: Joint Automated Deep Operations Coordination System (JADOCS) (project code EF6); Pocket-sized Forward Entry Device (Increment 2) (project code EF7); and Advanced Field Artillery Tactical Data System (AFATDS) (Increment 1) (project code EF8).

Joint Automated Deep Operations Coordination System (JADOCS) software provides joint fire support management, and common operational picture (COP) capabilities. JADOCS complements the Mission Command architecture with joint and collaborative capabilities that can be employed and tailored based on the unit mission and operational situation. JADOCS software provides integration between multiple joint command and control (C2) systems of the uniformed services involved in the targeting process at US Air Force (USAF), US Navy (USN), and US Marine Corps (USMC) Air Operations Centers (AOCs), Marine Expeditionary Forces (MEFs), Fleet Maritime Operations Centers (MOCs), and staff sections at the regional Combatant Commands (COCOMs), Special Operations Command (SOCOM), and Army Battlefield Coordination Detachments (BCDs), Army Service Component Commands (ASCC), Corps and Divisions. Project EF6 funds development of JADOCS Version 2.0 which is the final version of JADOCS to be developed with new functionality. JADOCS V2.0 is required to incorporate critical Joint requirements into JADOCS. These requirements include modification and updates for joint interfaces, updates to databases, and creation of non kinetic fires targeting. JADOCS V2.0 development is slated to be developed by a government agency with work beginning in FY2014.

The Pocket-sized Forward Entry Device (PFED) Increment 2 will be a software only application that operates on the existing Nett Warrior End User Device (EUD). It will provide the dismounted Forward Observer (FO) and Fire Support Teams (FISTs) the capability and functionality to accurately and rapidly locate ground targets and enable the Nett Warrior Ensemble to digitally process a Call For Fire; linking the sensor to the shooter with an efficient integration of multiple acquisition programs. PFED Increment 2 aligns with the Army's Fires and Effects Concept of Operation and describes how fires and effects contribute to Networked Fires as part of the combined arms teams in Army, Special Operations Forces (SOF), and Joint operations. PFED Increment 2 answers the Mobile Handheld Computing Environment requirement

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCS)</i>
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that all handheld applications reside on the Nett Warrior End User Device. PFED Increment 2 will provide Category 1 target mensuration via Precision Fires Imagery enabling the effective use of new precision munitions. Project code EF7 funds the evolutionary software development of this handheld Fires Command and Control (C2) system.

AFATDS Increment 1 provides Army, Navy, and Marine Corps automated fire support command, control and communications and functions as the land component's automated Fire Support Command and Control (FSC2) system. AFATDS is used in the Fires Warfighting Function to plan, execute, and deliver lethal and non-lethal fires within the overall Mission Command and Control (MC2) enterprise. The system interoperates and integrates with: over 80 different battlefield systems from Army, Marine Corps, Navy, and Air Force; and the German, French, Turkish, and Italian fire support command and control systems. AFATDS fuses the essential situational awareness data, intelligence information and targeting data, in near real time, in order to effectively manage target selection and target engagement in accordance with the Maneuver Commanders guidance and priorities and to safely execute against friendly situational picture. AFATDS pairs targets to weapons to provide optimum use of fire support assets and timely execution of fire missions. AFATDS automates the planning, coordinating, and controlling of all fire support assets (field artillery, mortars, close air support, naval gunfire, attack helicopters, offensive electronic warfare, fire support meteorological systems, forward observers, and fire support radars). AFATDS automatically implements detailed commander's guidance in the automation of operational planning, movement control, targeting, target value analysis, and fire support planning. AFATDS is being used in operations in Afghanistan. Project EF8 funds development of AFATDS Version 6.8.1. AFATDS 6.8.1 fires capabilities are being enhanced to meet JADOCS ground fires requirements in order to remove JADOCS from the ground forces inventory. With the completion of AFATDS Version 6.8.1, the program office will complete the AFATDS Increment 1 development and will start the Increment 2 development in 4Q FY2014. Final engineering reviews will be conducted and Government Confidence Testing, Information Assurance testing, and Certification testing will be completed. Full materiel release of the software will be completed in 3Q FY2015 and universal fielding and training of the software will be conducted.

B. Program Change Summary (\$ in Millions)	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	24.371	-	24.371
Total Adjustments	-	-	24.371	-	24.371
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-	-	5.425	-	5.425
• Other Adjustments 2	-	-	15.441	-	15.441
• Other Adjustments 3	-	-	3.505	-	3.505

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF6 / JADOCS
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EF6: JADOCS	-	-	-	15.441	-	15.441	13.002	2.496	-	-	-	30.939
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Project code EF6 was previously justified in OSD program element 0203726A project code F19 (PB2014 BLIN 161). Due to OSD Major Automated Information System (MAIS) transparency requirements, all non-MAIS funds were transferred out of 0203726A into 0203728A.

A. Mission Description and Budget Item Justification

Joint Automated Deep Operations Coordination System (JADOCS) software provides joint fire support management, and common operational picture (COP) capabilities. JADOCS complements the Mission Command architecture with joint and collaborative capabilities that can be employed and tailored based on the unit mission and operational situation. JADOCS software provides integration between multiple joint command and control (C2) systems of the uniformed services involved in the targeting process at US Air Force (USAF), US Navy (USN), and US Marine Corps (USMC) Air Operations Centers (AOCs), Marine Expeditionary Forces (MEFs), Fleet Maritime Operations Centers (MOCs), and staff sections at the regional Combatant Commands (COCOMs), Special Operations Command (SOCOM), and Army Battlefield Coordination Detachments (BCDs), Army Service Component Commands (ASCC), Corps and Divisions.

Project EF6 funds development of JADOCS Version 2.0 which is the final version of JADOCS to be developed with new functionality. JADOCS V2.0 is required to incorporate critical Joint requirements into JADOCS. These requirements include modification and updates for joint interfaces, updates to databases, and creation of non kinetic fires targeting. JADOCS V2.0 development is slated to be developed by a government agency with work beginning in FY2014.

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

	FY 2013	FY 2014	FY 2015
Title: JADOCS Software Development Efforts	-	-	12.380
Description: Software development of JADOCS Increment 1 (JADOCS Version 2.0 software).			
FY 2015 Plans: Continues development of JADOCS Version 2.0 software.			
Title: Program Support Costs for JADOCS Software Development Efforts	-	-	1.061
Description: Program support for JADOCS software development efforts for Version 2.0.			
FY 2015 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF6 / JADOCS

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Continues program support for JADOCS Version 2.0 software development.			
Title: Testing Description: Conduct and support Army and Joint Testing Activities. FY 2015 Plans: Continues support of Army and Joint testing activities; conduct Independent Validation and Verification (IV&V) of the JADOCS Version 2.0 software.	-	-	0.300
Title: Contractor Management Services and Support Description: Funds Systems Engineering and Technical Assistance support provided by Liaison Officers and JADOCS training managers. FY 2015 Plans: Continues program support for JADOCS training activities.	-	-	1.700
Accomplishments/Planned Programs Subtotals	-	-	15.441

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

N/A

Remarks

D. Acquisition Strategy

Joint Automated Deep Operations Coordination System (JADOCS) began as a Defense Advanced Research Projects Agency technology demonstration, and has evolved through a series of Army-led Joint Advanced Concept Technology Demonstrations (ACTDs), culminating in a joint and combined deployed operational capability. The Vice Chief of Staff of the Army approved JADOCS for acquisition program status under the Capabilities Development for Rapid Transition (CDRT) process. The approved JADOCS Capability Production Document (CPD) dated 16 April 2012, documents the current JADOCS threshold capabilities that are in the field today. As the lead agency for managing JADOCS capabilities within the Department of Defense, the Fires Center of Excellence, tailored the JADOCS CPD to incorporate Field Artillery tasks not included in the currently fielded version (v 1.0.5.1) of the software. JADOCS retirement will occur when system capabilities are individually or collectively incorporated into Army, Service, or Joint programs or are no longer needed as determined by its multi-Service users.

JADOCS Inc 1 is a software only development effort that will produce JADOCS v2.0 software, which will resolve technical requirements generated by the Joint Services that align with the CPD capabilities. JADOCS v2.0 will be the last major version of JADOCS software and will be the follow-on version to the development and fielding of the JADOCS 1.0.5.2 software versions. JADOCS v2.0 will be interoperable with AFATDS Increments 1 and 2.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCS)</i>	Project (Number/Name) EF6 / <i>JADOCS</i>
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The current fielded version of JADOCS software is 1.0.5.1. The targeting and fires functionality of this version are being incorporated into the AFATDS v6.8.1 software baseline. The fielding of the AFATDS v6.8.1 software (planned for Fiscal Year (FY) 15) will represent the initial merge of the JADOCS/AFATDS capabilities. This software will be provided to users to evaluate AFATDS software's ability to adequately perform the functions provided by the JADOCS software. Any changes, improvements, or further enhancements identified by the Services will be made to the AFATDS software. The JADOCS Joint fires and targeting features will continue to be incorporated into the AFATDS software and will be provided to users with the initial fielding of AFATDS Inc II, v7.0 software (planned to start in FY18 timeframe). JADOCS v2.0 software (planned for fielding in the 4QFY17 timeframe). Users will continue to use JADOCS v2.0 until AFATDS v7.0 meets the total Joint Users requirements (expected with the full fielding of AFATDS v7.0 in FY18).

Program Executive Officer, Command, Control, Communications -Tactical (PEO C3T) signed the JADOCS Milestone C Acquisition Decision Memorandum (ADM) on 2 December 2013. The ADM approved MS C and authorized entrance into the Production and Deployment phase. The ADM also approved the acquisition strategy, APB and established the MS C exit criteria.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF6 / JADOCS
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Business/Technical Services	Various	Chenega Federal Systems : Alexandria, VA	0.000	-		-		1.700	Mar 2015	-		1.700	-	1.700	-
Subtotal			0.000	-		-		1.700		-		1.700	-	1.700	-

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Software Development	TBD	MOA with a Government Developer : TBD	0.000	-		-		12.380	Mar 2014	-		12.380	-	12.380	-
Subtotal			0.000	-		-		12.380		-		12.380	-	12.380	-

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management	Various	PM Mission Command (MC) : APG, MD	0.000	-		-		1.061		-		1.061	-	1.061	-
Subtotal			0.000	-		-		1.061		-		1.061	-	1.061	-

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Army and Joint Test Support	Various	Joint Service Testing : Various	0.000	-		-		0.300		-		0.300	-	0.300	-
Subtotal			0.000	-		-		0.300		-		0.300	-	0.300	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army							Date: March 2014						
Appropriation/Budget Activity 2040 / 7			R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)				Project (Number/Name) EF6 / JADOCS						
	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		15.441		-		15.441	-	15.441	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army			Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCS)</i>	Project (Number/Name) EF6 / <i>JADOCS</i>	

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Award - Memorandum of Agreement (MOA) for SW Development - V2.0																												
Software Development V2.0																												
Independent Validation & Verification (IV&V)																												
Developmental Test V2.0																												
Operational Test & JITC																												
Government Confidence Demonstration (GCD) V2.0																												
Army Interoperability Certification - V2.0																												
Material Release - V2.0																												
Fielding - V2.0																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCS)</i>	Project (Number/Name) EF6 / <i>JADOCS</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Award - Memorandum of Agreement (MOA) for SW Development - V2.0	2	2014	2	2014
Software Development V2.0	3	2014	3	2016
Independent Validation & Verification (IV&V)	4	2014	2	2017
Developmental Test V2.0	3	2016	4	2016
Operational Test & JITC	1	2017	4	2017
Government Confidence Demonstration (GCD) V2.0	2	2017	2	2017
Army Interoperability Certification - V2.0	3	2017	3	2017
Material Release - V2.0	4	2017	4	2017
Fielding - V2.0	4	2017	1	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)				Project (Number/Name) EF7 / Pocket-Sized Forward Entry Device (PFED) Increment 2			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EF7: Pocket-Sized Forward Entry Device (PFED) Increment 2	-	-	-	3.505	-	3.505	3.520	3.587	3.655	3.456	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Project code EF7 is a new start program in PB2015 to justify the Pocket-Sized Forward Entry Device (PFED) Increment 2 software development effort.

A. Mission Description and Budget Item Justification

The Pocket-sized Forward Entry Device (PFED) Increment 2 will be a software only application that operates on the existing Nett Warrior End User Device (EUD). It will provide the dismounted Forward Observer (FO) and Fire Support Teams (FISTs) the capability and functionality to accurately and rapidly locate ground targets and enable the Nett Warrior Ensemble to digitally process a Call For Fire; linking the sensor to the shooter with an efficient integration of multiple acquisition programs. PFED Increment 2 aligns with the Army's Fires and Effects Concept of Operation and describes how fires and effects contribute to Networked Fires as part of the combined arms teams in Army, Special Operations Forces (SOF), and Joint operations. PFED Increment 2 answers the Mobile Handheld Computing Environment requirement that all handheld applications reside on the Nett Warrior End User Device. PFED Increment 2 will provide Category 1 target mensuration via Precision Fires Imagery enabling the effective use of new precision munitions.

Project code EF7 funds the evolutionary software development of this handheld Fires Command and Control (C2) system.

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

	FY 2013	FY 2014	FY 2015
Title: PFED Incr 2 Software Development	-	-	2.598
Description: PFED Incr 2 software development			
FY 2015 Plans: Complete version 1.0 software development. Software development will include removing capabilities from the S&T software that cannot be traced to the PFED Increment 2 CPD as well as redundant capabilities that will be provided by the Nett Warrior software. The resulting software will be repackaged and delivered to the Nett Warrior software developers for integration onto the Nett Warrior End User Device. Complete Milestone B statutory and regulatory requirements			
Title: Program Support Costs for PFED Increment 2 Software Development Efforts	-	-	0.602
Description: Program support for PFED Incr 2 software development effects.			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF7 / Pocket-Sized Forward Entry Device (PFED) Increment 2
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
FY 2015 Plans: Program support for PFED Increment 2 software development.			
Title: Testing Description: Conduct and Support Army Testing Activities	-	-	0.305
FY 2015 Plans: Conduct Developmental Testing and Evaluation. Support participation in Network Integration Experiment (NIE) 15.2.			
Accomplishments/Planned Programs Subtotals	-	-	3.505

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

Remarks

D. Acquisition Strategy

On 29 January 2014, the Army Acquisition Executive (AAE) signed the Acquisition Decision Memorandum (ADM) approving the PFED Increment 2 Materiel Development Decision (MDD). The Acquisition Decision Memorandum (ADM) officially approved entry into the acquisition management system at the Technology Development phase as an Acquisition Category (ACAT) III program with the Program Executive Officer (PEO), Command, Control and Communications-Tactical (C3T) as the Materiel Developer and Milestone Decision Authority.

PFED Increment 2 leverages an Army Science and Technology investment by transitioning a software application that has been developed and used in proponent experimentation events. Upon a successful Milestone B, this software application will be transitioned to PM Mission Command, the assigned project manager, to conduct all Army developmental and operational test and evaluation requirements. Upon approval for Software Materiel Release, PM Mission Command will work together with PM Soldier Warrior to integrate the software application on Nett Warrior End User Devices (EUDs) and field to units based on the Nett Warrior fielding schedule. Training on the PFED Increment 2 software will be conducted by PM Mission Command as units are fielded the capability. Sustainment of the fielded software is the responsibility of PM Mission Command.

The PFED Increment 2 CPD was approved as an "Information Technology (IT) Box" requirement. As such, evolutionary development of the software will continue in order to meet emerging requirements that fall within the bounds of the approved IT Box. PM Mission Command will continue to manage this aspect of software development, to be conducted by a Government organization. PM Mission Command will continue to work in tandem with PM Soldier Warrior to field and train future versions of the software, as described above. Likewise, sustainment of future software versions will continue to be managed by PM Mission Command.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCS)</i>	Project (Number/Name) EF7 / <i>Pocket-Sized Forward Entry Device (PFED) Increment 2</i>

E. Performance Metrics N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF7 / Pocket-Sized Forward Entry Device (PFED) Increment 2
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Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PFED Increment 2 Software Development efforts	TBD	AMRDEC : Redstone, AL	0.000	-		-		2.598		-		2.598	Continuing	Continuing	Continuing
Subtotal			0.000	-		-		2.598		-		2.598	-	-	-

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Support	Various	PM Mission Command (MC) : APG, MD	0.000	-		-		0.602		-		0.602	Continuing	Continuing	Continuing
Subtotal			0.000	-		-		0.602		-		0.602	-	-	-

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support	Various	Testing : Various	0.000	-		-		0.305		-		0.305	Continuing	Continuing	Continuing
Subtotal			0.000	-		-		0.305		-		0.305	-	-	-

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		0.000	-	-	3.505	-	3.505	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF7 / Pocket-Sized Forward Entry Device (PFED) Increment 2

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Milestone B									■																			
Software Development & Testing V1.0									■	■	■	■	■	■	■	■												
Developmental Test (DT) V1.0										■	■																	
Preliminary Deployment Decision (PDD) V1.0											■	■																
Operational Test (OT) V1.0												■	■															
Initial Operational Capability (IOC) V1.0													■	■														
Full Deployment Decision (FDD) V1.0														■	■													
Materiel Release V1.0														■	■													
Fielding V1.0														■	■	■												
Software Development & Testing V2.0															■	■	■	■	■	■								
Full Operational Capability (FOC) V1.0															■	■												
Developmental Test (DT) V2.0																		■	■									
Preliminary Deployment Decision (PDD) V2.0																		■	■									
Operational Test (OT) V2.0																			■	■								
Full Deployment Decision (FDD) V2.0																			■	■								
Materiel Release V2.0																				■	■							
Additional SW Capability Development & Testing																									■	■	■	■

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF7 / Pocket-Sized Forward Entry Device (PFED) Increment 2

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Milestone B	2	2015	2	2015
Software Development & Testing V1.0	2	2015	2	2016
Developmental Test (DT) V1.0	3	2015	3	2015
Preliminary Deployment Decision (PDD) V1.0	4	2015	4	2015
Operational Test (OT) V1.0	1	2016	1	2016
Initial Operational Capability (IOC) V1.0	1	2016	1	2016
Full Deployment Decision (FDD) V1.0	2	2016	2	2016
Materiel Release V1.0	2	2016	2	2016
Fielding V1.0	2	2016	4	2016
Software Development & Testing V2.0	3	2016	4	2017
Full Operational Capability (FOC) V1.0	4	2016	4	2016
Developmental Test (DT) V2.0	2	2017	2	2017
Preliminary Deployment Decision (PDD) V2.0	2	2017	2	2017
Operational Test (OT) V2.0	3	2017	3	2017
Full Deployment Decision (FDD) V2.0	3	2017	3	2017
Materiel Release V2.0	4	2017	4	2017
Additional SW Capability Development & Testing	1	2018	1	2021

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF8 / AFATDS Increment 1
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EF8: AFATDS Increment 1	-	-	-	5.425	-	5.425	-	-	-	-	-	5.425
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

The FY 2015 OCO Request will be submitted at a later date.

Note

Project code EF8 was previously justified in PB2014, program element 0203726A project code 322 (PB2014 BLIN 161). Due to OSD Major Automated Information System (MAIS) transparency requirements, all non-MAIS funds were transferred out of 0203726A into 0203728A.

A. Mission Description and Budget Item Justification

There are two developmental efforts that are being executed concurrently on this budget item. They are Advanced Field Artillery Tactical Data System (AFATDS) and Network Assisted Global Positioning System (GPS) for Precision Fires.

AFATDS Increment 1 provides Army, Navy, and Marine Corps automated fire support command, control and communications and functions as the land component's automated Fire Support Command and Control (FSC2) system. AFATDS is used in the Fires Warfighting Function to plan, execute, and deliver lethal and non-lethal fires within the overall Mission Command and Control (MC2) enterprise. The system interoperates and integrates with: over 80 different battlefield systems from Army, Marine Corps, Navy, and Air Force; and Coalition Forces fire support command and control systems. AFATDS fuses the essential situational awareness data, intelligence information and targeting data, in near real time, in order to effectively manage target selection and target engagement in accordance with the Maneuver Commanders guidance and priorities and to safely execute against friendly situational picture. AFATDS pairs targets to weapons to provide optimum use of fire support assets and timely execution of fire missions. AFATDS automates the planning, coordinating, and controlling of all fire support assets (field artillery, mortars, close air support, naval gunfire, attack helicopters, offensive electronic warfare, fire support meteorological systems, forward observers, and fire support radars). AFATDS automatically implements detailed commander's guidance in the automation of operational planning, movement control, targeting, target value analysis, and fire support planning. AFATDS is being used in operations in Afghanistan. Project 322 funds development of AFATDS Version 6.8.1. AFATDS 6.8.1 fires capabilities are being enhanced to meet JADOCS ground fires requirements in order to remove JADOCS from the ground forces inventory. With the completion of AFATDS Version 6.8.1, the program office will complete the AFATDS Increment 1 development and will start the Increment 2 development in 4Q FY2014. Final engineering reviews will be conducted and Government Confidence Testing, Information Assurance testing, and Certification testing will be completed. Full materiel release of the software will be completed in 3Q FY2015 and universal fielding and training of the software will be conducted.

Network Assisted GPS for Precision Fires is a developmental effort to improve performance of GPS-guided munitions. It requires pre-launch loading of target location and sufficient GPS satellite-related data at the weapon platform level to enable flight path and delivery of precision capable fires. This hot start capability allows for rapid post-launch time-to-first-fix of GPS signal and maximum utilization of Precision Guided Munition (PGM) maneuver authority to ensure required target engagement performance. This is especially critical for short flight times and steer-early solutions such as mortar and cannon based PGMs. Local GPS Satellite visibility challenges due to vertical terrain/complex environment issues during normal combat operations can prohibit precision capable fires when using GPS Satellite data generated

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF8 / AFATDS Increment 1
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exclusively at the firing weapon platform. A system-of-systems Network Assisted GPS capability will be developed, integrated, and validated to overcome local GPS Satellite masking problems through the sharing of sufficient timely required GPS Satellite data via Wide-Area Network (WAN) and Local-Area Network (LAN) based materiel solutions that effectively and efficiently leverage mature technologies and taxpayer investments of existing acquisition programs.

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

	FY 2013	FY 2014	FY 2015
Title: Program Support Costs for AFATDS software development Description: Provide program support for AFATDS software development efforts for Versions 6.8 and 6.8.1. FY 2015 Plans: Program Support Costs for AFATDS Increment 1 software development efforts	-	-	0.750
Title: AFATDS software development efforts cost Description: Development of AFATDS Increment 1 requirements - including Version 6.8 and 6.8.1 FY 2015 Plans: Complete development and testing of AFATDS Version 6.8.1	-	-	0.925
Title: Network Assisted GPS for Precision Fires Description: Define system architecture and standardize tactical GPS Satellite data exchange solutions. Initiate WAN and LAN based system-of-systems Network Assisted GPS capability for PGMs. FY 2015 Plans: Complete the development of Network Assisted GPS for Precision Fires	-	-	1.000
Title: Testing Description: Conduct and support test activities for AFATDS development of Increment 1 requirements FY 2015 Plans: Conduct and support test activities for AFATDS Increment 1 software	-	-	2.750
Accomplishments/Planned Programs Subtotals	-	-	5.425

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• B28620: MOD OF IN-SVC EQUIP, AFATDS	36.966	17.702	8.163	-	8.163	8.435	3.912	3.971	4.049	-	83.198

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)	Project (Number/Name) EF8 / AFATDS Increment 1

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks

D. Acquisition Strategy

AFATDS version 6.8 was fielded only to the International Security Assistance Force (ISAF) in June 2013. PM will universally field AFATDS Version 6.8 in March 2014 to ensure compatibility with JADOCS Version 1.0.5.2. AFATDS Version 6.8.1 is under development. PM expects Full Materiel Release in 3Q FY2015. AFATDS Version 6.8.1, AFATDS Increment 1 will have achieved Full Operational Capability (FOC).

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0203728A / Joint Automated Deep Operation Coordination System (JADOCS)				EF8 / AFATDS Increment 1							
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management for Increment 1 Support	SS/BA	PM Mission Command (MC) : APG, MD	0.000	-		-		0.590		-		0.590	-	0.590	-
Subtotal			0.000	-		-		0.590		-		0.590	-	0.590	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Network Assisted GPS for Precision Fires Development	C/CPFF	PM Combat Ammunition Systems, PM Mission Command, and various Army agencies : Various Locations	0.000	-		-		1.000		-		1.000	-	1.000	-
Software Development of AFATDS Version 6.8.1	C/CPFF	Raytheon Systems Corp. : Ft. Wayne, IN	0.000	-		-		0.925		-		0.925	-	0.925	33.188
Subtotal			0.000	-		-		1.925		-		1.925	-	1.925	33.188
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Information Assurance and Engineering Support for AFATDS Increment 1 requirements	C/CPFF	CSC : Various Locations	0.000	-		-		0.160		-		0.160	-	0.160	0.405
Subtotal			0.000	-		-		0.160		-		0.160	-	0.160	0.405

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203728A / <i>Joint Automated Deep Operation Coordination System (JADOCS)</i>	Project (Number/Name) EF8 / <i>AFATDS Increment 1</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Development and Testing V6.8.1	3	2012	3	2015
Materiel Release V6.8.1	3	2015	3	2015
Fielding V6.8.1	3	2015	4	2015
Development /Testing Network Assisted GPS for Precision Fires	3	2012	3	2015
Materiel Release Network Assisted GPS for Precision Fires	3	2015	3	2015
Fielding Network Assisted GPS for Precision Fires	3	2015	4	2015

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	189.396	177.437	295.177	-	295.177	318.674	291.722	202.341	277.895	Continuing	Continuing
330: <i>Abrams Tank Improve Prog</i>	-	86.764	101.265	112.544	-	112.544	159.205	138.377	63.262	94.795	Continuing	Continuing
371: <i>Bradley Improve Prog</i>	-	75.769	76.172	92.427	-	92.427	98.997	100.118	115.444	158.070	Continuing	Continuing
DS5: <i>Armored Multi Purpose Vehicle</i>	-	26.863	-	-	-	-	-	-	-	-	Continuing	Continuing
EE2: <i>Stryker Improvement</i>	-	-	-	90.206	-	90.206	60.472	53.227	23.635	25.030	-	252.570

The FY 2015 OCO Request will be submitted at a later date.

Note

The Stryker Program is submitted under a new Program Element for the FY 2015 President's Budget. The previous program element was 0603653A, project C03 and C51, Advanced Tank Armament System (ATAS.)

A. Mission Description and Budget Item Justification

The Army has approved engineering change proposals for the Abrams, Bradley and Stryker programs to restore lost platform capability and host inbound technologies.

This Program Element (PE) corrects vehicle deficiencies identified in Army operations; continues technical system upgrades to include the integration of applicable technologies on ground systems; addresses needed evolutionary enhancements to tracked combat vehicles; and develops technology improvements which have application to or insertion opportunities across multiple Ground Combat Systems vehicles. This PE provides combat effectiveness and Operating and Support (O&S) cost reduction enhancements for the Abrams tanks, Bradley Fighting Vehicles and Stryker Family of Vehicles (FOVs) through a series of product improvements.

The strategy for Abrams and Bradley will focus on incrementally delivering capability to the warfighter to meet both near-term limitations as well as mitigating gaps and maintaining combat overmatch in the future. This effort was approved by the Army Acquisition Executive in 3Q FY 2011.

The Abrams M1A2 SEP V2 and M2/M3A3 Bradley Fighting Vehicles are at or exceed Space, Weight, and Power-Cooling (SWaP-C) limitations. In order to host and restore lost platform capability, the Abrams Tank and Bradley Fighting Vehicle programs will execute a series of Engineering Change Proposals (ECPs) to support the current embedded systems and to facilitate integration of technologies currently in development under other existing Programs of Record. The ECPs are not intended to exceed the operational capability outlined in current system requirements documents, but rather to ensure that the existing system performance is not further degraded and that Army mission equipment packages can be integrated on the Abrams and Bradley Platforms.

Stryker Improvement program (EE2), will enable the Stryker Family of Vehicles (FOV) to host the future network without further degrading vehicle performance. The upgrade will increase available electrical power while ensuring adequate mechanical power, weight margin, and cooling. Combined with an in-vehicle network, this will

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>
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ensure the FOV can host the future network while retaining its protection and mobility. Funding in FY 15-19 supports continued development engineering efforts on the Stryker Engineering Change Proposal (ECP).

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	253.959	177.532	219.937	-	219.937
Current President's Budget	189.396	177.437	295.177	-	295.177
Total Adjustments	-64.563	-0.095	75.240	-	75.240
• Congressional General Reductions	-16.400	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-26.000	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-6.732	-			
• Other Adjustments 1	-15.431	-0.095	75.240	-	75.240

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	Project (Number/Name) 330 / <i>Abrams Tank Improve Prog</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
330: <i>Abrams Tank Improve Prog</i>	-	86.764	101.265	112.544	-	112.544	159.205	138.377	63.262	94.795	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Army has approved engineering change proposals for the Abrams program to restore lost platform capability and host inbound technologies. The strategy for Abrams will focus on incrementally delivering capability to the warfighter to meet both near-term limitations as well as mitigating gaps and maintaining combat overmatch in the future. This effort was approved by the Army Acquisition Executive in 3Q FY 2011.

The Abrams M1A2 SEP V2 vehicle is at or exceeds Space, Weight, and Power-Cooling (SWaP-C) limitations. In order to host and restore lost platform capability, the Abrams Tank will execute a series of Engineering Change Proposals (ECPs) to support the current embedded systems and to facilitate integration of technologies currently in development under other existing Programs of Record. The ECPs are not intended to exceed the operational capability outlined in current system requirements documents, but rather to ensure that the existing system performance is not further degraded and that Army mission equipment packages can be integrated on the Abrams Platform. 3rd Generation Forward Looking Infrared (IFLIR) integration efforts will begin in FY16.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
<p>Title: Abrams Engineering Change Proposal (ECP) 1</p> <p style="text-align: right;">Articles:</p> <p>Description: The M1A2 SEPv2 improvements implemented through the Abrams ECP 1 Program will restore lost power generation and distribution while incorporating inbound technologies currently under development under other existing Programs.</p> <p>FY 2013 Accomplishments: The largest portion of sub-system integration was executed in FY 2013 with the confirmation of the preliminary design at the Preliminary Design Review. This will quickly be followed by the Critical Design Review in 3Q FY 2014, finalizing the system baseline.</p> <p>FY 2014 Plans: The Critical Design Review will occur in 3QFY2014. This will finalize the system baseline and initiate technology integration of Joint Tactical Radio System Handheld Manpack Small (JTRS-HMS) and Joint Battle Command-Platform (JBC-P) to enable network compatibility, Power Generation/Distribution (battery monitoring system, increased amperage alternator, slip ring), auxiliary power unit, ammunition data link, armor protection upgrade, Counter Remote Control Improvised Explosive Device</p>	<p>72.324</p> <p>-</p>	<p>83.900</p> <p>-</p>	<p>89.497</p> <p>-</p>

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	Project (Number/Name) 330 / <i>Abrams Tank Improve Prog</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
(RCIED) Electronics Warfare System (CREW) Duke V3, and Line replacement modules as well as the start of nine (9) prototype builds. FY 2015 Plans: FY15 will consist of completing prototype builds, component qualification testing, contractor vehicle testing, and initial prototype handoff for government testing.				
Title: Program Management Office (PMO) Support Description: Program Management Office Support includes Systems Engineering and Government and Contractor salaries, travel and other support costs required to effectively manage the program. FY 2013 Accomplishments: Systems Engineering and Program Management Office Support to effectively manage the program. FY 2014 Plans: Systems Engineering and Program Management Office Support to effectively manage the program. FY 2015 Plans: Systems Engineering and Program Management Office Support to effectively manage the program.		12.467 Articles: -	15.413 -	15.957 -
Title: Test & Evaluation Description: Test and Evaluation FY 2013 Accomplishments: Test & Evaluation efforts to support system level test events and planning and development of test documentation FY 2014 Plans: Test & Evaluation efforts to support system level test events and planning and development of test documentation FY 2015 Plans: Test & Evaluation efforts to support system level test events and planning and development of test documentation. We will be conducting Original Equipment Manufacturer (OEM) testing to include software, mobility, communications, and slope and grade testing. Firing functionality of the main gun and secondary weapon systems will occur at Aberdeen Proving Grounds, MD and Yuma Proving Grounds, AZ.		1.973 Articles: -	1.952 -	7.090 -
Accomplishments/Planned Programs Subtotals		86.764	101.265	112.544

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	Project (Number/Name) 330 / <i>Abrams Tank Improve Prog</i>

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Abrams Upgrade Program: <i>Abrams Upgrade Program (GA0750) WTCV</i>	241.540	90.000	-	-	-	-	-	-	-	-	331.540
• M1 Abrams Tank Mod (GA0700): <i>Abrams Vehicle Modification (GA0700) WTCV</i>	128.920	178.100	237.023	-	237.023	461.248	684.958	626.855	787.643	11,300.000	14,404.747

Remarks

D. Acquisition Strategy

Abrams Engineering Change Proposal (ECP) 1: Research & Development Contract - Sole Source, Cost Plus Incentive Fee (CPIF); Production Contract - Sole Source, Firm Fixed Price

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0203735A / Combat Vehicle Improvement Programs				330 / Abrams Tank Improve Prog							
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Abrams Engineering Change Proposal (ECP) 1	SS/CPIF	General Dynamics Land Systems : Sterling Heights, MI	80.000	72.324	Jul 13	83.900	Mar 14	89.497	Mar 15	-		89.497	71.067	396.788	-
Subtotal			80.000	72.324		83.900		89.497		-		89.497	71.067	396.788	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Office (PMO)Support	MIPR	PMO Support Offices : Various	30.193	12.467	Dec 2012	15.413	Dec 2013	15.957	Dec 2014	-		15.957	Continuing	Continuing	Continuing
Subtotal			30.193	12.467		15.413		15.957		-		15.957	-	-	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Advance Technology Preparation and Testing	MIPR	Aberdeen Proving Ground; Yuma Proving Ground; White Sands Missile Range, : Various	9.200	1.973	Jan 2013	1.952	Jan 2014	7.090	Jan 2015	-		7.090	Continuing	Continuing	Continuing
Subtotal			9.200	1.973		1.952		7.090		-		7.090	-	-	-
Project Cost Totals			119.393	86.764		101.265		112.544		-		112.544	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	Project (Number/Name) 330 / <i>Abrams Tank Improve Prog</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Preliminary Design Review (PDR)				■																								
Critical Design Review (CDR)							■																					
Component Qualification Testing											■	■																
Contractor Prototype Proveout											■	■																
Pre Production Test															■	■												
Production Contract Award												■																
Live Fire Test & Evaluation (LFT&E)																							■	■				
Production Qualification Testing (PQT)																											■	■
Logistics Demo																											■	■
Follow-on Test and Evaluation (FOT&E)																												■

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	Project (Number/Name) 330 / <i>Abrams Tank Improve Prog</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Preliminary Design Review (PDR)	4	2013	4	2013
Critical Design Review (CDR)	3	2014	3	2014
Component Qualification Testing	4	2014	4	2015
Contractor Prototype Proveout	2	2015	1	2016
Pre Production Test	4	2015	1	2018
Production Contract Award	2	2016	2	2016
Live Fire Test & Evaluation (LFT&E)	1	2018	4	2018
Production Qualification Testing (PQT)	3	2018	2	2020
Logistics Demo	4	2018	3	2019
Follow-on Test and Evaluation (FOT&E)	3	2019	1	2021

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>				Project (Number/Name) 371 / <i>Bradley Improve Prog</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
371: <i>Bradley Improve Prog</i>	-	75.769	76.172	92.427	-	92.427	98.997	100.118	115.444	158.070	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not Applicable for this item.

A. Mission Description and Budget Item Justification

The M2/M3A3 Bradley Fighting Vehicle is at or exceeds Space, Weight, and Power-Cooling (SWAP-C) limitations. To restore lost platform capability and to host other Army Existing Programs of Record, the Bradley Fighting Vehicle program shall execute a series of Engineering Change Proposals (ECPs). ECP 1 improves vehicle's track and suspension while ECP 2 improves the power train and electrical system to enable the A3 fleet to host inbound technologies from Army Program of Records, including Joint Tactical Radio System (JTRS) and Joint Battle Command – Platform (JBC-P). The ECPs are not intended to exceed the operational capability outlined in current system requirement documents, but rather to ensure that the existing system performance is not further degraded and that Army mission equipment packages can be integrated on the Bradley platform. ECP2 development effort will lead to a production start in FY17. A separate integration effort begins in FY14 for an underbelly armor kit for improved survivability against blast threats. Additionally, Improved FLIR (IFLIR) integration effort will begin in FY16 that will replace the current second generation FLIR for increased lethality through improved target acquisition capability.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Bradley Engineering Change Proposal (ECP) Program	65.151	58.537	63.473
Articles:	-	-	-
Description: The Bradley Fighting Vehicle System (BFVS) improvements implemented through the Engineering Change Proposal (ECP) Program will focus on restoring lost platform capability to support Army inbound technologies and to facilitate integration of technologies currently in development under other existing Programs of Record.			
FY 2013 Accomplishments: Bradley Modernization - The Bradley Fighting Vehicle System (BFVS) improvements implemented through the Engineering Change Proposal (ECP) Program will focus on restoring lost platform capability to support Army inbound technologies and to facilitate integration of technologies currently in development under other existing Programs of Record. Complete System Requirements Review (SRR) and Preliminary Design Review (PDR).			
FY 2014 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	Project (Number/Name) 371 / <i>Bradley Improve Prog</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Complete the Critical Design Review, continue qualification testing moving forward with vehicle integration and contractor testing. FY 2015 Plans: Build ECP 2 prototypes and begin contractor component & qualification testing, Combat Simulation Integration Lab (CSIL), Vehicle Test Integration Lab (VTIL) test efforts and vehicle level system integration testing. Begin Production Qualification Test (PQT) planning, new equipment training and obtaining equipment for government test.				
Title: Bradley Improvements				
Description: Initiate Underbelly Armor Technologies. The Bradley Family of Vehicles will integrate underbelly armor for improved survivability against blast threats and weight reduction efforts.				
FY 2014 Plans: Award major integration contracts for Underbelly improvements for increased lethality and survivability.				
FY 2015 Plans: Award major integration contracts for Underbelly improvements for increased lethality and survivability.				
Title: Program Management Office (PMO) Support				
Description: Program Management Office Support includes Systems Engineering, Government and Contractor salaries, travel and other support costs required to effectively manage the program.				
FY 2013 Accomplishments: Government System Engineering, Program Management Support Costs. These funds cover the costs of Government salaries, travel and the facilities required to effectively manage the program.				
FY 2014 Plans: Government System Engineering, Program Management Support Costs. These funds cover the costs of Government salaries, travel and the facilities required to effectively manage the program.				
FY 2015 Plans: Government System Engineering, Program Management Support Costs. These funds cover the costs of Government salaries, travel and the facilities required to effectively manage the program.				
Title: Test & Evaluation				
Articles:				
		8.658	11.322	11.537
		-	-	-
		1.960	4.267	7.682
		-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	Project (Number/Name) 371 / <i>Bradley Improve Prog</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>Description: Test & Evaluation efforts support system sub-system test events and planning and development of test documentation.</p> <p>FY 2013 Accomplishments: Test & Evaluation efforts support system sub-system test events and planning and development of test documentation.</p> <p>FY 2014 Plans: Test & Evaluation efforts support system sub-system test events and planning and development of test documentation. Start Component Qualification testing.</p> <p>FY 2015 Plans: Test & Evaluation efforts support system sub-system test events and planning and development of test documentation. Continue component qualification testing. Begin Contractor Vehicle testing and Government evaluation of contractor testing. Begin contractor component & qualification testing, Combat Simulation Integration Lab (CSIL), Vehicle Test Integration Lab (VTIL) test efforts and vehicle level system integration testing. Begin Production Qualification Test (PQT) planning, new equipment training and obtaining equipment for government test.</p>			
Accomplishments/Planned Programs Subtotals	75.769	76.172	92.427

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• GZ2400: <i>Bradley Program (MOD)</i>	266.730	158.000	107.506	-	107.506	359.551	512.212	737.912	793.122	1,120.238	4,055.271

Remarks

D. Acquisition Strategy

Product Manager Bradley will execute an Engineering Change Proposal (ECP) reestablishing Space, Weight, Power and Cooling (SWAP-C) to facilitate integration of technologies being developed under existing Programs of Record (POR). The proposed ECP will restore lost capability, not to exceed operational envelopes outlined in current approved requirement documents. The ECP is scheduled to field in FY 2018 to address powerpack and electrical power upgrades, which will enable the vehicle to host Army directed inbound technologies with no further performance degradation to the vehicle. This ECP development will be executed on a sole source cost plus incentive fee contract to the current platform Original Equipment Manufacturer. Integration of the Improved Forward Looking Infrared (IFLIR) sights will be executed through a sole source cost plus contract with the Bradley Original Equipment Manufacturer beginning in FY16. The IFLIR system will be developed by Project Manager, Night Vision/Reconnaissance, Surveillance, and Target Acquisition (PM NV/RSTA) and be provided to Product Manager Bradley as a Horizontal Technology Integration effort.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	Project (Number/Name) 371 / <i>Bradley Improve Prog</i>

<u>E. Performance Metrics</u> N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0203735A / Combat Vehicle Improvement Programs					Project (Number/Name) 371 / Bradley Improve Prog						
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Bradley Modernization Program	SS/CPPIF	PMO : Warren	79.009	-		-		-		-		-	-	79.009	-
Non Recurring Engineering	SS/CPFF	L3COM : Muskegon, MI	0.000	5.630	Aug 2013	8.000	Apr 2014	4.089	Apr 2015	-		4.089	Continuing	Continuing	Continuing
Non Recurring Engineering	SS/CPPIF	BAE : Sterling Heights, MI	3.821	59.521	Jun 2013	50.537	Jun 2014	59.384	Jun 2015	-		59.384	Continuing	Continuing	Continuing
Bradley Improvement Integration	SS/CPPIF	BAE : Sterling Heights, MI	0.000	-		2.046	Jun 2014	9.735	Jun 2015	-		9.735	Continuing	Continuing	Continuing
Subtotal			82.830	65.151		60.583		73.208		-		73.208	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO/PEO Support	MIPR	PMO/PEO : Bradley ECP Program	6.561	3.988	Dec 2012	3.952	Dec 2013	4.026	Dec 2014	-		4.026	Continuing	Continuing	Continuing
Government Engineering Support	MIPR	Various : Bradley ECP Program	15.219	4.670	Dec 2012	7.370	Dec 2013	7.511	Dec 2014	-		7.511	Continuing	Continuing	Continuing
Subtotal			21.780	8.658		11.322		11.537		-		11.537	-	-	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Testing	MIPR	Various : Test Sites	0.800	1.960	Jun 2013	1.812	May 2014	2.685	May 2015	-		2.685	Continuing	Continuing	Continuing
Contractor Testing	SS/CPPIF	BAE : Various	0.000	-		2.455	May 2014	4.997	May 2015	-		4.997	Continuing	Continuing	-
Subtotal			0.800	1.960		4.267		7.682		-		7.682	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army								Date: March 2014					
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>				Project (Number/Name) 371 / <i>Bradley Improve Prog</i>					
	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	105.410	75.769		76.172		92.427		-		92.427	-	-	-

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	Project (Number/Name) 371 / <i>Bradley Improve Prog</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Bradley Engineering Change Proposal Program	1	2012	4	2018
System Requirements Review	2	2013	2	2013
Preliminary Design Review	4	2013	4	2013
Critical Design Review	3	2014	3	2014
Component Qualification Testing	3	2014	2	2015
Contractor Vehicle Testing	3	2015	3	2016
Production Qualification Test (PQT)	2	2016	2	2018
Production Contract Award	3	2017	3	2017
Follow-on Test and Evaluation (FOT&E)	1	2019	2	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>				Project (Number/Name) DS5 / <i>Armored Multi Purpose Vehicle</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DS5: <i>Armored Multi Purpose Vehicle</i>	-	26.863	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

The new program element is 0605028A, Project EB5, Armored Multi Purpose Vehicle (AMPV). The previous program element was 0203735A, Project DS5, Combat Vehicle Improvement Program.

A. Mission Description and Budget Item Justification

The Armored Multi Purpose Vehicle Program is submitted under Program Element 0605028A, Project EB5 for the FY2015 Budget Estimate Submission.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Armored Multi-Purpose Vehicle	26.863	-	-
Articles:	-	-	-
Description: .Armored Multi-Purpose Vehicle (AMPV) Replaces the Army's Armored Personnel Carrier (M113) Family of Vehicles (FoV). The Armored Multi-Purpose Vehicle (AMPV) is a materiel solution to support the Armored Brigade Combat Team (ABCT) across the Spectrum of Conflict by replacing five mission roles currently performed by the M113 Family of Vehicles (FOV) and integrating the current M113 FOV Mission Equipment Package (MEP) to a Military Vehicle Derivative (MVD).			
FY 2013 Accomplishments: The Joint Requirements Oversight Council (JROC) validated the Capabilities Development Document (CDD) on 16 Mar 2013. The Defense Acquisition Executive (DAE) approved the AMPV Acquisition Concept on 12 Feb 2013 and authorized release of a draft Request for Proposal (RFP) to industry on 21 Mar 2013. Product Manager (PdM) AMPV also held an Industry Day on 22 - 24 of April 2013 to support a competitive acquisition approach. Following the industry day, PdM AMPV revised the performance specification and acquisition strategy based on industry feedback. PdM AMPV held a Defense Acquisition Board (DAB) on 13 Aug 2013 for final release of the RFP to industry. The DAE directed the Army to re-evaluate the EMD schedule, LRIP contract and RAM Growth Curve. Changes based on this direction resulted in the plan to release another draft RFP to industry on 26 Sep 2013.			
Accomplishments/Planned Programs Subtotals	26.863	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	Project (Number/Name) DS5 / <i>Armored Multi Purpose Vehicle</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
Remarks		
D. Acquisition Strategy N/A		
E. Performance Metrics N/A		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	Project (Number/Name) DS5 / <i>Armored Multi Purpose Vehicle</i>
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Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
AMPV Development	MIPR	Other Government Agencies : Various locations	8.263	9.869	Dec 2012	-		-		-		-	-	18.132	-
Subtotal			8.263	9.869		-		-		-		-	-	18.132	-

Remarks
Armored Multi Purpose Vehicle Tech data and system level product development costs.

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
AMPV Documentation	C/FFP	Camber : Michigan	1.000	1.016	Jan 2013	-		-		-		-	-	2.016	-
Program Management Office (PMO)	MIPR	PMO : Warren, MI	1.790	2.973	Dec 2012	-		-		-		-	-	4.763	-
Other Program Support	MIPR	OGAs : Various locations	2.788	13.005	Feb 2013	-		-		-		-	-	15.793	-
Subtotal			5.578	16.994		-		-		-		-	-	22.572	-

Remarks
AMPV Support Costs

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	13.841	26.863	-	-	-	-	-	40.704	-

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	Project (Number/Name) EE2 / <i>Stryker Improvement</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EE2: <i>Stryker Improvement</i>	-	-	-	90.206	-	90.206	60.472	53.227	23.635	25.030	-	252.570
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note
Beginning in FY15, PE Number 0203735A/Project EE2 funds the Stryker ECP program, which was originally funded by PE Number 0603653A/Project C03 (FY13) and Project C51 (through FY14).

A. Mission Description and Budget Item Justification
Stryker Modernization will enable the Stryker FOV to host the future network without further degrading vehicle performance. The upgrade will increase available electrical power while ensuring adequate mechanical power, weight margin, and cooling. Combined with a digital backbone, this will ensure the FOV can cost the future network while retaining its protection and mobility. Funding in FY15-19 supports continued development engineering, prototype build and testing efforts on the Stryker Engineering Change Proposal (ECP). Funding for this effort was previously funded in Program Element 0603653A/Project C51 and Project C03 (FY13).

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
<p>Title: Stryker ECP Development (Engineering/Prototypes)</p> <p>Description: Funding is provided for the following effort</p> <p>FY 2015 Plans: Continuing development engineering for the Stryker ECP upgrades and continue procuring prototypes for the engine, alternator, suspension and in-vehicle network on the DVH variant.</p>	-	-	78.924
<p>Title: Training Device Updates</p> <p>Description: Funding is provided for the following effort</p> <p>FY 2015 Plans: Continuing the development and design of training device upgrades to reflect the ECP upgrades to the vehicles.</p>	-	-	3.588
<p>Title: Stryker ECP Testing</p> <p>Description: Funding is provided for the following effort</p> <p>FY 2015 Plans:</p>	-	-	2.463

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	Project (Number/Name) EE2 / <i>Stryker Improvement</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Begin the development test planning and execution for the ECP upgrade technologies, including tests for safety and human factors, automotive, communications, command and control (C3), Live Fire Testing and operational testing.			
Title: Contractor Support to Test Description: Funding is provided for the following effort FY 2015 Plans: Begin the contractor support of the test planning and execution. Support the Stryker platforms to include test preparation, vehicle maintenance/repair and overall test support for development tests, Live Fire Testing and operational testing.	-	-	1.659
Title: Government Engineering and Project Management Description: Funding is provided for the following effort FY 2015 Plans: Continuing Government Systems Engineering and Program Management which includes labor, travel, training, supplies and equipment	-	-	3.572
Accomplishments/Planned Programs Subtotals	-	-	90.206

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Stryker Vehicle: <i>Stryker Vehicle (G85100)</i>	242.439	419.100	385.110	-	385.110	455.484	396.631	99.038	-	484.028	2,481.830
• Stryker Modification: <i>Stryker Modification (GM0100)</i>	60.801	20.522	39.683	-	39.683	66.159	170.823	503.552	603.906	1,709.838	3,175.284
• Spares (Initial) Stryker: <i>Spares (Initial) Stryker</i>	22.176	-	-	-	-	-	-	-	-	-	22.176

Remarks
The Phase III decision point associated with the Stryker ECP will determine the WTCV funds required, planned in FY2017

D. Acquisition Strategy

The Stryker ECP effort will buy back the vehicle space, weight, and power margin lost due to the addition of numerous kits in response to eleven years of war (20-combat rotations & 30+ million total miles), in order to allow integration of the future network (as directed by VCSA in August 2011) without further degrading the performance of the platform. In May 2012, Phase I (Design) of the Stryker ECP program was approved, permitting preliminary design and integration efforts on both

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army Date: March 2014

Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
2040 / 7	PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	EE2 / <i>Stryker Improvement</i>

the Flat Bottom (FB) and Double-V Hull (DVH) variants (completed). In March 2013, Phase II approved upgrading the mechanical power, electrical power generation, chassis upgrades and the in-vehicle network for the DVH vehicles. ECP Phase II contract awarded in November 2013, continues development engineering, prototype build test and evaluation. The Phase III (Production) decision point will determine the production requirements of the technologies selected in Phase II. Beginning in FY15, PE Number 0203735A/Project EE2 funds the Stryker ECP program, which was originally funded by PE Number 0603653A/Project C03 (FY13) and Project C51 (through FY14).

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0203735A / Combat Vehicle Improvement Programs				EE2 / Stryker Improvement							
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Office (PMO)	TBD	TACOM, MI : Various	0.000	-		-		3.572	Oct 2014	-		3.572	14.596	18.168	-
Subtotal			0.000	-		-		3.572		-		3.572	14.596	18.168	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Stryker ECP Development	SS/CPPIF	GDLS, MI : Various	0.000	-		-		78.924	Oct 2014	-		78.924	68.765	147.689	-
Training Device Updates	TBD	PEO STRI, FL : Various	0.000	-		-		3.588	Mar 2015	-		3.588	7.181	10.769	-
Subtotal			0.000	-		-		82.512		-		82.512	75.946	158.458	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Support to Test	SS/CPFF	GDLS, MI : Various	0.000	-		-		1.659	Jan 2015	-		1.659	22.764	24.423	-
Stryker ECP Testing	TBD	Various Test Centers, Multiple : Various	0.000	-		-		2.463	Jan 2015	-		2.463	49.058	51.521	-
Subtotal			0.000	-		-		4.122		-		4.122	71.822	75.944	-
Project Cost Totals			0.000	-		-		90.206		-		90.206	162.364	252.570	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	Project (Number/Name) EE2 / <i>Stryker Improvement</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Stryker Engineering Change Proposal (ECP)																												
ECP Critical Design Review																												
Production Decision																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203735A / <i>Combat Vehicle Improvement Programs</i>	Project (Number/Name) EE2 / <i>Stryker Improvement</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Stryker Engineering Change Proposal (ECP)	1	2015	3	2019
ECP Critical Design Review	1	2015	1	2015
Production Decision	2	2017	2	2017

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203740A / <i>Maneuver Control System</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	60.948	36.475	45.092	-	45.092	66.754	22.022	21.006	15.130	Continuing	Continuing
484: <i>Maneuver Control System</i>	-	60.948	36.475	45.092	-	45.092	66.754	22.022	21.006	15.130	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note
 FY 2015 funding will support COE development efforts.

A. Mission Description and Budget Item Justification
 Tactical Mission Command (TMC) is a suite of products and services that provide commanders and their staff executive decision making capability in a collaborative environment, planning tools, and Common Operational Picture (COP) management and other maneuver functional tools. TMC satisfies requirements and capabilities identified in the Maneuver Control System (MCS) Good Enough Operational Requirements Document (ORD) and MCS 6.4 Capability Production Document (CPD) which includes Army migration to Department of Defense (DoD) net-centric environment. The overarching capability includes a user-defined COP with integrated Command and Control (C2) and Situational Awareness (SA), map-centric collaboration, Army Battle Command System (ABCS) and other enabling system interoperability, data management, and enterprise services. The suite of products include Command Post of the Future (CPOF), Command Web, Battle Command Common Services (BCCS), and Command Post Client (CPC), that provides the consolidate server and services infrastructure for systems supporting Army Battle Command from Battalion to Army Component Command, Battalion and Above Joint Convergence with the Marine Corps, and Tactical Web Portal for Knowledge management. TMC products and services are compliant with the joint technical architecture. In addition, this project funds the development of a collaborative Mission Command (MC) environment for ABCS to operate more efficiently and effectively. The MC environment will serve as a common foundation for functionality development and support by converging onto a common architecture and infrastructure. MC Convergence/ Common Operating Environment (COE) development and integration will significantly enhance the ability of commanders and staff to effectively conduct collaborative mission planning and execution across a range of operations and spectrum of conflict.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203740A / <i>Maneuver Control System</i>
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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	68.325	36.495	44.760	-	44.760
Current President's Budget	60.948	36.475	45.092	-	45.092
Total Adjustments	-7.377	-0.020	0.332	-	0.332
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-7.377	-0.020	0.332	-	0.332

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203740A / <i>Maneuver Control System</i>				Project (Number/Name) 484 / <i>Maneuver Control System</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
484: <i>Maneuver Control System</i>	-	60.948	36.475	45.092	-	45.092	66.754	22.022	21.006	15.130	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Tactical Mission Command (TMC) is a suite of products and services that provide commanders and their staff executive decision making capability in a collaborative environment, planning tools, and Common Operational Picture (COP) management and other maneuver functional tools. TMC satisfies requirements and capabilities identified in the Maneuver Control System (MCS) Good Enough Operational Requirements Document (ORD) and MCS 6.4 Capability Production Document (CPD) which includes Army migration to Department of Defense (DoD) net-centric environment. The overarching capability includes a user-defined COP with integrated Command and Control (C2) and Situational Awareness (SA), map-centric collaboration, Army Mission Command System and other enabling system interoperability, data management, and enterprise services. The suite of products include Command Post of the Future (CPOF), Command Web, Battle Command Common Services (BCCS), and Command Post Client (CPC), that provides server consolidation and services infrastructure for systems supporting Army Mission Command from Battalion to Army Component Command, Battalion and Above, Joint Convergence with the Marine Corps, and Tactical Web Portal for Knowledge management. TMC products and services are compliant with the joint technical architecture. In addition, this project funds the development of a collaborative Mission Command (MC) environment to operate more efficiently and effectively. The MC environment will serve as a common foundation for functionality development and support by converging onto a common architecture and infrastructure. MC Convergence/ Common Operating Environment (COE) development and integration will significantly enhance the ability of commanders and staff to effectively conduct collaborative mission planning and execution across a range of operations and spectrum of conflict.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Command Post Client (CPC) - Command Post Computing Environment (CP CE) Infrastructure Development & Integration and Test	-	-	26.304
Description: Command Post Computing Environment (CP CE) is the computing environments to organizationally manage, control and implement COE across the force. Included is an Operational test for COE V2.			
FY 2015 Plans: Command Post Client (CPC) - Command Post Computing Environment (CP CE) Infrastructure Development & Integration and Test			
Title: Battle Command Common Services Development	7.919	7.255	8.736
Articles:	-	-	-
Description: Battle Command Common Services Development			
FY 2013 Accomplishments:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203740A / <i>Maneuver Control System</i>	Project (Number/Name) 484 / <i>Maneuver Control System</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Battle Command Common Services Development FY 2014 Plans: Battle Command Common Services Development FY 2015 Plans: Battle Command Common Services Development				
Title: Mission Command Convergence Description: Mission Command Convergence Development and Integration FY 2013 Accomplishments: Mission Command Convergence Development and Integration FY 2014 Plans: Mission Command Convergence Development and Integration FY 2015 Plans: Mission Command Convergence - Software Development and Integration for BCS3 and Common Software (CS)		27.678 Articles: -	7.814 -	10.052 -
Title: CPOF Development Description: CPOF Development FY 2013 Accomplishments: CPOF Development FY 2014 Plans: CPOF Development		21.409 Articles: -	20.397 -	- -
Title: Command Web Development Description: Command Web Development FY 2014 Plans: Command Web Development		- Articles: -	1.009 -	- -
Title: Joint Convergence Engineering and Development		3.942 Articles: -	- -	- -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203740A / <i>Maneuver Control System</i>	Project (Number/Name) 484 / <i>Maneuver Control System</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: Joint Convergence Engineering and Development			
FY 2013 Accomplishments: Joint Convergence Engineering and Development			
Accomplishments/Planned Programs Subtotals	60.948	36.475	45.092

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Funding: <i>BA9320 Maneuver Control System (MCS)</i>	54.361	18.179	95.455	-	95.455	109.681	173.965	85.269	108.967	Continuing	Continuing
• SPARES: <i>BS9710 MCS Spares Procurement</i>	1.669	0.655	0.637	-	0.637	0.631	0.604	4.950	4.955	Continuing	Continuing

Remarks

D. Acquisition Strategy

In accordance with the Training and Doctrine Command (TRADOC) requirements document approved in 2008, entitled Mission Command Essential Capability, software capability will be developed in 2-year increments as capability sets designed to deploy specified Mission Command Essential Capabilities to operating force commanders and their integrated battle staffs.

This strategy accounts for subsequent Army directives for Mission Command (MC) convergence and migration to the Army Common Operating Environment (COE); designed to optimize opportunities for improved interoperability among the Army Mission Command systems and applications, to capture the benefits of competition where possible, to reduce application and system redundancy, to ensure the rapid integration of new capability into warfighter systems, to increase operational efficiency, reduce the physical footprint, and reduce logistics support and training requirements. The products developed under this funding line is an integral part of the Army Mission Command System of Systems.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203740A / Maneuver Control System	Project (Number/Name) 484 / Maneuver Control System
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Office Mgmt	Various	PM Mission Command : Aberdeen Proving Grounds, MD	11.870	1.888	Jan 2013	1.922	Jan 2014	2.112	Jan 2015	-		2.112	Continuing	Continuing	Continuing
Subtotal			11.870	1.888		1.922		2.112		-		2.112	-	-	-

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Misc Contracts	Various	Various : Various	24.931	-		-		-		-		-	Continuing	Continuing	Continuing
ABCS SoS Contract (Joint Convergence Development)	Various	Lockheed Martin : Tinton Falls, NJ	3.487	2.917	Jul 2013	-		-		-		-	Continuing	Continuing	Continuing
Technical Support	Various	PM Mission Command/SEC : Various	26.011	0.309	Nov 2012	0.931	Nov 2013	-		-		-	Continuing	Continuing	Continuing
CPOF Development	Various	General Dynamics : Scottsdale, AZ	97.568	20.428	Feb 2013	20.397	Feb 2014	-		-		-	Continuing	Continuing	Continuing
ABCS SoS Contract (Joint Convergence Development) Follow-on	Various	General Dynamics : Scottsdale, AZ	0.000	1.025	Jul 2013	-		-		-		-	Continuing	Continuing	-
Command Web Development	Various	CECOM SEC : APG, MD	0.000	-		1.009	Nov 2013	-		-		-	-	1.009	-
Mission Command Convergence Development & Integration	Various	Various : Various	15.020	27.678	Mar 2013	-		-		-		-	Continuing	Continuing	Continuing
Mission Command Convergence - CP CE Software Development & Integration (BCS3)	Various	Future Skies : APG, MD	0.000	-		2.011	Apr 2014	1.654	Apr 2015	-		1.654	Continuing	Continuing	-
Mission Command Convergence - CP CE Software Development	Various	IBM : Bethesda, MD	0.000	-		3.462	Jan 2014	8.399	Jan 2015	-		8.399	-	11.861	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203740A / Maneuver Control System	Project (Number/Name) 484 / Maneuver Control System
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Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
& Integration (Common Software)															
Mission Command Convergence Development & Integration (TAIS)	Various	CECOM SEC : APG, MD	0.000	-		2.103	Feb 2014	-		-		-	-	2.103	-
Software Development & Technical Support	Various	CECOM Software Engineering Center : APG, MD	53.214	5.441	Nov 2012	2.321	Nov 2013	8.736	Nov 2014	-		8.736	Continuing	Continuing	Continuing
PAL Integration	IA	SRI : AZ	11.000	-		-		-		-		-	Continuing	Continuing	-
Command Post Client (CPC) CP CE SoftwareDevelopment	TBD	TBD : TBD	0.000	-		-		9.925	Jan 2015	-		9.925	-	9.925	-
Subtotal			231.231	57.798		32.234		28.714		-		28.714	-	-	-

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Misc Engineering Support	Various	PM Mission Command/SEC : Aberdeen Proving Ground, MD	8.472	0.463	Feb 2013	0.255	Feb 2014	1.150	Feb 2015	-		1.150	Continuing	Continuing	Continuing
Misc Contracts	Various	Various : Various	5.235	0.304	Feb 2013	0.204	Feb 2014	-		-		-	Continuing	Continuing	Continuing
Subtotal			13.707	0.767		0.459		1.150		-		1.150	-	-	-

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
OGA	Various	Various : APG, MD	6.017	0.240	Dec 2012	0.370	Dec 2013	1.166	Dec 2014	-		1.166	Continuing	Continuing	Continuing
Misc Contracts	TBD	VARIOUS : APG, MD	7.093	0.255	Dec 2012	0.430	Dec 2013	1.100	Dec 2014	-		1.100	-	8.878	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203740A / Maneuver Control System	Project (Number/Name) 484 / Maneuver Control System
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Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Planning/Conduct	Various	Various : APG, MD	24.894	-		1.060	Mar 2014	10.850	Jan 2015	-		10.850	Continuing	Continuing	Continuing
Subtotal			38.004	0.495		1.860		13.116		-		13.116	-	-	-
Project Cost Totals			294.812	60.948		36.475		45.092		-		45.092	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203740A / <i>Maneuver Control System</i>	Project (Number/Name) 484 / <i>Maneuver Control System</i>
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	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Mission Command COE 1.0 Development Test and Integration																												
Mission Command CPCE 2.0 Development, Test and Integration																												
Mission Command CPCE 3.0 Development, Test and Integration																												
Mission Command CPCE 4.0 Development, Test and Integration																												
Integration Testing/Interop Certification and NIE OA of TMC Suite (BCCS/CP CE)																												
Integration Testing/Interop Certification and NIE OA of TMC Suite (CPOF)																												
Evolving Software Upgrades (e.g., joint interoperability, COE compliance, etc.)																												
Fielding																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203740A / <i>Maneuver Control System</i>	Project (Number/Name) 484 / <i>Maneuver Control System</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Mission Command COE 1.0 Development Test and Integration	1	2011	4	2014
Mission Command CPCE 2.0 Development, Test and Integration	1	2014	4	2016
Mission Command CPCE 3.0 Development, Test and Integration	1	2016	4	2018
Mission Command CPCE 4.0 Development, Test and Integration	1	2018	4	2020
Integration Testing/Interop Certification and NIE OA of TMC Suite (BCCS/CP CE)	3	2004	4	2020
Integration Testing/Interop Certification and NIE OA of TMC Suite (CPOF)	3	2004	2	2015
Evolving Software Upgrades (e.g., joint interoperability, COE compliance, etc.)	4	2004	4	2020
Fielding	2	2004	4	2020

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/Product Improvement Programs
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	201.504	239.696	264.887	-	264.887	256.677	223.993	250.129	326.542	Continuing	Continuing
430: Impr Cargo Helicopter	-	63.835	33.220	35.424	-	35.424	47.046	43.944	44.740	63.275	Continuing	Continuing
504: Black Hawk Recapitalization/Modernization	-	25.985	79.880	65.217	-	65.217	45.880	24.744	45.807	99.132	Continuing	Continuing
D17: Apache Block III	-	110.802	124.764	124.099	-	124.099	113.329	52.455	21.537	32.244	-	579.230
D18: Fixed Wing Aircraft	-	0.882	1.832	0.819	-	0.819	1.175	0.997	1.087	2.273	-	9.065
EB1: Improved Turbine Engine Program	-	-	-	39.328	-	39.328	49.247	101.853	136.958	129.618	-	457.004

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

FY 2015 budget request funds aviation development of modifications and improvements for the Improved Cargo Helicopter (ICH), the UH-60L Black Hawk Recapitalization/Modernization, Apache Block III, and Fixed Wing Aircraft.

B. Program Change Summary (\$ in Millions)

	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	280.247	257.187	334.521	-	334.521
Current President's Budget	201.504	239.696	264.887	-	264.887
Total Adjustments	-78.743	-17.491	-69.634	-	-69.634
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-17.491			
• Congressional Rescissions	-78.743	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-69.634	-	-69.634

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) 430 / Impr Cargo Helicopter
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
430: <i>Impr Cargo Helicopter</i>	-	63.835	33.220	35.424	-	35.424	47.046	43.944	44.740	63.275	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note
Not applicable for this item.

A. Mission Description and Budget Item Justification

The CH-47 Chinook is the only heavy lift helicopter for the Army and is an essential element of the current Army Aviation master plan. This program funds improvements to the CH-47F System that include: T55-GA-714A engine control and component upgrades to increase power to support emerging 6K/95 requirements, continued development and testing of the Advanced Chinook Rotor Blades (ACRB) which will provide increased lift in high/hot conditions and reduce O&S costs. Production of the ACRB will begin in FY 2017. Funding also initiates advanced flight control and drive train component improvements to improve aircraft performance. Development of requirements specifications, studies and risk reduction prototyping are also part of this effort.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
<p>Title: 714 Engine Component Improvement Program</p> <p align="right">Articles:</p> <p>Description: Included in the Engine Component Improvement Program are improvements that address improved performance, reduced maintenance burden for better maintainability for the Soldier, improved safety, and increased reliability leading to reduced O&S costs. Improvements include improved component designs/updates and electronic control unit software.</p> <p>FY 2013 Accomplishments: Included in the Engine Component Improvement Program are improvements that address increased maintainability, improved safety, and increased reliability leading to reduced O&S costs. Improvements include component design/updates and updated electronic control unit software.</p> <p>FY 2014 Plans: Included in the Engine Component Improvement Program are improvements that address increased maintainability, improved safety, and increased reliability leading to reduced O&S costs. Improvements include component design/updates and related component design and improved electronic control unit software.</p>	2.621 -	9.685 -	- -
<p>Title: Electronic Control Unit (ECU) Software Upgrade</p>	-	-	3.505

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) 430 / Impr Cargo Helicopter		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<p>Description: This effort is to develop, generate, and qualify the latest software version of the T55-GA-714A Electronic Control Unit. Effort will correct any deficiencies noted in the field and/or incorporate upgrades as needed.</p> <p>FY 2015 Plans: This effort is to develop, generate, and qualify the latest software version of the T55-GA-714A Electronic Control Unit. Effort will correct any deficiencies noted in the field and/or incorporate upgrades as needed.</p>				
<p>Title: Ratio Detector Power Supply (RDPS)</p> <p>Description: This effort will consist of design, development, and qualification of a replacement T55-GA-714A Engine Ratio Detector Power Supply (RDPS) to alleviate obsolescence issues with the current system.</p> <p>FY 2015 Plans: This effort will consist of design, development, and qualification of a replacement T55-GA-714A Engine Ratio Detector Power Supply (RDPS) to alleviate obsolescence issues with the current system.</p>		-	-	2.665
<p>Title: Airframe Component Improvement Program</p> <p align="right">Articles:</p> <p>Description: Included in the Airframe Component Improvement Program are the continued development and flight testing of the Advanced Chinook Rotor Blade (ACRB) and development of advanced flight control and drive train components. The ACIP will also assess potential improvements to the, fuel system, and structural improvements for improved aircraft performance, aircraft weight reduction, and reduction of O&S costs.</p> <p>FY 2013 Accomplishments: Included in these efforts are development and testing of the Advanced Chinook Rotor Blade (ACRB) that will result in significant performance improvements such as providing approximately 1,975 lbs of additional lift, improving erosion protection, and reducing O&S costs. Funding also continues component development of advanced flight controls, drive train, and fuel system to increase aircraft performance, reduce aircraft weight, and reduce O&S costs.</p> <p>FY 2014 Plans: Included in these efforts are development and testing of the Advanced Chinook Rotor Blade (ACRB) that will result in significant performance improvements such as providing approximately 1,975 lbs of additional lift, improving erosion protection, and reducing O&S costs. Funding continues airframe weight reductions and component development of advanced flight controls, drive train, rotor system, and fuel system to increase aircraft performance, reduce aircraft weight, and reduce O&S costs.</p>		58.022 -	21.874 -	- -
<p>Title: Systems Engineering</p>		-	-	8.863

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) 430 / Impr Cargo Helicopter		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<p>Description: This effort provides the systems engineering approach to ensure successful integration of upgrades at the platform level to realize efficiencies and reduce costs.</p> <p>FY 2015 Plans: This effort provides the systems engineering approach to ensure successful integration of upgrades at the platform level to realize efficiencies and reduce costs.</p>				
<p>Title: Advanced Chinook Rotor Blade (ACRB)</p> <p>Description: This effort provides an Advanced Chinook Rotor Blade which is a redesign of the current rotor blade to provide increased hover lift in payload capability. It improves high/hot performance and is a Form, Fit, Function replacement for the legacy blade.</p> <p>FY 2015 Plans: This effort provides an Advanced Chinook Rotor Blade which is a redesign of the current rotor blade to provide increased hover lift in payload capability. It improves high/hot performance and is a Form, Fit, Function replacement for the legacy blade. This effort covers final fabrication, test and qualification of the ACRB.</p>		-	-	16.578
<p>Title: Testing and Evaluation</p> <p>Description: This effort incorporates all testing requirements to integrate numerous Engineering Change Proposals (ECPs) into one system level requirement to include Advanced Chinook Rotor Blade (ACRB).</p> <p>FY 2015 Plans: This effort incorporates all testing requirements to integrate numerous Engineering Change Proposals (ECPs) into one system level requirement to include Advanced Chinook Rotor Blade (ACRB).</p>		-	-	2.042
<p>Title: In-house and Program Management Administration</p> <p align="right">Articles:</p> <p>Description: This funding provides support costs for various government agencies.</p> <p>FY 2013 Accomplishments: This funding provides future support costs for various government agencies.</p> <p>FY 2014 Plans: This funding provides future support costs for various government agencies.</p> <p>FY 2015 Plans:</p>		3.192 -	1.661 -	1.771 -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) 430 / Impr Cargo Helicopter

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
This funding provides future support costs for various government agencies.			
Accomplishments/Planned Programs Subtotals	63.835	33.220	35.424

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

Line Item	FY 2013	FY 2014	FY 2015	FY 2015	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	Cost To	
			Base	OCO	Total					Complete	Total Cost
• AA0252: CH-47 CARGO HELICOPTER MODS	90.487	149.764	32.092	-	32.092	147.856	164.074	503.948	91.142	Continuing	Continuing
• A05105: CH-47 SLEP (Including Adv Proc)	632.564	669.053	758.622	-	758.622	772.020	748.591	165.047	235.829	Continuing	Continuing
• A05008: CH-47 CARGO HELICOPTER NEW BUILD	756.441	606.973	236.243	-	236.243	350.336	0.199	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

The CH-47F program replaces one for one, the aging CH-47D aircraft by FY2020, incorporates a new machined airframe, and includes a new Common Avionics Architecture System (CAAS) cockpit with digital communication/navigation capability allowing improved interoperability on the digital battlefield. The CH-47F program includes recapitalization of key dynamic components, bringing them to a near zero time.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs				Project (Number/Name) 430 / Impr Cargo Helicopter							
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
714 Engine Component Improvement Program	SS/CPFF	Honeywell : Phoenix, AZ	7.900	2.621	Mar 2013	9.685		-		-		-	Continuing	Continuing	Continuing
Electronic Control Unit (ECU) Software Upgrade	SS/CPFF	Honeywell : Phoenix, AZ	0.000	-		-		3.505	May 2015	-		3.505	Continuing	Continuing	Continuing
Ratio Detector Power Supply (RDPS)	SS/CPFF	Boeing : Ridley Park, PA	0.000	-		-		2.665	May 2015	-		2.665	Continuing	Continuing	Continuing
Airframe Component Improvement Program	SS/CPFF	Boeing : Ridley Park PA	47.239	58.022	Dec 2012	21.874		-		-		-	Continuing	Continuing	Continuing
System Engineering	SS/CPFF	Boeing : Ridley Park, PA	0.000	-		-		8.863	Jan 2015	-		8.863	Continuing	Continuing	Continuing
Advanced Chinook Rotor Blade (ACRB)	SS/CPFF	Boeing : Ridley Park, PA	0.000	-		-		16.578	Mar 2015	-		16.578	Continuing	Continuing	Continuing
Subtotal			55.139	60.643		31.559		31.611		-		31.611	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO/OGA	Various	Various government : Redstone Arsenal AL	2.740	3.192	Mar 2013	1.661		1.771	Mar 2015	-		1.771	Continuing	Continuing	Continuing
Subtotal			2.740	3.192		1.661		1.771		-		1.771	-	-	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing of configuration update ECPs to include the Advanced Chinook Rotor Blades.	SS/CPFF	Boeing : Ridley Park PA	0.000	-		-		2.042	Dec 2014	-		2.042	Continuing	Continuing	Continuing
Subtotal			0.000	-		-		2.042		-		2.042	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army							Date: March 2014						
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs			Project (Number/Name) 430 / Impr Cargo Helicopter						
	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	57.879	63.835		33.220		35.424		-		35.424	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) 430 / Impr Cargo Helicopter

FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Full Rate Production																												
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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) 430 / Impr Cargo Helicopter

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Full Rate Production	2	2005	2	2020

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs				Project (Number/Name) 504 / Black Hawk Recapitalization/ Modernization			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
504: <i>Black Hawk Recapitalization/Modernization</i>	-	25.985	79.880	65.217	-	65.217	45.880	24.744	45.807	99.132	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The H-60L Digital BLACK HAWK is designed to update the existing H-60L analog architecture to a digital infrastructure enabling the upgraded aircraft to have a similar Pilot-Vehicle Interface (PVI) to the H-60M. The program will address current capability gaps and meet operational requirements by employing an evolutionary acquisition approach to leverage mature technologies that have been successfully integrated on other military aircraft. The program will reduce obsolescence and increase commonality and interoperability by installing a digital cockpit, bussing and upgrading the communication/identification suite, improving navigation guidance, and integrating Aircraft Survivability Equipment (ASE), digital moving map, and Joint Variable Message Format (JVMF) messaging.

The Improved Turbine Engine Program (ITEP) develops, tests, and qualifies the next generation turboshaft engine. The Improved Turbine Engine (ITE) replaces the existing T700 engine design originated in the 1970's and meets the operational requirement of 6K/95. The ITE will fit inside the existing engine bays of the Black Hawk and Apache Helicopters and provides a significant power enhancement of up to fifty percent (total of 3,000 shaft horsepower) with increased fuel efficiency. Additional benefits include improved design life, enhanced reliability, lower maintenance cost and restored capability lost due to aircraft weight growth, without increasing the logistics footprint. The program consists of system engineering and program management, detailed design engineering, design assurance, hardware manufacturing and testing, component and module level development and testing, system level testing and qualification, as well as integration into the airframe.

FY 2014 funds system engineering/program management, continuing component testing, and initial airframe integration efforts. All funding for ITEP for FY 2015 and beyond is located in Project Element (PE) 0203744A - Project EB1. UH-60L Digital will remain in Project 504. FY 2014 H-60L Digital (\$17.3M) funded within PE 0203744A. Funds required for systems engineering/program management and preliminary hardware and software development leading to up to program readiness for preliminary design review

FY 2015 UH-60L Digital funds hardware and software development as well as prototype support. Tasks include Preliminary Design Review and Critical Design Review and commencement of the first aircraft build.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: ITEP	16.585	79.880	-
Articles:	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) 504 / Black Hawk Recapitalization/ Modernization

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>Description: Improved Turbine Engine Program (ITEP) - a multi-platform turbine engine improvement required across existing Army aircraft to fill the capability gaps for Army Aviation Operations.</p> <p>FY 2013 Accomplishments: Systems Engineering/Program Management requirements. Continue preparation for Milestone entry, development of contractor requirements package, and support to Analysis of Alternatives (AoA).</p> <p>FY 2014 Plans: Systems Engineering/Program Management requirements. Continue preparation for Milestone entry, development of contractor requirements package, initial airframe integration efforts and continued engine component testing.</p>			
<p>Title: UH-60L Digital</p> <p align="right">Articles:</p> <p>Description: Provide an integrated digital map, integrated performance planning, common functionality and commonality of training with UH-60M.</p> <p>FY 2013 Accomplishments: Begin UH-60L Digital effort. Activity to support Material Development Decision (MDD), preparation for Milestone entry, development of contractor requirements package.</p> <p>FY 2015 Plans: Begin UH-60L cockpit digitization effort, an upgrade program to digitize UH-60L with integrated digital map, integrated performance planning, common Pilot Vehicle Interface (PVI) with UH-60M.</p>	9.400 -	- -	65.217 -
Accomplishments/Planned Programs Subtotals	25.985	79.880	65.217

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• BLACK HAWK (Modifications) AA0492: BLACK HAWK (Modifications) AA0492	73.561	74.095	76.515	-	76.515	51.017	91.809	149.068	191.452	Continuing	Continuing
Remarks AA0492 BLACK HAWK (Modifications) provides funding for the UH-60L Digital starting in FY 2018. This line also includes other post production modifications to the UH-60 A/L aircraft.											

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) 504 / Black Hawk Recapitalization/ Modernization

D. Acquisition Strategy

The UH-60L Digital program plans to leverage a Government-owned Government-operated (GOGO) facility to design, integrate and build 3 production representative aircraft. The GOGO facility uses a cost plus vehicle and will conduct full and open competition for the selection of the avionics solution provider.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0203744A / Aircraft Modifications/ Product Improvement Programs				504 / Black Hawk Recapitalization/ Modernization							
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ITEP SEPM - Organic	Various	PMO : Huntsville, AL	1.400	2.307	Dec 2012	3.400	Dec 2013	-		-		-	Continuing	Continuing	Continuing
ITEP SEPM - Contractor	Various	TBD : TBD	0.631	1.500	Dec 2012	2.400	Dec 2013	-		-		-	Continuing	Continuing	Continuing
ITEP SEPM - OGA	Various	PMO : Huntsville, AL	3.030	1.400	Dec 2012	9.300	Dec 2013	-		-		-	Continuing	Continuing	Continuing
UH-60L Digital - Organic	TBD	TBD : TBD	0.000	0.983	Mar 2013	-		3.603	Oct 2014	-		3.603	-	4.586	-
UH-60L Digital - Contractor	TBD	TBD : Various	0.000	0.243	Mar 2013	-		2.573	Oct 2014	-		2.573	-	2.816	-
Subtotal			5.061	6.433		15.100		6.176		-		6.176	-	-	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
UH-60L Digital Development Engineering	C/CPFF	TBD : Various	0.000	7.014		-		55.773	Oct 2014	-		55.773	Continuing	Continuing	Continuing
ITEP Air Vehicle Integration	SS/BOA	Various : Various	0.000	-		15.000	May 2014	-		-		-	-	15.000	-
Subtotal			0.000	7.014		15.000		55.773		-		55.773	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ITEP Other OGA - AoA Development Support	Various	AMSAA : Huntsville, AL	0.650	0.678	Jan 2013	-		-		-		-	Continuing	Continuing	Continuing
UH-60 L Digital	Various	Huntsville, AL : Huntsville, AL	11.000	1.160	Apr 2013	-		3.168	Oct 2014	-		3.168	-	15.328	-
Subtotal			11.650	1.838		-		3.168		-		3.168	-	-	-

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) 504 / Black Hawk Recapitalization/ Modernization

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Improved Turbine Engine Program Systems Engineering/Program Management	██████████																											
UH-60L Digital (Development)	██████████																											
UH-60L Digital (Development) continued									██████████																			
UH-60L Digital (Trainers/Manuals Development) RDTE																					██████████							
UH-60L Digital Modifications (LRIP) APA																					██████████							

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) 504 / Black Hawk Recapitalization/ Modernization

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Improved Turbine Engine Program Systems Engineering/Program Management	1	2012	4	2014
UH-60L Digital (Development)	1	2013	4	2013
UH-60L Digital (Development) continued	1	2015	2	2018
UH-60L Digital (Trainers/Manuals Development) RDTE	3	2018	4	2020
UH-60L Digital Modifications (LRIP) APA	3	2018	4	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) D17 / Apache Block III
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
D17: Apache Block III	-	110.802	124.764	124.099	-	124.099	113.329	52.455	21.537	32.244	-	579.230
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

The FY 2015 budget request for Apache Block III (AB3) will fund the non-recurring engineering (NRE), development, and testing work associated with the planned remanufacture and new build of 690 Apache aircraft in the Block III configuration (deliveries began in Oct 2011). The AB3 program consists of two Major Defense Acquisition Programs (MDAP), AB3A Remanufacture and AB3B New Build. This project also addresses obsolescence and reliability challenges and provides increased combat capability to the aircraft. Upgrades include: Unmanned Aircraft System (UAS) Level III-IV Control, Improved Situational Awareness, Upgraded Communications Suite, Improved Drive and Propulsion Systems, Improved Targeting Capability, Increased Computer Processing Capability and Speed, Improved Navigation Systems, and Improved Diagnostics and Maintainability. Upgrades are integrated as incremental block modifications. The program addresses operational shortfalls identified during real-world combat missions and meets Longbow Apache Capability Production Document (CPD) requirements for modernization.

Funds will also provide for the development, integration and testing of the Modernized Rocket Launcher (MRL) with digital launcher electronics.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Product Development	93.416	97.106	104.643
Articles:	-	-	-
Description: Funding is provided for the following efforts by Boeing, Longbow Limited Liability (LBL), and Lockheed Martin.			
FY 2013 Accomplishments: Development & Testing work associated with the planned remanufacture and new build of Apache aircraft in the Block III Lot 4-6 configuration and to enhance operational capabilities. Provides for development of the MRL.			
FY 2014 Plans: Development, Integration & Testing work associated with the planned remanufacture and new build of Apache aircraft in the Block III Lot 4-6 configuration (joint interoperability, crashworthy fuel tank kits, embedded diagnostics, communications, mission processor, and navigation upgrades) and to enhance operational capabilities. Risk reduction for Lot 6 CPD capabilities to include			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) D17 / Apache Block III		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
cognitive decision aiding, soldier radio waveform, modernized dayside assembly, modernized radio frequency interferometer, maritime targeting, and radar upgrades. - Provides NRE for design of the Hydra Launcher Electronics Assembly for development of the MRL. FY 2015 Plans: Development, Integration & Testing work associated with the planned remanufacture and new build of Apache aircraft in the Block III Lot 6 configuration (joint interoperability, crashworthy fuel tank kits, embedded diagnostics, communications, mission processor, and navigation upgrades) and to enhance operational capabilities. Risk reduction for Lot 6 CPD capabilities to include cognitive decision aiding, soldier radio waveform, modernized dayside assembly, modernized radio frequency interferometer, maritime targeting, and radar upgrades. - Provides NRE for design of the Hydra Launcher Electronics Assembly for development of the MRL.				
Title: Support Costs Description: Funding is provided for the following effort FY 2013 Accomplishments: GFE supporting AB3 tests FY 2014 Plans: GFE supporting AB3 tests FY 2015 Plans: GFE supporting AB3 tests and government R&D Facilities		Articles: 6.862 -	10.376 -	4.183 -
Title: Test and Evaluation Description: Funding is provided for Development Testing and Evaluation and Operational Test and Evaluation FY 2013 Accomplishments: Development Test & Evaluation and Operational Test & Evaluation FY 2014 Plans: Development, Test & Evaluation, Operational Testing. Government test oversight, test ranges, flight hour costs for MRL testing. FY 2015 Plans:		Articles: 8.930 -	7.780 -	5.318 -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) D17 / Apache Block III

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Development, Test & Evaluation, Operational Testing. Government test oversight, test ranges, flight hour costs for MRL testing.			
Title: Management Services	1.594	9.502	9.955
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2013 Accomplishments: Payroll, TDY, Support Contractors, Matrix Support			
FY 2014 Plans: Payroll, TDY, Support Contractors, Matrix Support			
FY 2015 Plans: Payroll, TDY, Support Contractors, Matrix Support			
Accomplishments/Planned Programs Subtotals	110.802	124.764	124.099

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• AA6605: AH-64 MODS	178.805	53.559	181.869	-	181.869	127.873	139.936	127.372	147.515	Continuing	Continuing
• A05111: AH-64 APACHE BLOCK IIIA REMAN	684.822	759.400	651.347	-	651.347	1,203.115	1,272.837	1,370.040	1,101.971	Continuing	Continuing
• A05133: AH-64 APACHE BLOCK IIIB NEW BUILD	371.114	-	-	-	-	-	-	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

The NRE will encompass subsystem integration and will utilize existing test aircraft, incorporate the technical insertions, and initiate appropriate qualification and operational flight-testing. The Low Rate Initial Production (LRIP) effort includes a total quantity of 51 aircraft, with deliveries completing in December 2013. These 51 LRIP aircraft will be used for operational testing, First Unit Equipped (FUE), and training base fielding.

In Oct 2010, a contract for Apache Block III Lot 1 (8 aircraft) was awarded to initiate LRIP. In April 2012, additional options for Lot 2a (16 aircraft), Lot 2b (19 aircraft) and Lot 2c (8 aircraft) were definitized.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army Date: March 2014

Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
2040 / 7	PE 0203744A / Aircraft Modifications/ Product Improvement Programs	D17 / Apache Block III

In early 2012, the existing Engineering Manufacturing Development (EMD) effort was modified to incorporate development and testing to support the AB3 Lot 4 and Lot 6 production configurations.

In FY14, a contract for Apache Block III Lot 3, initiating Full Rate Production, is planned with options for Lot 4 and will continue to a total of 690 remanufactured and new build aircraft.

Training device concurrency will be maintained with each technical insertion. The EMD effort is managed as Cost Reimbursable. Production efforts will be awarded as Firm Fixed Price (FFP) and include the Advance Procurement requirements.

In FY13, FY14, and FY15 MRL NRE will encompass US Government (USG) design of the Hydra Launcher Electronics Assembly (LEA), modification of the M261 launcher, launcher fabrication, and launcher testing.

Multi-year authority may be requested for the out years.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs				Project (Number/Name) D17 / Apache Block III							
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Services (In-House, Travel, etc.)	MIPR	PMO AAH, Matrix Support, AMCOM Express : Redstone Arsenal, AL	0.489	0.783		8.691		9.935	Dec 2014	-		9.935	Continuing	Continuing	Continuing
Management Services (In-House, Travel, etc)	MIPR	PEO Missiles & Space, Matrix Support, AMCOM Express, SETA : Huntsville, AL	0.000	0.811		0.811		0.020		-		0.020	Continuing	Continuing	-
Subtotal			0.489	1.594		9.502		9.955		-		9.955	-	-	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
The Boeing Company	SS/CPIF	Boeing Contracts : Mesa, AZ	131.184	83.516	Dec 2012	84.057	Dec 2013	97.031	Dec 2014	-		97.031	Continuing	Continuing	Continuing
Longbow Limited Liability (LBL) Contracts	SS/CPIF	Longbow Limited Liability (LBL) Contracts : Orlando, FL and Baltimore, MD	14.372	1.810		6.000		6.750	Dec 2014	-		6.750	Continuing	Continuing	Continuing
Lockheed Martin	SS/CPIF	Lockheed Martin Contracts : Orlando, FL	0.000	0.470		-		-		-		-	Continuing	Continuing	Continuing
Modernized Rocket Launcher Development - USG	MIPR	Various USG Activities : Various	0.000	6.860		6.598		0.862	Oct 2014	-		0.862	Continuing	Continuing	-
Boeing - MRL Platform SW and Integration	SS/CPIF	Boeing Company : Mesa, AZ	0.000	0.760		0.451		-		-		-	Continuing	Continuing	-
Subtotal			145.556	93.416		97.106		104.643		-		104.643	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0203744A / Aircraft Modifications/ Product Improvement Programs				D17 / Apache Block III							
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Support Activities	MIPR	Various Activities : Various	14.791	6.862	Dec 2012	10.376		4.183	Nov 2014	-		4.183	Continuing	Continuing	Continuing
Subtotal			14.791	6.862		10.376		4.183		-		4.183	-	-	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Assessments, Test Integration Working Group (TWIG), TEMP, etc.	MIPR	Various Activities : Various	19.655	8.700	Dec 2012	5.940		3.700	Nov 2014	-		3.700	Continuing	Continuing	Continuing
MRL Weapon Integration Lab, LFT, Qual Test, & Test Working Group	MIPR	AMRDEC : Huntsville, AL, Yuma Proving Grounds, AZ	0.000	0.230		1.840		1.618		-		1.618	Continuing	Continuing	-
Subtotal			19.655	8.930		7.780		5.318		-		5.318	-	-	-
Project Cost Totals			180.491	110.802		124.764		124.099		-		124.099	-	-	-
Remarks															

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) D17 / Apache Block III

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
NRE Contracts - Boeing	1	2011	4	2017
NRE Contracts - Longbow Limited Liability	1	2011	4	2017
MRL PDR	3	2014	3	2014
MRL Prototypes & CDR	4	2014	1	2015
Follow-On Test & Eval I	4	2014	4	2014
MRL Design	3	2013	4	2014
Force Develop Test & Evaluation (FDTE III)	4	2016	4	2016
Follow-On Test & Eval II	4	2016	4	2016
MRL Integration and Test	2	2015	4	2015

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Exhibit R-5, RDT&E Termination Liability: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) D17 / Apache Block III
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Cost (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Program Termination Liability	-	110.802	124.764	124.099	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) D18 / Fixed Wing Aircraft
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
D18: Fixed Wing Aircraft	-	0.882	1.832	0.819	-	0.819	1.175	0.997	1.087	2.273	-	9.065
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

The budget line provides for Non-Recurring Engineering (NRE), development of supplemental type certificates (STC) and associated testing, and integration of all Army fixed wing aircraft to provide Communications, navigation and Surveillance (CNS), Aircraft Survivability Equipment (ASE), and Department of Defense (DoD) mandated safety equipment to meet current and evolving international and Army standards. FY 2015 Research, Development, Test and Evaluation (RDT&E) dollars in the amount of \$0.819 million provides funding for developmental NRE for aircraft modifications to CNS, ASE, and integration of Intelligence, Surveillance and Reconnaissance (ISR) Mission Equipment Packages (MEP). The increased performance will permit the Army fixed wing aircraft to operate in compliance with other existing and emerging regulations. As requirements for new avionics equipment continue, aircraft delays and airspace exclusions are likely for aircraft not properly equipped. Upgrade of communication and aircraft modifications will assure worldwide deployability for those required to deploy. This budget line will also provide funding for studies, evaluations and Analysis of Alternatives to support emerging Army fixed wing requirements for product improvements to support the Army fleet.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
<p>Title: Non-recurring Engineering</p> <p style="text-align: right;">Articles:</p> <p>Description: Non-recurring engineering efforts provide improved performance to Army fixed wing aircraft for communication, navigation, and surveillance equipment.</p> <p>FY 2013 Accomplishments: Non-recurring engineering efforts provide improved performance to Army fixed wing aircraft for communication, navigation, and surveillance equipment.</p> <p>FY 2014 Plans: Non-recurring engineering efforts provide improved performance to Army fixed wing aircraft for communication, navigation, and surveillance equipment.</p> <p>FY 2015 Plans:</p>	<p>0.829</p> <p>-</p>	<p>1.723</p> <p>-</p>	<p>0.770</p> <p>-</p>

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) D18 / Fixed Wing Aircraft

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Non-recurring engineering efforts in order to improve performance to Army fixed wing aircraft for communication, navigation, and surveillance equipment.			
Title: Program Management	0.053	0.109	0.049
Articles:	-	-	-
Description: Program Management of PM FW			
FY 2013 Accomplishments: Program Management of PM FW			
FY 2014 Plans: Program Management of PM FW			
FY 2015 Plans: Program Management of PM FW			
Accomplishments/Planned Programs Subtotals	0.882	1.832	0.819

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• AA0703: GATM-Fixed Wing Aircraft	7.356	12.072	12.456	-	12.456	14.949	18.945	15.553	15.854	-	97.185
• AA0270: Utility/Cargo Airplane Mods	23.048	11.500	15.029	-	15.029	16.486	17.721	16.598	16.709	-	117.091

Remarks

D. Acquisition Strategy
The US Army Fixed Wing acquisition and modernization strategy leverages commercial derivative aircraft through the use of supplemental type certificates (STC) and associated testing and includes cockpit modernization for civil and tactical upgrades of military unique equipment and integration of Intelligence, Surveillance and Reconnaissance (ISR) Mission Equipment Packages (MEP). Cockpit modernization upgrades include items such as dual Flight Management Systems, Terrain Area Warning Systems, transponder, Mode S/5 transponders, Satellite Communications, Traffic Alert and Collision Avoidance II, Flight Data Recorders, Cockpit Voice Recorders, communication radios, military Global Positioning System (GPS), Wide Area Augmentation System/ Localizer Performance with Vertical Guidance, Automatic Dependence Surveillance Broadcast (ADS-B) Out, M-code GPS, Blue Force Tracker, and Smart books. ISR MEP upgrades include integration of multi-intelligence systems.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) D18 / Fixed Wing Aircraft

<u>E. Performance Metrics</u> N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) D18 / Fixed Wing Aircraft

FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

FW Non-recurring Engineering	[REDACTED]																											
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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) D18 / Fixed Wing Aircraft

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
FW Non-recurring Engineering	1	2013	4	2020

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs				Project (Number/Name) EB1 / Improved Turbine Engine Program			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EB1: Improved Turbine Engine Program	-	-	-	39.328	-	39.328	49.247	101.853	136.958	129.618	-	457.004
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Improved Turbine Engine Program (ITEP) develops, tests, and qualifies the next generation turboshaft engine. The Improved Turbine Engine (ITE) replaces the existing T700 engine design originated in the 1970's and meets the operational requirement of 6K/95. The ITE will fit inside the existing engine bays of the Black Hawk and Apache Helicopters and provides a significant power enhancement of up to fifty percent (total of 3,000 shaft horsepower) with increased fuel efficiency. Additional benefits include improved design life, enhanced reliability, lower maintenance cost and restored capability lost due to aircraft weight growth, without increasing the logistics footprint. The program consists of system engineering and program management, detailed design engineering, design assurance, hardware manufacturing and testing, component and module level development and testing, system level testing and qualification, as well as integration into the airframe.

For FY 2014 and prior, all funding for ITEP was contained in PE 0203744A – Aircraft Modifications/Product Improvement Programs, Project 504. FY 2015 funding provides for ITEP Technology Maturation and Risk Reduction (TMRR) contract award, and initial component design, and initial platform/engine integration trade studies. FY 2016 – FY 2017 funds the continuing design effort. FY 2018 funds the completion of the TMRR phase and results in the Preliminary Design Review (PDR). FY 2019 funds the initial Engineering Manufacturing and Development (EMD) contract award.

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

	FY 2013	FY 2014	FY 2015
Title: ITEP	-	-	39.328
Description: Improved Turbine Engine Program (ITEP) - a multi-platform turbine engine improvement required across existing Army aircraft to fill the capability gaps for Army Aviation Operations			
FY 2015 Plans: Systems Engineering/Program Management requirements. Initial Technology Maturation and Risk Reduction (TMRR) contract award for initial engine design. Initial aircraft platform/engine integration trade studies.			
Accomplishments/Planned Programs Subtotals	-	-	39.328

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

N/A

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) EB1 / Improved Turbine Engine Program

D. Acquisition Strategy

Full and Open Competition is planned for the ITEP Technology Maturation and Risk Reduction (TMRR) contract. Award cost plus incentive fee contract to a single vendor following Milestone A.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) EB1 / Improved Turbine Engine Program
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
ITEP SEPM - Organic	TBD	PMO Huntsville, AL : Various	0.000	-		-		4.500	Oct 2014	-		4.500	-	4.500	-
ITEP SEPM - Contractor	TBD	PMO Huntsville, AL : Various	0.000	-		-		3.276	Oct 2014	-		3.276	-	3.276	-
ITEP SEPM - OGA	TBD	PMO Huntsville, AL : Various	0.000	-		-		1.549	Oct 2014	-		1.549	-	1.549	-
Subtotal			0.000	-		-		9.325		-		9.325	-	9.325	-

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
ITEP Technology Maturation and Risk Reduction (TMRR) Development Engineering	C/CPIF	Various : Various	0.000	-		-		26.003	May 2015	-		26.003	-	26.003	-
ITEP Air Vehicle Integration	TBD	Various : Various	0.000	-		-		4.000	May 2015	-		4.000	-	4.000	-
Subtotal			0.000	-		-		30.003		-		30.003	-	30.003	-

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-	-	39.328	-	39.328	-	39.328	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) EB1 / Improved Turbine Engine Program

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Improved Turbine Engine Program Systems Engineering/Program Management																												
Improved Turbine Engine Program Development Engineering																												
Improved Turbine Engine Program Detailed Design (EMD)																												
Improved Turbine Engine Program Air Vehicle Integration																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203744A / Aircraft Modifications/ Product Improvement Programs	Project (Number/Name) EB1 / Improved Turbine Engine Program

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Improved Turbine Engine Program Systems Engineering/Program Management	1	2015	4	2020
Improved Turbine Engine Program Development Engineering	2	2015	1	2019
Improved Turbine Engine Program Detailed Design (EMD)	1	2019	4	2020
Improved Turbine Engine Program Air Vehicle Integration	2	2015	4	2020

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203752A / <i>Aircraft Engine Component Improvement Program</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	0.804	0.315	0.381	-	0.381	0.366	0.326	0.146	0.149	Continuing	Continuing
106: <i>A/C Compon Improv Prog</i>	-	0.804	0.315	0.381	-	0.381	0.366	0.326	0.146	0.149	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Aircraft Engine Component Improvement Program (CIP) develops, tests, and qualifies improvements to aircraft engine components to correct service-revealed deficiencies, improve flight safety, enhance readiness and reduce operating and support (O&S) costs. In addition, CIP provides the test vehicles for the testing and qualification efforts required as a part of the Army's Critical Safety Item (CSI) program. CIP is included in the RDTE budget vice procurement appropriations in accordance with congressional direction. The majority of CIP funding has been reallocated to PE 273744 beginning in FY07. Non-program specific Auxiliary Power Unit (APU) as well as Unmanned Aerial Vehicle (UAV) safety and readiness issues will continue to be addressed under this Program Element.

B. Program Change Summary (\$ in Millions)

	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>
Previous President's Budget	0.898	0.315	0.387	-	0.387
Current President's Budget	0.804	0.315	0.381	-	0.381
Total Adjustments	-0.094	-	-0.006	-	-0.006
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-0.094	-	-0.006	-	-0.006

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203752A / Aircraft Engine Component Improvement Program	Project (Number/Name) 106 / A/C Compon Improv Prog
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
106: A/C Compon Improv Prog	-	0.804	0.315	0.381	-	0.381	0.366	0.326	0.146	0.149	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note
The Aircraft Engine Component Improvement Program (CIP) is included in the RDTE budget vice procurement appropriations in accordance with congressional direction. The majority of CIP funding has been reallocated to PE 273744 beginning in FY07.

A. Mission Description and Budget Item Justification
Aircraft Engine Component Improvement Program (CIP) develops, tests, and qualifies improvements to aircraft engine components to correct service-revealed deficiencies, improve flight safety, enhance readiness and reduce operating and support (O&S) costs. In addition, CIP provides the test vehicles for the testing and qualification efforts required as a part of the Army's Critical Safety Item (CSI) program. Non-program specific Auxiliary Power Unit (APU) as well as Unmanned Aerial Vehicle (UAV) safety and readiness issues will continue to be addressed under this Program Element (PE).

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>Title: T700 Engine</p> <p align="right">Articles:</p> <p>Description: Majority of funding for this program has been reallocated to PE 273744. Previously, this program addressed flight safety and readiness problems that arise in the field by providing timely engineering support, continued the development of the T700-GE-701D, provided engineering support of fielded engines to enhance war fighting capability and improve durability and reliability while reducing cost of ownership.</p> <p>FY 2013 Accomplishments: Started efforts to perform an instrumented engine test to measure gas generator turbine hardware metal temperatures. Evaluate clean air combustor shield hardware for redesign effort.</p> <p>FY 2014 Plans: Continue efforts to perform an instrumented engine test to measure gas generator turbine hardware metal temperatures. Continue to evaluate clean air combustor shield hardware for redesign effort.</p> <p>FY 2015 Plans: Will continue effort to update engine drawings to add the latest CSI requirements.</p>	<p>0.010</p> <p align="center">-</p>	<p>0.100</p> <p align="center">-</p>	<p>0.120</p> <p align="center">-</p>
Title: T55 Engine	0.600	0.100	0.120

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203752A / Aircraft Engine Component Improvement Program	Project (Number/Name) 106 / A/C Compon Improv Prog

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p align="right">Articles:</p> <p>Description: Provide timely support to field users, applying engineering effort to resolve unanticipated flight safety problems revealed in the field. Continue the engineering support of fielded engines to enhance war-fighting capability, improve durability and reliability while reducing CH-47 engine cost of ownership.</p> <p>FY 2013 Accomplishments: Continued ECU Software Block Update to improve ECU functionality and address field software issues.</p> <p>FY 2014 Plans: Continuing ECU Software Block Update to improve ECU functionality and address field software issues.</p> <p>FY 2015 Plans: Will complete ECU Software Block Update to improve ECU functionality and address field software issues.</p>	-	-	-
<p>Title: GTCP36 Auxiliary Power Unit (APU)</p> <p align="right">Articles:</p> <p>Description: Provide timely responses to technical problems arising in the field during operational use. Review operational and repair reports, perform engineering analysis of failed engines and equipment. Perform investigation and testing as required to isolate/verify reported field problems and service revealed deficiencies (SRDs).</p> <p>FY 2014 Plans: Formulate correlation factors to published life limits and will address service revealed deficiencies that affect safe operation of the GTCP 36 APU.</p> <p>FY 2015 Plans: Will address service revealed deficiencies that affect safe operation of the GTCP 36 APU.</p>	-	0.015	0.015
<p>Title: T62 Auxiliary Power Unit (APU)</p> <p align="right">Articles:</p> <p>Description: Provide timely responses to technical problems arising in the field during operational use. Review operational and repair reports, perform engineering analysis of failed engines and equipment. Perform investigation and testing as required to isolate/verify reported field problems and service revealed deficiencies (SRDs).</p> <p>FY 2014 Plans: Address service revealed deficiencies affecting safe operation of US Army APUs.</p> <p>FY 2015 Plans:</p>	-	0.020	0.020

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203752A / Aircraft Engine Component Improvement Program	Project (Number/Name) 106 / A/C Compon Improv Prog		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Will continue to address service revealed deficiencies affecting safe operation of US Army APUs.				
<p>Title: UAV Engine</p> <p align="right">Articles:</p> <p>Description: UAV Shadow Engine Investigation at U.S. Army Research Laboratory (ARL) Cleveland: US Army Vehicle Technology Directorate (VTD) at ARL Cleveland. Provide research to support airworthiness, reliability and performance improvements of the Unmanned Aerial Vehicle (UAV) shadow engine. Investigate and research the technology challenges (i.e. engine performance, engine durability, engine life, and engine modifications) for reliable engine operation using JP-8 fuel and readily available MIL-spec lubricants.</p> <p>FY 2014 Plans: Research improvements to address service related deficiencies to improve safety and reduce O&S costs.</p> <p>FY 2015 Plans: Will continue to research improvements to address service related deficiencies to improve safety and reduce O&S costs.</p>		-	0.020	0.020
		-	-	-
<p>Title: In-House Support</p> <p align="right">Articles:</p> <p>Description: In-house support for the CIP engineers. Contracting support for CIP contracts.</p> <p>FY 2013 Accomplishments: Provided in-house support for the CIP engineers and contracting support for CIP contracts.</p> <p>FY 2014 Plans: Provide in-house support for the CIP engineers and contracting support for CIP contracts.</p> <p>FY 2015 Plans: Will continue to provide in-house support for the CIP engineers and contracting support for CIP contracts.</p>		0.194	0.060	0.086
		-	-	-
Accomplishments/Planned Programs Subtotals		0.804	0.315	0.381
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203752A / Aircraft Engine Component Improvement Program	Project (Number/Name) 106 / A/C Compon Improv Prog

D. Acquisition Strategy

Improved designs will be implemented via Engineering Change Proposal (ECP) and follow-on procurement or modification to a production contract to introduce the improved hardware.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0203752A / Aircraft Engine Component Improvement Program				106 / A/C Compon Improv Prog							
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
In-house Engineering	WR	AMRDEC : Redstone Arsenal, AL	2.300	0.194	Jan 2013	0.060	Jan 2014	0.086	Jan 2015	-		0.086	Continuing	Continuing	Continuing
Subtotal			2.300	0.194		0.060		0.086		-		0.086	-	-	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
T700 Engine	SS/IDIQ	GE-Air : Lynn, MA	61.632	0.010	Jan 2013	0.100	Jan 2014	0.120	Jan 2015	-		0.120	Continuing	Continuing	Continuing
T55 Engine	SS/IDIQ	Honeywell : Phoenix, AZ	29.561	0.600	Jan 2013	0.100	Jan 2014	0.120	Jan 2015	-		0.120	Continuing	Continuing	Continuing
APU's	SS/IDIQ	Air Force : Kelly AFB, TX	13.647	-		0.015	Oct 2013	0.015	Oct 2014	-		0.015	Continuing	Continuing	-
UAV Engine	Various	ARL-Vehicle Technology Directorate : TBD	0.137	-		0.020	Jan 2014	0.020	Jan 2015	-		0.020	Continuing	Continuing	-
APU's	SS/IDIQ	Air Force : Hill AFB, UT	2.319	-		0.020	Oct 2013	0.020	Oct 2014	-		0.020	Continuing	Continuing	Continuing
Subtotal			107.296	0.610		0.255		0.295		-		0.295	-	-	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
T-62T-2B Vibration Test	Various	Redstone Technical Text Center : Redstone Arsenal, AL	0.050	-		-		-		-		-	Continuing	Continuing	-
Subtotal			0.050	-		-		-		-		-	-	-	-
Remarks															
Not Applicable															

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army							Date: March 2014				
Appropriation/Budget Activity 2040 / 7			R-1 Program Element (Number/Name) PE 0203752A / Aircraft Engine Component Improvement Program				Project (Number/Name) 106 / A/C Compon Improv Prog				
	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract		
Project Cost Totals	109.646	0.804	0.315	0.381	-	0.381	-	-	-		

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203752A / Aircraft Engine Component Improvement Program	Project (Number/Name) 106 / A/C Compon Improv Prog

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
T700 Engine Temperature Survey					[REDACTED]																											
T55 Engine 1553 Engine Control Unit (ECU)	[REDACTED]																															
T55 Engine ECU Block Upgrade					[REDACTED]																											
Auxiliary Power Units (APUs)					[REDACTED]																											
UAV Shadow Engine					[REDACTED]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203752A / Aircraft Engine Component Improvement Program	Project (Number/Name) 106 / A/C Compon Improv Prog

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
T700 Engine Temperature Survey	2	2014	2	2019
T55 Engine 1553 Engine Control Unit (ECU)	2	2012	1	2013
T55 Engine ECU Block Upgrade	2	2013	4	2018
Auxiliary Power Units (APUs)	1	2014	4	2015
UAV Shadow Engine	2	2014	1	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203758A / <i>Digitization</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	34.225	6.183	10.912	-	10.912	15.035	13.517	13.351	13.463	Continuing	Continuing
374: <i>HOR Battlefld Digitizn</i>	-	9.074	6.183	5.996	-	5.996	5.186	3.657	3.484	3.583	Continuing	Continuing
EC8: <i>Emerging Technologies from NIEs</i>	-	25.151	-	4.916	-	4.916	9.849	9.860	9.867	9.880	-	69.523

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Horizontal Battlefield Digitization is a strategy that allows warfighters, from the individual soldier and platform to echelons above corps, to share critical situation awareness (SA) and command and control (C2) information. It conducts analysis and evaluation of new information technologies, concepts, and applications of integrated management activities to meet the dynamic Army acquisition technology requirements. The strategy applies digital information technologies to acquire, exchange, and employ data throughout the operational environment, and provides a clear and accurate common operational picture for leaders at all levels. This timely sharing of information significantly improves the ability of commanders and leaders to quickly make decisions, synchronize forces and fires, and increase the operational tempo. Digitization is a means of realizing a fully integrated C2/SA capability to the platoon level, including interoperability links with joint and multi-national ground forces. The major efforts included in the program element are: 1) Integration and synchronization of the Army's interoperability efforts, coordination of interoperability efforts between joint and multi-national forces, and the synchronization of combat material and training efforts to develop Army information technologies. 2) Systems engineering and integration of hardware and software interfaces between and across the warfighting functions and across multiple Program Executive Offices, providing System of Systems (SOS) capabilities that satisfy warfighter requirements and enable the execution of mission operations by providing one Common Operational Picture (COP)/Common Tactical Picture (CTP). 3) Support fielding of integrated systems to Active and Reserve Components (USARNG and USAR) in accordance with Army Force Generation (ARFORGEN). 4) Support of the the Army Equipping Enterprise System (AE2S) integration of the Force Development Investment Information System (FDIIS), Army Flow Model (AFM), and the Continuing Early Validation (CEaVa) programs into a single integrated system. This supports the Army's Equipment Modernization Strategy, Army Force Generation (ARFORGEN) and consolidates capabilities to gain efficiencies. IAW the National Defense Authorization Act 804 and support of OSD's reports to Congress, the Army is poised to implement the "Agile Business Process" that will result in an iterative and incremental approach to software development and hardware/software capability integration. This process will improve effectiveness in the identification, assessment and acquisition of capability solutions for the Army.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203758A / <i>Digitization</i>
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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	35.180	6.186	11.388	-	11.388
Current President's Budget	34.225	6.183	10.912	-	10.912
Total Adjustments	-0.955	-0.003	-0.476	-	-0.476
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-0.289	-	-0.289
• Other Adjustments 1	-0.955	-0.003	-0.187	-	-0.187

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203758A / Digitization				Project (Number/Name) 374 / HOR Battlefield Digitizn			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
374: HOR Battlefield Digitizn	-	9.074	6.183	5.996	-	5.996	5.186	3.657	3.484	3.583	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Horizontal Battlefield Digitization is a strategy that allows warfighters, from the individual soldier and platform to echelons above corps, to share critical situation awareness (SA) and command and control (C2) information. It conducts analysis and evaluation of new information technologies, concepts, and applications of integrated management activities to meet the dynamic Army acquisition technology requirements. The strategy applies digital information technologies to acquire exchange and employ data throughout the operational environment, and provides a clear and accurate common operational picture for leaders at all levels. This timely sharing of information significantly improves the ability of commanders and leaders to quickly make decisions, synchronize forces and fires, and increase the operational tempo. Digitization is a means of realizing a fully integrated C2/SA capability to the platoon level, including interoperability links with joint and multi-national ground forces. The major efforts included in the program element are: 1) Integration and synchronization of the Army's interoperability efforts, coordination of interoperability efforts between joint and multi-national forces, and the synchronization of combat material and training efforts to develop Army information technologies. 2) Systems engineering and integration of hardware and software interfaces between and across the warfighting functions and across multiple Program Executive Offices, providing System of Systems (SOS) integration capabilities that satisfy warfighter requirements and enable the execution of mission operations by providing one Common Operational Picture (COP)/Common Tactical Picture (CTP). 3) Support fielding of integrated systems to Active and Reserve Components (USARNG and USAR) in accordance with Army Force Generation (ARFORGEN). 4) Support the Army Equipping Enterprise System (AE2S) integration of the Force Development Investment Information System (FDIIS), Army Flow Model (AFM) and the Continuous Early Validation (CEaVa) programs into a single integrated system. This supports the Army's Equipment Modernization Strategy, Army Force Generation (ARFORGEN) and consolidates capabilities to gain efficiencies. IAW the National Defense Authorization Act 804 and support of OSD's report to Congress, the Army is poised to implement the "Agile Business Process" that will result in an iterative and incremental approach to software development and hardware/software capability integration. This process will improve effectiveness in the identification, assessment and acquisition of capability solutions for the Army.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Interoperability Assessment	2.007	1.091	1.076
Articles:	-	-	-
Description: Funds are to be used for the following efforts			
FY 2013 Accomplishments:			
Conduct technical interoperability assessments, perform interoperability/integration analyses, analyze networked weapon system and Situational Awareness (SA), Command and Control (C2), Command, Control, Communications, Computers, Intelligence,			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203758A / Digitization	Project (Number/Name) 374 / HOR Battlefield Digitizn		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Surveillance, and Reconnaissance (C4ISR) systems compatibility, and assess technical and operational test plans, activities, and results. FY 2014 Plans: Conduct technical interoperability assessments, perform interoperability/integration analyses, analyze networked weapon system and Situational Awareness (SA), Command and Control (C2) systems compatibility and assess technical and operational test plans, activities, and results. FY 2015 Plans: Conduct technical interoperability assessments, perform interoperability/integration analyses, analyze networked weapon system and Situational Awareness (SA), Command and Control (C2) systems compatibility and assess technical and operational test plans, activities, and results.				
Title: SA/C2 Description: Funds are to be used for the following efforts FY 2013 Accomplishments: Integrate and synchronize interoperability across SA/C2/C4ISR programs in support of acquisition synchronization, testing, training, and fielding System of Systems capabilities to the Army Force. Continue application across current and future force. FY 2014 Plans: Integrate and synchronize interoperability across SA/C2 programs in support of acquisition synchronization, testing, training, and fielding System of Systems capabilities to the Army Force. Continue application across current and future force. FY 2015 Plans: Integrate and synchronize interoperability across SA/C2 programs in support of acquisition synchronization, testing, training, and fielding System of Systems capabilities to the Army Force. Continue application across current and future force.		Articles: 2.007 -	1.091 -	0.961 -
Title: Ditization Technical Integration Description: Support digitization technical integration with Active and Reserve Components both CONUS and OCONUS. FY 2013 Accomplishments: Support digitization technical integration with Active and Reserve Components both CONUS and OCONUS. FY 2014 Plans:		Articles: 1.025 -	1.071 -	1.103 -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203758A / Digitization	Project (Number/Name) 374 / HOR Battlefield Digitizn		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Support digitization technical integration with Active and Reserve Components both CONUS and OCONUS. FY 2015 Plans: Support digitization technical integration with Active and Reserve Components both CONUS and OCONUS.				
Title: AE2S Software		1.000	0.806	0.938
		Articles: -	-	-
Description: Procures AE2S software integration and enhancements for the single program language, single platform system that incorporates FDIIS, CEaVa, COP and AFM.				
FY 2013 Accomplishments: Procures AE2S software integration and enhancements for the single program language, single platform system that incorporates FDIIS, CEaVa, COP and AFM.				
FY 2014 Plans: AE2S software integration and enhancements for the single program language, single platform system that incorporates FDIIS, COP and AFM.				
FY 2015 Plans: AE2S software integration and enhancements for the single program language, single platform system that incorporates FDIIS, COP and AFM.				
Title: Joint & Coalition Interoperability		1.255	0.944	0.826
		Articles: -	-	-
Description: Support Joint and Coalition interoperability programs to improve integration and interoperability in accordance with Army Software Blocking Policy, Joint Planning Guidance, Coalition Specifications, Joint Capabilities Integration and Development System (JCIDS) requirements.				
FY 2013 Accomplishments: Support Joint and Coalition interoperability programs to improve integration and interoperability in accordance with Army Software Blocking Policy, Joint Planning Guidance, Coalition Specifications, Joint Capabilities Integration and Development System (JCIDS) requirements.				
FY 2014 Plans:				

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203758A / Digitization	Project (Number/Name) 374 / HOR Battlefield Digitizn		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Support Joint and Coalition interoperability programs to improve integration and interoperability in accordance with Army Software Blocking Policy, Joint Planning Guidance, Coalition Specifications, Joint Capabilities Integration and Development System (JCIDS) requirements. FY 2015 Plans: Support Joint and Coalition interoperability programs to improve integration and interoperability in accordance with Army Software Blocking Policy, Joint Planning Guidance, Coalition Specifications, Joint Capabilities Integration and Development System (JCIDS) requirements.				
Title: Academic Research		0.570	0.506	0.522
Articles:		-	-	-
Description: Apply university academic and research resources to the integration of Army complex modeling, simulation, and training in support of modernized forces.				
FY 2013 Accomplishments: Apply university academic and research resources to the integration of Army complex modeling, simulation, and training in support of modernized forces.				
FY 2014 Plans: Apply university academic and research resources to the integration of Army complex modeling, simulation, and training in support of modernized forces.				
FY 2015 Plans: Apply university academic and research resources to the integration of Army complex modeling, simulation, and training in support of modernized forces.				
Title: Cross-platform development		1.210	0.674	0.570
Articles:		-	-	-
Description: Manage cross-platform software and hardware development, testing, training, and fielding to ensure the coordinated interoperability for each Army Force unit rotation.				
FY 2013 Accomplishments: Manage cross-platform software and hardware development, testing, training, and fielding to ensure the coordinated interoperability for each Army Force unit rotation.				
FY 2014 Plans:				

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203758A / <i>Digitization</i>	Project (Number/Name) 374 / <i>HOR Battlefield Digitizn</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Manage cross-platform software and hardware development, testing, training, and fielding to ensure the coordinated interoperability for each Army Force unit rotation.			
<i>FY 2015 Plans:</i> Manage cross-platform software and hardware development, testing, training, and fielding to ensure the coordinated interoperability for each Army Force unit rotation.			
Accomplishments/Planned Programs Subtotals	9.074	6.183	5.996

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

N/A

Remarks

Not Applicable for this item

D. Acquisition Strategy

To validate/demonstrate concepts and requirements, near term efforts are focused on developing a seamless battlefield software architecture and digitized hardware systems to include: evaluation of the horizontal battlefield digitization resources for systems, acquisition, integration, and testing of digital capability across multiple command and control, communications, sensors, and weapons platforms. The result will be an integrated, synchronized capability designed to meet the near-term requirements of the Stryker Brigade Combat Teams and the Army Future Force. Also supports the Army's role in joint and multi-national digitization programs, battle command efforts and Joint Battlefield Situational Awareness.

E. Performance Metrics

N/A

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203758A / Digitization	Project (Number/Name) EC8 / Emerging Technologies from NIEs
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EC8: <i>Emerging Technologies from NIEs</i>	-	25.151	-	4.916	-	4.916	9.849	9.860	9.867	9.880	-	69.523
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

As a result of the language that was incorporated into the Senate Report 112-196 that accompanied the Department of Defense Appropriations Bill 2013, House Report 5856, this Project was established specifically for the transition of promising technologies from NIES to the field, particularly those developed by nontraditional vendors. Program control will be exercised by review of individual projects and approval by Army Gatekeepers, much like the Network Integration Evaluation (NIE) Program (PE 0604798A).

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Emerging Technologies from NIEs	25.151	-	4.916
Articles:	-	-	-
Description: To mature, test, integrate and evaluate traditional and nontraditional small business and industry's technologies.			
FY 2013 Accomplishments: These funds were used to mature, test, and integrate small business and industry technologies that were demonstrated and evaluated during various NIE Events. This includes improvements of technologies from previous NIEs that will be evaluated and baselined future NIEs for fielding in a Capability Set (CS). The technologies that will benefit from these funds for further development are dependent upon the Gatekeeper's approval. These funds supported such technologies as; Common Operating Picture (Ringtail), Network Operations Tools (PacStar Software), Single Consolidated Mobile Mast (Blue Sky Mast), Improved Operational Energy (Batteries), Vehicle Tactical Routers, Voice Interoperable Software Client, and others.			
FY 2015 Plans: These funds will be used to mature, test, and integrate small business and industry technologies that are demonstrated and evaluated during various NIE Events. This includes improvements of technologies from previous NIEs that will be then evaluated and baselined at a NIE for fielding in a Capability Set (CS). The technologies that will benefit from these funds for further development are dependent upon the Gatekeeper's approval. These funds will affect technologies from NIE 15.1, (2 QTR FY15), NIE 15.2 (4QTR FY15) and/or NIE 16.1 (2QTR FY16).			
Accomplishments/Planned Programs Subtotals	25.151	-	4.916

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army Date: March 2014

Appropriation/Budget Activity	R-1 Program Element (Number/Name)	Project (Number/Name)
2040 / 7	PE 0203758A / <i>Digitization</i>	EC8 / <i>Emerging Technologies from NIEs</i>

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

N/A

Remarks

D. Acquisition Strategy

Technologies will be selected dependent upon the Gatekeeper's approval.

E. Performance Metrics

N/A

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203758A / <i>Digitization</i>	Project (Number/Name) EC8 / <i>Emerging Technologies from NIEs</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
NIE 15.1 Planning - Execution	3	2013	1	2015
NIE 15.2 Planning - Execution	2	2014	3	2015
NIE 16.1 Planning - Execution	3	2014	1	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203801A / <i>Missile/Air Defense Product Improvement Program</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	17.863	1.577	5.115	-	5.115	3.556	3.663	2.810	4.154	Continuing	Continuing
038: <i>Avenger PIP</i>	-	-	-	5.115	-	5.115	3.556	3.663	2.810	4.154	Continuing	Continuing
DT5: <i>Stinger Product Improvement</i>	-	17.863	1.577	-	-	-	-	-	-	-	-	19.440

The FY 2015 OCO Request will be submitted at a later date.

Note

FY13 Other Adjustments 1: Sequestration reduction.

FY15 Adjustments to Budget Years: Funds for the development of the Avenger Product Improvement Program (PIP) addresses modernization and added capability.

A. Mission Description and Budget Item Justification

Project 038 Avenger Product Improvement Program (PIP): The Avenger Air Defense System is a lightweight, highly mobile surface-to-air missile and gun weapon system mounted on a High Mobility Multi-purpose Wheeled Vehicle (HMMWV). The system employs a canopied turret consisting of a gunner position, two gyro-stabilized missile launcher pods containing four STINGER missiles each, a Forward Looking Infrared Receiver (FLIR), a Laser Range Finder (LRF), an Identification Friend or Foe (IFF) system, and a very high rate of fire .50 caliber machine gun. The gun system is used against ground targets and to cover the Stinger missile dead-zone. Avenger is capable of day, night and adverse weather operations, can be transported by UH-60L Blackhawk helicopter or C-130 aircraft, is air-droppable and can shoot on the move. The system can also be operated by remote control from a protected position up to 50 meters away from the fire unit.

The Avenger system is operated by a two-man crew to counter Unmanned Aerial Systems (UASs), cruise missiles, attack helicopters, and high performance fixed wing/ rotary wing aircraft. The system fills the line-of-sight rear component of the Forward Area Air Defense (FAAD) system.

These funds are provided for the Avenger PIP to address modernization and added capability. Avenger will remain in the force through the Fiscal Year (FY) 30 timeframe according to the Long Range Investments Requirements Analysis. Avenger fills a capability gap which will be permanently filled by the Indirect Fire Protection Capability Increment 2 Intercept (IFPC2-I) which is fully fielded in FY30. The Avenger Fire Control Computer (AFCC) will undergo software and hardware upgrades that will enable the system to handle increased targeting capability realized with the latest version of the Forward Area Air Defense (FAAD) early warning system and ensure the system meets the latest Information Assurance (IA) requirements, upgraded analog to digital vehicle intercommunication system and Mode 5 cooperative target identification functions.

Project DT5 Stinger Product Improvement: The Stinger Block I missile is an advanced, fire-and-forget, short-range, man-portable, air defense weapon system. Stinger's mission is to provide the force with low-altitude air defense against fixed and rotary wing aircraft, unmanned aircraft systems (UAS) and cruise missiles (CM). Stinger employs an infrared (heat seeking)/ultraviolet seeker to guide to the target. Stinger Block I has extensive infrared counter-countermeasure capabilities and can engage

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203801A / <i>Missile/Air Defense Product Improvement Program</i>
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targets from any aspect to include head-on. The missile utilizes a high-explosive, hit-to-kill warhead. Stinger can be fired from the shoulder or from a variety of platforms to include vehicles, helicopters and UAS. The missile is delivered as a certified round and requires no field testing or maintenance.

The Stinger Product Improvement provides design, development, test and integration of a Proximity Fuze into the existing Stinger Block I missiles. The Proximity Fuze will improve system effectiveness against the evolving UAS threat. Unmanned Aerial System Defense (UAS-D) is a requirement of the Operational Requirements Document (ORD) for the Stinger Guided Missile System and validated by the Deputy Chief of Staff, G-3/5/7, Current and Future Warfighting Capabilities Division (DAMO-CIC) in memo dated 28 May 2013.

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	20.733	1.578	-	-	-
Current President's Budget	17.863	1.577	5.115	-	5.115
Total Adjustments	-2.870	-0.001	5.115	-	5.115
• Congressional General Reductions	-0.028	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.622	-			
• SBIR/STTR Transfer	-0.583	-			
• Adjustments to Budget Years	-	-	5.115	-	5.115
• Other Adjustments 1	-1.637	-0.001	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203801A / <i>Missile/Air Defense Product Improvement Program</i>	Project (Number/Name) 038 / <i>Avenger PIP</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
038: <i>Avenger PIP</i>	-	-	-	5.115	-	5.115	3.556	3.663	2.810	4.154	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note
Project 038 Avenger Production Improvement Program (PIP) - is a New Start FY 2015.

A. Mission Description and Budget Item Justification

The Avenger Air Defense System is a lightweight, highly mobile surface-to-air missile and gun weapon system mounted on a High Mobility Multi-purpose Wheeled Vehicle (HMMWV). The system employs a canopied turret consisting of a gunner position, two gyro-stabilized missile launcher pods containing four STINGER missiles each, a Forward Looking Infrared Receiver (FLIR), a Laser Range Finder (LRF), an Identification Friend or Foe (IFF) system, and a very high rate of fire .50 caliber machine gun. The gun system is used against ground targets and to cover the Stinger missile dead-zone. Avenger is capable of day, night and adverse weather operations, can be transported by UH-60L Blackhawk helicopter or C-130 aircraft, is air-droppable and can shoot on the move. The system can also be operated by remote control from a protected position up to 50 meters away from the fire unit.

The Avenger system is operated by a two-man crew to counter Unmanned Aerial Systems (UASs), cruise missiles, attack helicopters, and high performance fixed wing/ rotary wing aircraft. The system fills the line-of-sight rear component of the Forward Area Air Defense (FAAD) system.

These funds are provided for the Avenger PIP to address modernization and added capability. Avenger will remain in the force through the Fiscal Year (FY) 30 timeframe according to the Long Range Investments Requirements Analysis. Avenger fills a capability gap which will be permanently filled by the Indirect Fire Protection Capability Increment 2 Intercept (IFPC2-I) which is fully fielded in FY30. The Avenger Fire Control Computer (AFCC) will undergo software and hardware upgrades that will enable the system to handle increased targeting capability realized with the latest version of the Forward Area Air Defense (FAAD) early warning system and ensure the system meets the latest Information Assurance (IA) requirements, upgraded analog to digital vehicle intercommunication system and Mode 5 cooperative target identification functions.

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

	FY 2013	FY 2014	FY 2015
Title: Avenger Modernization	-	-	5.115
Description: This funds the effort to upgrade the fire control computer software, and adds new cooperative friendly identification function.			
FY 2015 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203801A / <i>Missile/Air Defense Product Improvement Program</i>	Project (Number/Name) 038 / <i>Avenger PIP</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Establish allocated and product baselines, and perform engineering design and development activities for platform integration, software upgrades, and capability enhancements. Plan test requirements and conduct limited contractor and government testing. Perform technical assessments, concept studies, cost reduction, risk reduction and development documentation.			
Accomplishments/Planned Programs Subtotals	-	-	5.115

C. Other Program Funding Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• PE 0605456A: <i>Proj PA3, PAC-3/MSE Missile</i>	69.029	69.175	120.065	-	120.065	63.506	65.179	65.734	117.666	Continuing	Continuing
• SSN C53101: <i>MSE Missile</i>	-	-	459.257	-	459.257	539.623	557.957	577.747	614.943	Continuing	Continuing
• PE 0102419A: <i>Proj E55, JLENS</i>	-	-	46.600	-	46.600	47.450	37.830	2.600	0.002	Continuing	Continuing
• PE 0604319A: <i>Proj DU3, IFPC2 (FY12)</i>	76.039	79.232	101.000	-	101.000	157.010	91.000	59.000	28.000	Continuing	Continuing
PE0603305A <i>IFPC II-Intercept</i>											
• PE 0605457A: <i>Proj S40, Army Integrated Air and Missile Defense (AIAMD)</i>	262.211	345.410	145.009	-	145.009	140.135	232.035	173.131	156.445	Continuing	Continuing
• SSN BZ5075: <i>Army IAMD Battle Command System (IBCS)</i>	-	20.980	-	-	-	-	21.091	101.273	325.378	Continuing	Continuing
• PE 0604820A: <i>Proj E10 Sentinel</i>	-	-	6.674	-	6.674	11.583	11.007	11.053	12.280	Continuing	Continuing
• PE 0604741A: <i>Proj 126, 146, 149: Air Defense C2I Engr Dev</i>	73.333	37.409	16.178	-	16.178	20.557	19.909	20.145	20.410	Continuing	Continuing
• PE0203201A: <i>Proj DT5; Missile/Air Defense Product Improvement Plan; Stinger Product Improvement</i>	17.863	1.577	-	-	-	-	-	-	-	-	19.440
• SSN C21300: <i>Stinger Blk I Upgrades</i>	-	37.252	1.355	-	1.355	2.217	-	-	-	-	40.824
• SSN CE8710: <i>Avenger Modernizations Procurement Line</i>	-	-	5.611	-	5.611	14.624	41.293	80.789	30.729	Continuing	Continuing

Remarks
This program is an integral part of the Army Air and Missile Defense Modernization strategy.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203801A / <i>Missile/Air Defense Product Improvement Program</i>	Project (Number/Name) 038 / <i>Avenger PIP</i>

D. Acquisition Strategy

In Fiscal Year (FY) 2015 the Avenger Product Office will award one or more contracts for modernization of the Avenger fleet. When completed, the Avenger fleet will have been modernized to support Force Development Update (FDU) structure until displaced with a replacement system as called out by the Long Range Investments Requirements Analysis (LIRA).

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203801A / <i>Missile/Air Defense Product Improvement Program</i>	Project (Number/Name) 038 / <i>Avenger PIP</i>
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Avenger Modernization	Various	Cruise Missile Defense Systems Project Office : Redstone Arsenal, AL	0.000	-		-		0.512		-		0.512	Continuing	Continuing	-
Subtotal			0.000	-		-		0.512		-		0.512	-	-	-

Remarks
This program supports the Army Integrated Air and Missile Defense (AIAMD) architecture.

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Avenger Modernization	Various	The Boeing Company : Huntsville, AL	0.000	-		-		3.233		-		3.233	Continuing	Continuing	-
Subtotal			0.000	-		-		3.233		-		3.233	-	-	-

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Avenger Modernization	Various	The Boeing Company, Aviation and Missile Research Development Engineering Center (AMRDEC) : Huntsville, AL; Redstone Arsenal, AL	0.000	-		-		1.370		-		1.370	Continuing	Continuing	-

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203801A / <i>Missile/Air Defense Product Improvement Program</i>	Project (Number/Name) 038 / <i>Avenger PIP</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Mode 5/Identification Friend or Foe (IFF) Development																												
Voice Intercom Communication (VIC) Development																												
Mode 5/VIC Production Representative Articles (PRA)																												
Mode5/IFF & VIC3 Integration and testing																												
Mode5/IFF & VIC Log/Maintenance Demo																												
Avenger Fire Control Computer-Revision (AFCC-R) Development																												
AFCC-R Production Representative Articles (PRA)																												
AFCC-R Integration & Testing																												
AFCC-R Log/Maintenance Demo																												
Remote Control Unit- Revised (RCU-R) Development																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203801A / <i>Missile/Air Defense Product Improvement Program</i>	Project (Number/Name) 038 / <i>Avenger PIP</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Mode 5/Identification Friend or Foe (IFF) Development	2	2015	2	2016
Voice Intercom Communication (VIC) Development	1	2016	2	2016
Mode 5/VIC Production Representative Articles (PRA)	4	2015	3	2016
Mode5/IFF & VIC3 Integration and testing	2	2016	2	2016
Mode5/IFF & VIC Log/Maintenance Demo	2	2016	2	2016
Avenger Fire Control Computer-Revision (AFCC-R) Development	3	2016	3	2018
AFCC-R Production Representative Articles (PRA)	1	2018	1	2018
AFCC-R Integration & Testing	2	2018	2	2018
AFCC-R Log/Maintenance Demo	2	2018	3	2018
Remote Control Unit- Revised (RCU-R) Development	2	2019	3	2020

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203801A / <i>Missile/Air Defense Product Improvement Program</i>				Project (Number/Name) DT5 / <i>Stinger Product Improvement</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DT5: <i>Stinger Product Improvement</i>	-	17.863	1.577	-	-	-	-	-	-	-	-	19.440
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Stinger Block I missile is an advanced, fire-and-forget, short-range, man-portable, air defense weapon system. Stinger's mission is to provide the force with low-altitude air defense against fixed and rotary wing aircraft, unmanned aircraft systems (UAS) and cruise missiles (CM). Stinger employs an infrared (heat seeking)/ultraviolet seeker to guide to the target. Stinger Block I has extensive infrared counter-countermeasure capabilities and can engage targets from any aspect to include head-on. The missile utilizes a high-explosive, hit-to-kill warhead. Stinger can be fired from the shoulder or from a variety of platforms to include vehicles, helicopters and UAS. The missile is delivered as a certified round and requires no field testing or maintenance.

The Stinger Product Improvement provides design, development, test and integration of a Proximity Fuze into the existing Stinger Block I missiles. The Proximity Fuze will improve system effectiveness against the evolving UAS threat. Unmanned Aerial System Defense (UAS-D) is a requirement of the Operational Requirements Document (ORD) for the Stinger Guided Missile System and validated by the Deputy Chief of Staff, G-3/5/7, Current and Future Warfighting Capabilities Division (DAMO-CIC) in memo dated 28 May 2013.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Proximity Fuze (Prox Fuze) Development and Integration	12.513	1.010	-
Articles:	-	-	-
Description: This effort funds the design and development of a Prox Fuze and integrates it into existing STINGER Block I missiles.			
FY 2013 Accomplishments: Completed design and development of Prox Fuze and Block I missile integration method and processes. Integrated warhead with Prox Fuze and integrated warhead/Prox Fuze assembly into existing Stinger Block I missiles for Guided Test Vehicles and All-Up-Rounds for testing. Performed technical assessments, concept studies, cost reduction, risk reduction, and develop required documentation.			
FY 2014 Plans: Complete integration efforts allowing for final revisions and developing the required documentation to support materiel release.			
Title: Test and Evaluation	4.650	0.511	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203801A / <i>Missile/Air Defense Product Improvement Program</i>	Project (Number/Name) DT5 / <i>Stinger Product Improvement</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p align="right">Articles:</p> <p>Description: This effort funds Government and contractor Developmental and Operational tests.</p> <p>FY 2013 Accomplishments: Performed government and contractor tests for hazard classification, lethality, and fuze board.</p> <p>FY 2014 Plans: Complete flight testing as well as required safety and lethality testing in support of materiel release.</p>	-	-	-
<p>Title: Management Support</p> <p align="right">Articles:</p> <p>Description: This effort funds government management and technical support.</p> <p>FY 2013 Accomplishments: Provided government management, technical and administrative support for the program in FY 2013.</p> <p>FY 2014 Plans: Provide government management, technical and administrative support for the program in FY 2014.</p>	0.700 -	0.056 -	- -
Accomplishments/Planned Programs Subtotals	17.863	1.577	-

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• PE0605456A: <i>Proj PA3, PAC-3/MSE Missile</i>	69.029	69.175	120.065	-	120.065	63.506	65.179	65.734	117.666	Continuing	Continuing
• SSN C53101: <i>MSE Missile</i>	12.850	546.210	459.257	-	459.257	539.623	557.957	577.747	614.943	Continuing	Continuing
• PE0102419A: <i>Proj E55, JLENS</i>	190.422	64.450	46.660	-	46.660	47.450	37.830	2.600	0.002	-	389.414
• PE 0604319A: <i>Proj DU3, IFPC2 (FY 2011/2012)</i>	76.039	79.232	101.000	-	101.000	157.010	91.000	59.000	28.000	Continuing	Continuing
PE0603305A <i>IFPC II- Intercept</i>											
• PE0605457A: <i>Proj S40, Army Integrated Air and Missile Defense (AIAMD)</i>	262.211	345.410	145.009	-	145.009	140.135	232.035	173.131	156.445	Continuing	Continuing
• SSN BZ5075: <i>Army IAMD Battle Command System (IBCS)</i>	-	20.980	-	-	-	-	21.091	101.273	325.378	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203801A / <i>Missile/Air Defense Product Improvement Program</i>	Project (Number/Name) DT5 / <i>Stinger Product Improvement</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PE 0604820A: <i>Proj E10, Sentinel</i>	3.486	1.944	6.674	-	6.674	11.583	11.007	11.053	12.280	Continuing	Continuing
• PE 0604741A: <i>Proj 126, 146, 149; Air Defense C2I Eng Dev</i>	73.333	37.409	16.178	-	16.178	20.557	19.909	20.145	20.410	Continuing	Continuing
• PE0203801A: <i>Proj 038; Missile/Air Defense Product Improvement Program Avenger PIP)</i>	-	-	5.115	-	5.115	3.556	3.663	2.810	4.154	Continuing	Continuing
• SSN CE8710: <i>Avenger Modernizations</i>	-	-	5.611	-	5.611	14.624	41.293	80.789	30.729	Continuing	Continuing
• SSNC21300: <i>Stinger Blk I Upgrades Procurement Line</i>	-	37.252	1.355	-	1.355	2.217	-	-	-	-	40.824

Remarks

This program is an integral part of the Army Air and Missile Defense Modernization strategy.

D. Acquisition Strategy

In Fiscal Year (FY) 12 the Stinger Based Systems (SBS) Product Office utilized Picatinny Arsenal to award a Proximity Fuze (Prox Fuze) development contract for the design, development, test and integration of a Proximity Fuze into existing Stinger Block I missiles. The Proximity Fuze will improve system effectiveness against the evolving Unmanned Aerial System (UAS) threat. UAS Defense (UAS-D) is a requirement of the Operational Requirements Document (ORD) for the Stinger Guided Missile System and validated by the Deputy Chief of Staff, G-3/5/7, Current and Future Warfighting Capabilities Division (DAMO-CIC) in memo dated 28 May 2013.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203801A / Missile/Air Defense Product Improvement Program	Project (Number/Name) DT5 / Stinger Product Improvement
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Mgt/Admin	SS/ Various	CMDS PO : Huntsville, AL	0.225	0.700		0.056		-		-		-	-	0.981	-
Subtotal			0.225	0.700		0.056		-		-		-	-	0.981	-

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Proximity Fuze Development	MIPR	Picatinny Arsenal : Picatinny Arsenal, NJ	9.454	12.513		1.010		-		-		-	-	22.977	-
Subtotal			9.454	12.513		1.010		-		-		-	-	22.977	-

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Test & Evaluation	Various	CMDS Project Office : Redstone Arsenal, AL and Eglin Air Force Base, FL	0.000	4.650		0.511		-		-		-	-	5.161	-
Subtotal			0.000	4.650		0.511		-		-		-	-	5.161	-

			Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			9.679	17.863	1.577	-	-	-	-	29.119	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203801A / <i>Missile/Air Defense Product Improvement Program</i>	Project (Number/Name) DT5 / <i>Stinger Product Improvement</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Proximity Fuze (Prox Fuze) Development	██████████																											
Prox Fuze Critical Design Review (CDR)					████																							
Component Level Qualifications (CLQ)					██████████																							
Proximity Flight Readiness Reviews (PFRR)					██████████																							
Proximity Flight Test (PFT)									████																			
Final Army Fuze Safety Review Board (AFSRB)					████																							

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203801A / <i>Missile/Air Defense Product Improvement Program</i>	Project (Number/Name) DT5 / <i>Stinger Product Improvement</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Proximity Fuze (Prox Fuze) Development	3	2012	2	2014
Prox Fuze Critical Design Review (CDR)	4	2013	4	2013
Component Level Qualifications (CLQ)	1	2014	2	2014
Proximity Flight Readiness Reviews (PFRR)	2	2014	3	2014
Proximity Flight Test (PFT)	3	2014	3	2014
Final Army Fuze Safety Review Board (AFSRB)	3	2014	3	2014

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203802A / <i>Other Missile Product Improvement Programs</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	-	62.067	49.848	-	49.848	35.951	7.592	-	-	Continuing	Continuing
DZ9: <i>ATACMS Mods</i>	-	-	62.067	49.848	-	49.848	35.951	7.592	-	-	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Army Tactical Missile Systems (ATACMS) is the United States (U.S) Army's primary 24/7, all-weather, and surface-to-surface artillery precision missile used by current and future Combatant Commanders to shape the battlefield with long-range fires against hard and soft stationary targets in open, complex, and urban environments. This effort will not build any new missiles or add to the overall inventory. Block (Blk) 1 missiles currently have warheads (WHs) that are non-compliant with the 2008 Department of Defense (DoD) policy on cluster munitions (CM). The modification program will take expired Blk 1 assets which have reached the end of their service life and reset to the contracted 10 year service life. Under this modification effort, a policy compliant WH will replace the existing M74 bomblets and also replace electronics and propellants. The Stockpile Reliability Program (SRP) will supply additional data to support extending the service life. This effort effectively brings the expired inventory back into service, while meeting the DoD CM Policy, to engage imprecisely located/area targets up to 300 kilometers (km).

B. Program Change Summary (\$ in Millions)

	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>
Previous President's Budget	-	62.100	46.300	-	46.300
Current President's Budget	-	62.067	49.848	-	49.848
Total Adjustments	-	-0.033	3.548	-	3.548
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-0.033	3.548	-	3.548

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203802A / Other Missile Product Improvement Programs	Project (Number/Name) DZ9 / ATACMS Mods
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DZ9: ATACMS Mods	-	-	62.067	49.848	-	49.848	35.951	7.592	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Army Tactical Missile Systems (ATACMS) is the United States (U.S) Army's primary 24/7, all-weather, and surface-to-surface artillery precision missile used by current and future Combatant Commanders to shape the battlefield with long-range fires against hard and soft stationary targets in open, complex, and urban environments. This effort will not build any new missiles or add to the overall inventory. Block (Blk) 1 missiles currently have warheads (WHs) that are non-compliant with the 2008 Department of Defense (DoD) policy on cluster munitions (CM). The modification program will take expired Blk 1 assets which have reached the end of their service life and reset to the contracted 10 year service life. Under this modification effort, a policy compliant WH will replace the existing M74 bomblets and also replace electronics and propellants. The Stockpile Reliability Program (SRP) will supply additional data to support extending the service life. This effort effectively brings the expired inventory back into service, while meeting the DoD CM Policy, to engage imprecisely located/area targets up to 300 kilometers (km).

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Conduct Development Engineering, Design Component Testing, and Performance Analysis.	-	62.067	49.848
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2014 Plans: Conduct Development Engineering, Design Component Testing, and Performance Analysis.			
FY 2015 Plans: Conduct Development Engineering, Design Component Testing, Performance Analysis, and Begin Test Hardware Modification.			
Accomplishments/Planned Programs Subtotals	-	62.067	49.848

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

N/A

Remarks

D. Acquisition Strategy

The ATACMS M57E1 program is a product improved version of the current ATACMS Blk 1 missile. M57E1 will be integrated and tested under a Firm Fixed Price (FFP) contract to Lockheed Martin Missile and Fire Control System (LMMFCS).

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203802A / <i>Other Missile Product Improvement Programs</i>	Project (Number/Name) DZ9 / <i>ATACMS Mods</i>

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203802A / Other Missile Product Improvement Programs	Project (Number/Name) DZ9 / ATACMS Mods
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Program Management	TBD	PFRMS Project Office, : RSA	0.000	-		3.711	Mar 2014	6.055	Oct 2014	-		6.055	-	9.766	-
Subtotal			0.000	-		3.711		6.055		-		6.055	-	9.766	-

Remarks
PFRMS-Precision Fires Rocket and Missile Systems; RSA-Redstone Arsenal; TBD-To Be Determined

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
ATACMS Mods Contracts	TBD	LMMFCS : (Dallas, TX)	0.000	-		42.009	Aug 2014	22.874	Aug 2015	-		22.874	-	64.883	-
Other Government Agencies	TBD	AMCOM/AMRDEC, : RSA	0.000	-		0.999	Aug 2014	1.454	Aug 2015	-		1.454	-	2.453	-
Subtotal			0.000	-		43.008		24.328		-		24.328	-	67.336	-

Remarks
ATACMS-Army Tactical Missile System; Mods-Modifications; LMMFCS-Lockheed Martin Missile and Fire Control; TX-Texas; TBD-To Be Determined; AMCOM-Army Materiel Command; AMRDEC-U.S. Army Research, Development and Engineering Command; RSA-Redstone Arsenal, Alabama

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Support Contract	TBD	Camber Research/S3/TMI, : Alabama	0.000	-		2.547	Mar 2014	2.344	Dec 2014	-		2.344	-	4.891	-
Subtotal			0.000	-		2.547		2.344		-		2.344	-	4.891	-

Remarks
S3-Systems Studies Simulation, Inc.; TMI-Tec Master, Inc.; TBD-To Be Determined

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203802A / Other Missile Product Improvement Programs	Project (Number/Name) DZ9 / ATACMS Mods
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Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support	TBD	WSMR, NM; : RTC, AL	0.000	-		12.801	Mar 2014	17.121	Jun 2015	-		17.121	-	29.922	-
Subtotal			0.000	-		12.801		17.121		-		17.121	-	29.922	-

Remarks
WSMR, NM-White Sands Missile Range, New Mexico; RTC, AL-Redstone Test Center, Alabama

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		62.067	49.848		-	111.915	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203802A / <i>Other Missile Product Improvement Programs</i>	Project (Number/Name) DZ9 / <i>ATACMS Mods</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Risk Reduction					████████████████████																							
Conduct Arena Warhead Tests								██████																				
Procure Flight Termination Systems								████████████████████																				
Proximity Sensor Integration								██████																				
Obsolescence								████████████████████																				
System Engineering Directorate Lab Stand Up								████████████████████																				
Component Integration and Testing								████████████████████																				
Hardware Build Up																████████████████████												
Deliveries																████████████████████												
Ground Tests																██████												
Flight Tests																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0203802A / <i>Other Missile Product Improvement Programs</i>	Project (Number/Name) DZ9 / <i>ATACMS Mods</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Risk Reduction	2	2014	1	2016
Conduct Arena Warhead Tests	4	2014	1	2015
Procure Flight Termination Systems	3	2014	1	2016
Proximity Sensor Integration	4	2014	1	2015
Obsolescence	3	2014	1	2016
System Engineering Directorate Lab Stand Up	3	2014	3	2015
Component Integration and Testing	4	2014	2	2017
Hardware Build Up	2	2016	2	2017
Deliveries	2	2016	2	2017
Ground Tests	1	2016	2	2016
Flight Tests	3	2016	2	2017

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0203808A / <i>TRACTOR CARD</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	58.174	18.768	22.691	-	22.691	39.807	30.708	27.965	17.144	Continuing	Continuing
DS1: <i>TRACTOR BARN</i>	-	27.156	-	-	-	-	-	-	-	-	-	27.156
DS2: <i>Tractor Puma</i>	-	14.622	1.516	10.968	-	10.968	23.138	14.361	12.532	1.432	Continuing	Continuing
E11: <i>DELL</i>	-	16.396	17.252	11.723	-	11.723	16.669	16.347	15.433	15.712	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The details for this program are reported in accordance with Title 10, United States Code, Section 119(a)(1).

B. Program Change Summary (\$ in Millions)

	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>
Previous President's Budget	63.243	18.778	19.834	-	19.834
Current President's Budget	58.174	18.768	22.691	-	22.691
Total Adjustments	-5.069	-0.010	2.857	-	2.857
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-5.069	-0.010			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	2.857	-	2.857

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203808A / <i>TRACTOR CARD</i>				Project (Number/Name) DS1 / <i>TRACTOR BARN</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DS1: <i>TRACTOR BARN</i>	-	27.156	-	-	-	-	-	-	-	-	-	27.156
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The details for this program are reported in accordance with Title 10, United States Code 119(a)(1).

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203808A / TRACTOR CARD				Project (Number/Name) DS2 / Tractor Puma			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DS2: <i>Tractor Puma</i>	-	14.622	1.516	10.968	-	10.968	23.138	14.361	12.532	1.432	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The details for this program are reported in accordance with Title 10, United States Code, Section 119(a)(1).

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0203808A / <i>TRACTOR CARD</i>				Project (Number/Name) E11 / <i>DELL</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
E11: <i>DELL</i>	-	16.396	17.252	11.723	-	11.723	16.669	16.347	15.433	15.712	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The details for this program are reported in accordance with Title 10, United States Code, Section 119(a)(1).

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0205402A / <i>Integrated Base Defense - Operational System Dev</i>							
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	-	-	4.364	-	4.364	3.230	-	-	-	-	7.594
EF2: <i>Integrated Base Defense Kitting</i>	-	-	-	4.364	-	4.364	3.230	-	-	-	-	7.594

The FY 2015 OCO Request will be submitted at a later date.

Note

FY 2015 Research Development Test and Evaluation funding in the amount of \$4.364 million moved from Program Element 0604785A to Program Element 0205402A.

A. Mission Description and Budget Item Justification

Integrated Base Defense (IBD) provides integration of software and analytical capability to support the integration of systems in the field. IBD employs an enterprise approach to enable Integrated Base Defense capabilities across the operational spectrum by leveraging interoperability efforts in support of the Integrated Unit, Base, and Installation Protection (IUBIP) framework.

FY 2015 Research Development Test and Evaluation funding in the amount of \$4.364 million supports the management, integration, and collaboration of specified Department of Defense Integrated Base Defense efforts to provide enhanced situational awareness, increased efficiencies, and more effective responses for both tactical bases and Continental United States (CONUS)/Outside the Continental United States (OCONUS) installations focused on system engineering, development efforts to upgrade systems, and software development.

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	4.364	-	4.364
Total Adjustments	-	-	4.364	-	4.364
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-	-	4.364	-	4.364

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205402A / <i>Integrated Base Defense - Operational System Dev</i>	Project (Number/Name) EF2 / <i>Integrated Base Defense Kitting</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
<i>EF2: Integrated Base Defense Kitting</i>	-	-	-	4.364	-	4.364	3.230	-	-	-	-	7.594
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Integrated Base Defense (IBD) provides integration of software and analytical capability to support the integration of systems in the field. IBD employs an enterprise approach to enable Integrated Base Defense capabilities across the operational spectrum by leveraging interoperability efforts in support of the Integrated Unit, Base, and Installation Protection (IUBIP) framework.

FY 2015 Research Development Test and Evaluation funding in the amount of \$4.364 million supports the management, integration, and collaboration of specified Department of Defense Integrated Base Defense efforts to provide enhanced situational awareness, increased efficiencies, and more effective responses for both tactical bases and Continental United States (CONUS)/Outside the Continental United States (OCONUS) installations focused on system engineering, development efforts to upgrade systems, and software development.

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

	FY 2013	FY 2014	FY 2015
<p>Title: Test and Evaluation</p> <p>Description: Test and Evaluation of Integrated Base Defense Software Development Efforts in support if Integrated Base Defense Kitting.</p> <p>FY 2015 Plans: Test and Evaluation of Integrated Base Defense Software Development Efforts in support if Integrated Base Defense Kitting.</p>	-	-	0.403
<p>Title: Integrated Base Defense Architecture and Software Development</p> <p>Description: Integrated Base Defense Architecture and Software Development</p> <p>FY 2015 Plans: Integrated Base Defense Architecture and Software Development in support of Integrated Base Defense Kitting.</p>	-	-	3.563
<p>Title: Engineering and Management Services</p> <p>Description: Engineering and Managment Services in support of Integrated Base Defense Software Development Efforts for Integrated Base Defense Kitting.</p>	-	-	0.398

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205402A / <i>Integrated Base Defense - Operational System Dev</i>	Project (Number/Name) EF2 / <i>Integrated Base Defense Kitting</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
<i>FY 2015 Plans:</i> Engineering and Managment Services in support of Integrated Base Defense Software Development Efforts for Integrated Base Defense Kitting.			
Accomplishments/Planned Programs Subtotals	-	-	4.364

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

N/A

Remarks

D. Acquisition Strategy

The Integrated Base Defense (IBD) acquisition strategy is to leverage existing IBD-related government organizations and to competitively award multiple contracts in support of IBD objectives for the development of holistic IBD architectures and products to support interoperability of fielded and emerging IBD-related systems.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0205402A / Integrated Base Defense - Operational System Dev				EF2 / Integrated Base Defense Kitting							
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering and Management Services	Allot	Joint Project Manager Guardian Joint Product Manager Force Protection Services : Fort Belvoir, VA	0.000	-		-		0.398	Oct 2014	-		0.398	Continuing	Continuing	-
Subtotal			0.000	-		-		0.398		-		0.398	-	-	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Base Defense Achitecture and Software Development	C/CR	AMRDEC : Huntsville, AL	0.000	-		-		3.563	Oct 2014	-		3.563	Continuing	Continuing	-
Subtotal			0.000	-		-		3.563		-		3.563	-	-	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	MIPR	A TEC : Aberdeen Proving Ground, MD	0.000	-		-		0.403	Nov 2014	-		0.403	Continuing	Continuing	-
Subtotal			0.000	-		-		0.403		-		0.403	-	-	-
Project Cost Totals			0.000	-		-		4.364		-		4.364	-	-	-
Remarks															

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0205410A / Materials Handling Equipment
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	-	-	0.834	-	0.834	0.402	0.304	0.750	0.750	-	3.040
EE9: Materials Handling Equipment - Advanced Development	-	-	-	0.834	-	0.834	0.402	0.304	0.750	0.750	-	3.040

The FY 2015 OCO Request will be submitted at a later date.

Note

Funding realigned from 603804A Project G14

A. Mission Description and Budget Item Justification

This program element supports component development and Material Handling Equipment (MHE) prototyping and stays abreast of emerging and available technologies to be integrated into military MHE to address identified capability gaps and warfighter objectives. This project enables the development of selected technologies and transition to system integration and development or production of MHE products. MHE includes Rough Terrain Forklifts, Rough Terrain Container Handlers (RTCH) and Cranes, as well as ancillary MHE equipment, to support distribution of critical supplies in the theater of operations. FY15 funding will allow innovative research with the goal to improve fuel efficiency, diagnostic tasks, and to enhance operation of MHE equipment.

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	0.834	-	0.834
Total Adjustments	-	-	0.834	-	0.834
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	0.834	-	0.834

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0205410A / <i>Materials Handling Equipment</i>				Project (Number/Name) EE9 / <i>Materials Handling Equipment - Advanced Development</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EE9: <i>Materials Handling Equipment - Advanced Development</i>	-	-	-	0.834	-	0.834	0.402	0.304	0.750	0.750	-	3.040
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project supports component development and Material Handling Equipment (MHE) prototyping and stays abreast of emerging and available technologies to be integrated into military MHE to address identified capability gaps and warfighter objectives. This project enables the development of selected technologies and transition to system integration and development or production of MHE products. MHE includes Rough Terrain Forklifts, Rough Terrain Container Handlers (RTCH) and Cranes, as well as ancillary MHE equipment, to support distribution of critical supplies in the theater of operations. FY15 funding will allow for innovative research with the goal to improve fuel efficiency, diagnostic tasks, and to enhance operation of MHE equipment.

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

	FY 2013	FY 2014	FY 2015
Title: Baseline Fuel Efficiency of Material Handling Equipment (MHE)	-	-	0.250
Description: Develop standard duty cycles for fielded system, investigate training/technology for improving efficiency and validate performance of proposed changes.			
FY 2015 Plans: Continue baseline and evaluate new solutions for fluid and controls			
Title: Upgrade RTCH control systems and on-board diagnostics	-	-	0.434
Description: Perform analysis of current control systems and technology which can be used to improve performance and reliability. Investigate integration of on-board diagnostics to aid in operation and maintenance.			
FY 2015 Plans: Investigate current RTCH control systems and conduct Market Research			
Title: Investigate Robotic Assist on Material Handling Equipment (MHE)	-	-	0.150
Description: Research and demonstrate technologies which would enhance operation such as the inclusion of cameras, collision sensors and lifting aids.			
FY 2015 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205410A / <i>Materials Handling Equipment</i>	Project (Number/Name) EE9 / <i>Materials Handling Equipment - Advanced Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Conduct research into appliqué which will enhance operation			
Accomplishments/Planned Programs Subtotals	-	-	0.834

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• RDT&E: 0604804A, <i>Logistics and Engineer Equipment, Engineering Development (H14)</i>	1.265	0.298	0.283	-	0.283	0.972	0.951	0.607	0.627	Continuing	Continuing

Remarks

D. Acquisition Strategy

Procure prototype component items for engineering tests and demonstrations with subject matter experts. Conduct trades between cost and improved maintainability and environmental risk reduction. Process engineering change proposals, update technical manuals and training materials, and prepare supporting acquisition documents and data to procure new training aids.

E. Performance Metrics

N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205410A / <i>Materials Handling Equipment</i>	Project (Number/Name) EE9 / <i>Materials Handling Equipment - Advanced Development</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Baseline fuel efficiency of equipment																												
Improve operational efficiency																												
Investigate current RTCH control systems and conduct market research																												
Electrical backbone update																												
Improve camera system																												
Investigate robotic assist on Material Handling Equipment																												
Engineer R&D support																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205410A / <i>Materials Handling Equipment</i>	Project (Number/Name) EE9 / <i>Materials Handling Equipment - Advanced Development</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Baseline fuel efficiency of equipment	1	2015	4	2015
Improve operational efficiency	1	2016	4	2019
Investigate current RTCH control systems and conduct market research	1	2015	4	2015
Electrical backbone update	1	2016	4	2019
Improve camera system	1	2016	4	2019
Investigate robotic assist on Material Handling Equipment	2	2015	4	2019
Engineer R&D support	1	2016	4	2019

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0205412A / <i>Environmental Information Tech Modernization</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	-	-	0.280	-	0.280	-	-	0.277	-	-	0.557
EE6: <i>Environmental Information Tech Modernization</i>	-	-	-	0.280	-	0.280	-	-	0.277	-	-	0.557

The FY 2015 OCO Request will be submitted at a later date.

Note

Funding for this project was transferred from Research Development Test and Evaluation (RDTE) Budget Activity (BA) 4 to RDTE BA 7, specifically from 06043779A-04E to 0205412A-EE6.

A. Mission Description and Budget Item Justification

This project funds the modernization of the Environmental Information Technology Management (EITM) program which includes support for Knowledge Based Corporate Reporting system (KBCRS) and Defense Environmental Network Information Exchange (DENIX).

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	0.280	-	0.280
Total Adjustments	-	-	0.280	-	0.280
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-	-	0.280	-	0.280

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205412A / <i>Environmental Information Tech Modernization</i>	Project (Number/Name) EE6 / <i>Environmental Information Tech Modernization</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EE6: <i>Environmental Information Tech Modernization</i>	-	-	-	0.280	-	0.280	-	-	0.277	-	-	0.557
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Beginning in FY 2015, funding for this project will transfer from Environmental Restoration Tech Validation (06043779-04E). This project is not a new start.

A. Mission Description and Budget Item Justification

The Environmental Information Technology Management (EITM) program includes support for Knowledge Based Corporate Reporting system (KBCRS) and Defense Environmental Network Information Exchange (DENIX). This request for research, development, test and evaluation (RDTE) is to enhance DENIX and KBCRS systems to a net-centric all services transactional system of record and reporting tool set. This also includes upgrades to incorporate new security and other information technology requirements.

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

	FY 2013	FY 2014	FY 2015
Title: Environmental Information Tech Modernization	-	-	0.280
Description: Conducts system enhancements as required to meet data management requirements for the Knowledge Based Corporate Reporting System and the Defense Environmental Network Information Exchange			
FY 2015 Plans: Will provide system upgrades to support users with reporting requirements, for example the Annual Report to Congress and Chemical Management Enterprise Information Integration.			
Accomplishments/Planned Programs Subtotals	-	-	0.280

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 06043779A: <i>Environmental Restoration Tech Validation (04E)</i>	0.316	0.431	-	-	-	-	-	-	-	-	0.747

Remarks

Beginning in FY 2015, funding for this project will transfer from Environmental Restoration Tech Validation (06043779-04E). This project is not a new start.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205412A / <i>Environmental Information Tech Modernization</i>	Project (Number/Name) EE6 / <i>Environmental Information Tech Modernization</i>

D. Acquisition Strategy

The Environmental Information Technology Management (EITM) Program is an Office of the Secretary of Defense sponsored program that was assigned to the Deputy Assistant Secretary of the Army for Environment, Safety and Occupational Health as the Department of Defense (DoD) Executive Agent by the Under Secretary of Defense for Acquisition, Technology and Logistics in 2001. The DoD Directive 4715.1E defined EITM mission is to ensure efficient use of enterprise environment, safety and occupational health (ESOH) corporate information management processes by providing and sustaining requirement-driven ESOH corporate data management, Congressional-reporting and public outreach tools to the DoD, and other DoD stakeholders. Funding provided for this program will allow EITM to develop a Deputy Under Secretary of Defense for Installations and Environment directed Chemical Management Enterprise Information Integration capability that will allow Army net-centric hazardous material and ESOH 2.0 NetCentric data management capabilities per the Secretary of the Army Directive 2009-03 "Army Data Management" and DoD Directive 8320.2 "Data Sharing in a Net-Centric Department of Defense." Prior to funding being committed, Army and DoD environmental information technology stakeholders meet to determine which high priority EITM interface requirements need upgrades to incorporate new security and other information technology requirements.

E. Performance Metrics

N/A

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0205456A / <i>Lower Tier Air and Missile Defense (AMD)</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	-	-	78.758	-	78.758	64.628	67.461	65.734	117.666	-	394.247
EF9: <i>System Integration and Test</i>	-	-	-	78.758	-	78.758	64.628	67.461	65.734	117.666	-	394.247

The FY 2015 OCO Request will be submitted at a later date.

Note

FY15 project EF9 funds realigned from PE 0605456A PA3.

A. Mission Description and Budget Item Justification

The PATRIOT system includes a family of hardware and software interceptors (GEM, PAC-2, PAC-3/MSE) and Ground Support Equipment. The system is required to continue evaluating the engagement envelope defended area for the fielded application. As software and hardware improvements are developed there is a continuing need for system level modeling, simulations, and tests. Modeling and Simulation allow for performance assessment against all threats that would not be possible in flight tests due to cost, target and range constraints. Flight testing is periodically required for validation of the Modeling and Simulation as well as satisfying ATEC/DOTE requirements of segment improvements.

PATRIOT is an integral part of the overall Air and Missile Defense (AMD) Architecture and enables the incremental fielding of the system capability for Army Air and Missile Defense Battalions.

B. Program Change Summary (\$ in Millions)	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	78.758	-	78.758
Total Adjustments	-	-	78.758	-	78.758
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	78.758	-	78.758

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205456A / Lower Tier Air and Missile Defense (AMD)	Project (Number/Name) EF9 / System Integration and Test
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EF9: <i>System Integration and Test</i>	-	-	-	78.758	-	78.758	64.628	67.461	65.734	117.666	-	394.247
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

This is not a new start - continues efforts funded in PAC-3/MSE Missile 0605456A.

A. Mission Description and Budget Item Justification

The PATRIOT system includes a family of hardware and software interceptors (GEM, PAC-2,PAC-3/MSE) and Ground Support Equipment. The system is required to continue evaluating the engagement envelope defended area for the fielded application. As software and hardware improvements are developed there is a continuing need for system level modeling, simulations, and tests. Modeling and Simulation allow for performance assessment against all threats that would not be possible in flight tests due to cost, target and range constraints. Flight testing is periodically required for validation of the Modeling and Simulation as well as satisfying ATEC/DOE requirements of segment improvements.

PATRIOT is an integral part of the overall Air and Missile Defense (AMD) Architecture and enables the incremental fielding of the system capability for Army Air and Missile Defense Battalions.

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

	FY 2013	FY 2014	FY 2015
Title: Program Development, Integration, and Support	-	-	15.558
Description: Funding is provided for the following effort:			
FY 2015 Plans: Program development, integration of missile and ground system hardware and software in support of PDB-8 activities.			
Title: Testing, Targets, Modeling and Simulation	-	-	63.200
Description: Funding is provided for the following effort.			
FY 2015 Plans: Continues testing program to include utilization of targets/threat simulators, flight simulator, modeling efforts and test activities to support Test and Evaluation Master Plan and system testing/analysis for PDB-8 IOT&E.			
Accomplishments/Planned Programs Subtotals	-	-	78.758

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205456A / Lower Tier Air and Missile Defense (AMD)	Project (Number/Name) EF9 / System Integration and Test

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

N/A

Remarks

D. Acquisition Strategy

The design objective of the PATRIOT system is to provide an element of an integrated Ballistic Missile Defense system capable of being modified to cope with the evolving threat. This strategy minimizes technological risks and provides a means of enhancing system capability through planned upgrades of deployed systems. PAC-3 system development efforts further improve system capabilities against emerging and reactive threats. The PAC-3 Missile Program focuses on developing, fabricating and testing the high velocity, hit to kill, surface to air missile and associated ground support equipment to provide essential increases in battle space, accuracy, lethality and firepower to counter and destroy evolving air defense threats. The missile performance is demonstrated through a series of flight tests and modeling and simulation activities. The PAC-3 MSE program evolves the PAC-3 system providing extended ranges, insensitive munitions enhancements, and greater logistical flexibility. The PAC-3 MSE will be fielded to U.S. PATRIOT units.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205456A / Lower Tier Air and Missile Defense (AMD)	Project (Number/Name) EF9 / System Integration and Test
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Program Management	RO	Various : Huntsville, Alabama	0.000	-		-		1.150	Dec 2014	-		1.150	-	1.150	-
Subtotal			0.000	-		-		1.150		-		1.150	-	1.150	-

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Integration	MIPR	Various : Huntsville, AL	0.000	-		-		3.550	Dec 2014	-		3.550	-	3.550	-
PAC-3 Product Office	RO	PO : Huntsville, AL	0.000	-		-		0.165	Dec 2014	-		0.165	-	0.165	-
MSE/PAC-3 Raytheon	Various	Multiple : Multiple	0.000	-		-		4.450	Jan 2015	-		4.450	-	4.450	-
SETA Contracts	Various	Multiple : Multiple	0.000	-		-		3.083	Feb 2015	-		3.083	-	3.083	-
U.S. Other Government Agencies (OGAs)	MIPR	Various : Huntsville, Alabama	0.000	-		-		4.310	Dec 2014	-		4.310	-	4.310	-
Subtotal			0.000	-		-		15.558		-		15.558	-	15.558	-

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Targets/Threats Simulators	MIPR	Various : Huntsville, Alabama	0.000	-		-		25.345	Dec 2014	-		25.345	-	25.345	-
Modeling and Simulation	MIPR	Various : Huntsville, Alabama	0.000	-		-		3.724	Dec 2014	-		3.724	-	3.724	-
Contractor T&E	Various	Multiple : Multiple	0.000	-		-		8.425	Dec 2014	-		8.425	-	8.425	-
Other T&E funding	MIPR	Various : WSMR, NM	0.000	-		-		14.925	Dec 2014	-		14.925	-	14.925	-
Mobile Flight Mission Simulator (MFMS)	SS/FPIF	Raytheon : Massachusetts	0.000	-		-		8.300	Dec 2014	-		8.300	-	8.300	-
PDB 8/9	MIPR	Various : WSMR, NM	0.000	-		-		1.331	Dec 2014	-		1.331	-	1.331	-

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205456A / Lower Tier Air and Missile Defense (AMD)	Project (Number/Name) EF9 / System Integration and Test

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
PATRIOT System Testing and Evaluation																												
PDB 8 Fielding - Radar Digital Processor																												
PDB-8 IOC																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205456A / <i>Lower Tier Air and Missile Defense (AMD)</i>	Project (Number/Name) EF9 / <i>System Integration and Test</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
PATRIOT System Testing and Evaluation	1	2015	4	2019
PDB 8 Fielding - Radar Digital Processor	4	2014	2	2019
PDB-8 IOC	3	2016	3	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0205778A / Guided Multiple-Launch Rocket System (GMLRS)
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	-	-	45.377	-	45.377	17.175	27.389	26.292	26.522	Continuing	Continuing
EG2: GMLRS Alternative Warheads	-	-	-	33.898	-	33.898	0.319	-	-	-	Continuing	Continuing
EG3: Guided MLRS	-	-	-	11.479	-	11.479	16.856	27.389	26.292	26.522	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

Adjustments to Budget Years: Reflects FY14; GMLRS Alternative Warhead (78G) and Guided MLRS (784) re-aligned to PE 205778A, Projects EG2 and EG3, respectively. Other Adjustments 1: Cost reduction initiatives

A. Mission Description and Budget Item Justification

Projects EG2/EG3. GMLRS rockets are surface-to-surface artillery rockets fired from the Multiple Launch Rocket System (MLRS) and High Mobility Artillery Rocket System (HIMARS) launchers. GMLRS rockets provide 24/7, all-weather precision fires to engage both area and point targets at short, medium, and long ranges.

The GMLRS Program consists of three separate increments: GMLRS Dual Purpose Improved Conventional Munition (DPICM) cluster munition to engage area or imprecisely located targets; GMLRS Unitary that utilizes a 200 lb high explosive warhead to engage point targets with limited collateral damage; and GMLRS Alternative Warhead (AW) that is being developed as a non-cluster munition to replace GMLRS DPICM. GMLRS DPICM Production was terminated in response to the June 2008 Department of Defense (DoD) Cluster Munitions Policy. GMLRS Unitary is currently in full rate production. GMLRS AW is currently in the Engineering and Manufacturing Development (EMD) Phase and scheduled to enter full rate production in FY2015. The GMLRS AW rocket is 90% common with the Unitary variant.

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	45.377	-	45.377
Total Adjustments	-	-	45.377	-	45.377
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	55.413	-	55.413

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army		Date: March 2014	
Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0205778A / <i>Guided Multiple-Launch Rocket System (GMLRS)</i>		
• Other Adjustments 1	-	-	-10.036
			-10.036

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0205778A / <i>Guided Multiple-Launch Rocket System (GMLRS)</i>				Project (Number/Name) EG2 / <i>GMLRS Alternative Warheads</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EG2: <i>GMLRS Alternative Warheads</i>	-	-	-	33.898	-	33.898	0.319	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Beginning in FY2015, Guided Multiple Launch Rocket System (GMLRS) will have its own separate Program Element, 0205778A, to include Projects EG2 (GMLRS Alternative Warhead) and EG3 (Guided MLRS), previously under Program Element 0603778A Project Codes 78G and 784, respectively.

A. Mission Description and Budget Item Justification

The United States (U.S.) Army is funding the development of the Guided Multiple Launch Rocket System (GMLRS) Alternative Warhead (AW) increment under the 78G-GMLRS AW project code. GMLRS AW is being developed as a non-cluster munition to replace GMLRS Dual Purpose Improved Conventional Munitions (DPICM) and service the same area and imprecisely-located targets. GMLRS DPICM Production was terminated in response to the June 2008 Department of Defense (DoD) Cluster Munitions Policy.

The GMLRS AW increment completed Milestone B (MS B) on February 19, 2012 and is currently in the Engineering and Manufacturing Development (EMD) Phase. The three-year EMD contract was awarded on March 30, 2012. Funding was requested in FY2013 for the second year of the EMD contract and for other government and contracted EMD activities to include engineering developmental testing and the Critical Design Review (CDR). GMLRS AW is scheduled for a combined Milestone C (MS C) and Full Rate Production (FRP) Decision in FY2015 and Initial Operational Capability (IOC) in FY2016.

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

	FY 2013	FY 2014	FY 2015
Title: Conduct Development Engineering, Design Component Testing, and Performance Analysis.	-	-	15.762
Description: Funding is provided for the following effort			
FY 2015 Plans: Assess warhead capability and effectiveness in cold conditioned environments.			
Title: Perform technical assessments and concept studies.	-	-	8.475
Description: Funding is provided for the following effort			
FY 2015 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205778A / <i>Guided Multiple-Launch Rocket System (GMLRS)</i>	Project (Number/Name) EG2 / <i>GMLRS Alternative Warheads</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Evaluate production rate tooling assessments; conduct functional configuration audit; assess readiness for operational testing.			
Title: Prepare Milestone Documentation, Risk Reduction, and Program Reviews.	-	-	1.492
Description: Funding is provided for the following effort			
FY 2015 Plans: Finalize milestone documentation; prepare for prebrief and execute Milestone C (MS C) and Full Rate Production Decision (FRPDR).			
Title: Conduct System Test and Evaluation Activities.	-	-	8.169
Description: Funding is provided for the following effort			
FY 2015 Plans: Initial Operational Test and Evaluation (IOT&E); Cold Regions Test Center (CRTC) testing.			
Accomplishments/Planned Programs Subtotals	-	-	33.898

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• GMLRS: <i>GMLRS</i>	214.288	273.025	127.145	-	127.145	194.775	167.250	190.934	90.792	Continuing	Continuing
• Guided MLRS: <i>Guided MLRS</i>	7.640	15.309	11.479	-	11.479	16.856	27.389	26.292	26.552	Continuing	Continuing
• Long Range Precision Fires: <i>Long Range Precision Fires</i>	-	-	-	-	-	69.000	40.000	77.000	107.169	Continuing	Continuing

Remarks
GMLRS procurement funding includes C65404 and C65406.

D. Acquisition Strategy
The GMLRS AW rocket is a product improved version of the current GMLRS DPICM rocket. During EMD, GMLRS AW will undergo further development, integration, and testing under a Firm Fixed Price (FFP) contract.

E. Performance Metrics
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205778A / <i>Guided Multiple-Launch Rocket System (GMLRS)</i>	Project (Number/Name) EG2 / <i>GMLRS Alternative Warheads</i>
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Program Management	TBD	PFRMS Project Office, : RSA	0.000	-		-		4.643	Oct 2014	-		4.643	Continuing	Continuing	Continuing
Subtotal			0.000	-		-		4.643		-		4.643	-	-	-

Remarks
TBD-To Be Determined; Cont.-Continuing; PFRMS-Precision Fires Rocket and Missile Systems; RSA-Redstone Arsenal

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
AWP Contracts (Multiple)	Various	ATK (Plymouth, MN) LMMFCS (Dallas, TX) : Systems Integrator	0.000	-		-		10.835	Dec 2014	-		10.835	Continuing	Continuing	Continuing
Other Government Agencies	TBD	AMCOM/ : AMRDEC, RSA	0.000	-		-		3.543	Dec 2014	-		3.543	Continuing	Continuing	Continuing
Subtotal			0.000	-		-		14.378		-		14.378	-	-	-

Remarks
AWP-Alternative Warhead Program; Various-Competitive/Firm Fixed Price/Sole Source/Cost Plus Fixed Fee; TBD-To Be Determined; Cont.-Continuing; AMCOM-Army Materiel Command; AMRDEC-U.S. Army Research, Development and Engineering Command; RSA-Redstone Arsenal; ATK-Alliant Techsystems, Inc.; MN-Minnesota; LMMFCS-Lockheed Martin Missile and Fire Control System; TX-Texas

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Support Contracts	C/CPFF	Camber Research/ S3/TMI, : Alabama	0.000	-		-		0.236	Dec 2014	-		0.236	Continuing	Continuing	Continuing
Subtotal			0.000	-		-		0.236		-		0.236	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205778A / <i>Guided Multiple-Launch Rocket System (GMLRS)</i>	Project (Number/Name) EG2 / <i>GMLRS Alternative Warheads</i>
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Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks
C/CPFF-Competitive/Cost Plus Fixed Fee; Cont.-Continuing; S3-Systems Studies Simulation, Inc.; TMI-Tec Master, Inc.

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support	TBD	WSMR, : NM	0.000	-		-		14.641	Dec 2014	-		14.641	-	14.641	-
Subtotal			0.000	-		-		14.641		-		14.641	-	14.641	-

Remarks
TBD-To Be Determined; Cont.-Continuing; WSMR, NM-White Sands Missile Range, New Mexico

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-	-	33.898	-	33.898	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205778A / <i>Guided Multiple-Launch Rocket System (GMLRS)</i>	Project (Number/Name) EG2 / <i>GMLRS Alternative Warheads</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Milestone C																												
Initial Operational Test (IOT)																												
Full Rate Production (FRP)																												
Initial Operational Capability (IOC)																												
Conduct Development Engineering, Design Component Testing and Performance Analys																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205778A / <i>Guided Multiple-Launch Rocket System (GMLRS)</i>	Project (Number/Name) EG2 / <i>GMLRS Alternative Warheads</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Milestone C	4	2015	4	2015
Initial Operational Test (IOT)	2	2015	2	2015
Full Rate Production (FRP)	4	2015	4	2015
Initial Operational Capability (IOC)	3	2017	3	2017
Conduct Development Engineering, Design Component Testing and Performance Analys	1	2015	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205778A / <i>Guided Multiple-Launch Rocket System (GMLRS)</i>	Project (Number/Name) EG3 / <i>Guided MLRS</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EG3: <i>Guided MLRS</i>	-	-	-	11.479	-	11.479	16.856	27.389	26.292	26.522	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Beginning in FY2015, Guided Multiple Launch Rocket System (GMLRS) will have its own separate Program Element, 0205778A, to include Projects EG2 (GMLRS Alternative Warhead) and EG3 (Guided MLRS), previously under Program Element 0603778A Project Codes 78G and 784, respectively.

A. Mission Description and Budget Item Justification

The United States (U.S.) Army continues to explore ways to enhance Guided Multiple Launch Rocket System (GMLRS) Unitary rockets and common components and to mitigate obsolescence issues under the Guided MLRS project code. The Army is requesting funding for the following GMLRS Research, Development, Test and Evaluation (RDT&E) activities: (1) evaluation of enhanced operational capabilities to provide more flexibility across the target set to include increased range and flight performance; (2) investigation of potential life cycle cost savings through obsolescence initiatives; (3) development of enhancements to the Multiple Launch Rocket System (MLRS) common test equipment; and (4) evaluation and development of technologies to enhance overall product performance, survivability, and Insensitive Munitions (IM) compliance.

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

	FY 2013	FY 2014	FY 2015
<p>Title: Assess and improve GMLRS rockets.</p> <p>Description: Funding is provided for the following effort</p> <p>FY 2015 Plans: Continue to levy and evaluate improvements in rocket reliability, collateral damage, and effectiveness.</p>	-	-	1.607
<p>Title: Conduct development engineering for IM program.</p> <p>Description: Funding is provided for the following effort</p> <p>FY 2015 Plans: Conduct System Functional Design Review (FDR) and System Integration Tests (SITs).</p>	-	-	6.428
<p>Title: Investigate obsolescence cost/cost reduction opportunities/second source suppliers.</p> <p>Description: Funding is provided for the following effort</p> <p>FY 2015 Plans:</p>	-	-	1.033

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205778A / <i>Guided Multiple-Launch Rocket System (GMLRS)</i>	Project (Number/Name) EG3 / <i>Guided MLRS</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Insert Guidance Processor Unit (GPU) and Power Condition Unit (PCU) into GMLRS program.			
Title: Conduct System Test and Evaluation activities.	-	-	2.411
Description: Funding is provided for the following effort			
FY 2015 Plans: Conduct configuration ground control testing for the GMLRS IM Rocket Motor (RM) and Ignition Safety Device (ISD).			
Accomplishments/Planned Programs Subtotals	-	-	11.479

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• GMLRS: <i>GMLRS</i>	214.288	273.025	127.145	-	127.145	194.775	167.250	190.934	90.792	Continuing	Continuing
• Gmlrs Alternative Warhead: <i>Gmlrs Alternative Warhead</i>	53.593	39.852	33.898	-	33.898	0.319	-	-	-	Continuing	Continuing
• Long Range Precision Fires: <i>Long Range Precision Fires</i>	-	-	-	-	-	69.000	40.000	77.000	107.169	Continuing	Continuing

Remarks
GMLRS Procurement funding includes C65404 and C65406.

D. Acquisition Strategy
Project EG3 is intended to support, investigate, and develop alternative material changes to improve the GMLRS family of munitions as they are identified by the material developer or combat developer. This project also supports IM activities to improve the overall posture of the system all the way down to component level. Future initiatives could include a missile modernization program to extend the shelf life of the GMLRS rocket.

E. Performance Metrics
N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205778A / <i>Guided Multiple-Launch Rocket System (GMLRS)</i>	Project (Number/Name) EG3 / <i>Guided MLRS</i>
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Program Management	TBD	PFRMS Project Office, : RSA	0.000	-		-		0.132	Oct 2014	-		0.132	Continuing	Continuing	Continuing
Subtotal			0.000	-		-		0.132		-		0.132	-	-	-

Remarks
TBD-To Be Determined; Cont.-Continuing; PFRMS-Precision Fires Rocket and Missile Systems; RSA-Redstone Arsenal, Alabama

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Unitary Contracts/Multiple	SS/CPFF	LMMFCS : Dallas, TX	0.000	-		-		8.872	Dec 2014	-		8.872	Continuing	Continuing	Continuing
Other Government Agencies	TBD	AMCOM/AMRDEC, : RSA	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.000	-		-		8.872		-		8.872	-	-	-

Remarks
SS/CPFF-Sole Source/Cost Plus Fixed Fee; Cont.-Continuing; LMMFCS - Lockheed Martin Missile and Fire Control System; TX - Texas; AMCOM-Aviation and Missile Command; TBD-To Be Determined; AMRDEC - U.S. Army Research, Development and Engineering Command; RSA - Redstone Arsenal, Alabama

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Support Contract	C/CPFF	Camber Research/S3/TMI, : Alabama	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.000	-		-		-		-		-	-	-	-

Remarks
C/CPFF: Competitive/Cost Plus Fixed Fee; Cont.-Continuing; S3-Systems Studies Simulation, Inc.; TMI-Tec Masters, Inc.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205778A / <i>Guided Multiple-Launch Rocket System (GMLRS)</i>	Project (Number/Name) EG3 / <i>Guided MLRS</i>
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Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support	TBD	WSMR, : NM	0.000	-		-		2.475	Dec 2014	-		2.475	Continuing	Continuing	Continuing
Subtotal			0.000	-		-		2.475		-		2.475	-	-	-

Remarks
TBD-To Be Determined; Cont.-Continuing; WSMR, NM-White Sands Missile Range, New Mexico

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-	-	11.479	-	11.479	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205778A / <i>Guided Multiple-Launch Rocket System (GMLRS)</i>	Project (Number/Name) EG3 / <i>Guided MLRS</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Technical Assessment/Concept, Survivability																												
Obsolescence/Cost Reduction Opportunities and Second Source Suppliers																												
IM/Enhanced Technology Improvements																												
Configuration System Qualification Ground/ Flight Testing																												
Engineering Change Proposal (ECP) Cut In Decision																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0205778A / <i>Guided Multiple-Launch Rocket System (GMLRS)</i>	Project (Number/Name) EG3 / <i>Guided MLRS</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Technical Assessment/Concept, Survivability	1	2015	4	2019
Obsolescence/Cost Reduction Opportunities and Second Source Suppliers	1	2015	4	2019
IM/Enhanced Technology Improvements	1	2015	4	2019
Configuration System Qualification Ground/Flight Testing	2	2015	4	2016
Engineering Change Proposal (ECP) Cut In Decision	2	2017	2	2017

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0208053A / Joint Tactical Ground System
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	29.187	7.104	10.209	-	10.209	20.662	11.671	8.755	10.680	Continuing	Continuing
635: Joint Tact Grd Station-P3I(MIP)	-	29.187	7.104	10.209	-	10.209	20.662	11.671	8.755	10.680	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Joint Tactical Ground Station (JTAGS) is a post-production, ACAT III program and is designated as a DoD Space Program. JTAGS provides missile warning message data for the Air and Missile Defense (AMD) architecture and improves performance for Integrated Air and Missile Defense Fire Control Systems/Composite Army Air and Missile Defense Brigades. The JTAGS Program Element (PE) supports development and test to meet JTAGS ORD thresholds using improved sensors and algorithms as Pre-Planned Product Improvements (P3I). Presently, JTAGS Block 1 is a transportable information processing system, receiving and processing in-theater, direct down-linked data from Defense Support Program (DSP) and other Infrared (IR) satellites. JTAGS then disseminates near real time warning, alerting, and cueing information on ballistic missile launches and other tactical events of interest throughout the theater using existing communication networks, providing critical support to Combatant Commanders in their Areas of Responsibility (AOR). Four OCONUS deployed JTAGS units constitute DoD's only in-theater system providing space-based missile warning. The fifth CONUS system is being used as an institutional trainer but is a deployable asset. JTAGS is designated as the in-theater element of the United States Strategic Command's Theater Event System (TES). JTAGS supports all Theater Missile Defense pillars and by being located in-theater, affords the shortest sensor to shooter connectivity. P3I Improvements will upgrade JTAGS to a new Block 2 configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, and will improve warning tactical parameters and timeliness. JTAGS Block 2 P3I is on contract for a two-Phase development effort. Phase 1 deshelters five systems, adds SBIRS Geosynchronous (GEO) scanner capability (FY 2012-15) and updates hardware/software/communication systems. Phase 2 activities include stereo SBIRS GEO starrer sensor data and Net Centric capabilities (FY 2016-19). JROC-Memos 197-12 and 113-13 directs fielding of JTAGS P3I Block 2 Phase 1 by FY15 and Phase 2 by FY 2017.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0208053A / <i>Joint Tactical Ground System</i>
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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	31.738	7.108	20.762	-	20.762
Current President's Budget	29.187	7.104	10.209	-	10.209
Total Adjustments	-2.551	-0.004	-10.553	-	-10.553
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-2.551	-0.004	-10.553	-	-10.553

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0208053A / Joint Tactical Ground System				Project (Number/Name) 635 / Joint Tact Grd Station-P3I(MIP)			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
635: Joint Tact Grd Station-P3I(MIP)	-	29.187	7.104	10.209	-	10.209	20.662	11.671	8.755	10.680	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

The Joint Tactical Ground Station (JTAGS) is a post-production, ACAT III program and is designated as a DoD Space Program. JTAGS provides missile warning message data for the Air and Missile Defense (AMD) architecture and improves performance for Integrated Air and Missile Defense Fire Control Systems/Composite Army Air and Missile Defense Brigades. The JTAGS Program Element (PE) supports development and test to meet JTAGS ORD thresholds using improved sensors and algorithms as Pre-Planned Product Improvements (P3I). Presently, JTAGS Block 1 is a transportable information processing system, receiving and processing in-theater, direct down-linked data from Defense Support Program (DSP) and other Infrared (IR) satellites. JTAGS then disseminates near real time warning, alerting, and cueing information on ballistic missile launches and other tactical events of interest throughout the theater using existing communication networks, providing critical support to Combatant Commanders in their Areas of Responsibility (AOR). Four OCONUS deployed JTAGS units constitute DoD's only in-theater system providing space-based missile warning. The fifth CONUS system is being used as an institutional trainer but is a deployable asset. JTAGS is designated as the in-theater element of the United States Strategic Command's Theater Event System (TES). JTAGS supports all Theater Missile Defense pillars and by being located in-theater, affords the shortest sensor to shooter connectivity. P3I Improvements will upgrade JTAGS to a new Block 2 configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, and will improve warning tactical parameters and timeliness. JTAGS Block 2 P3I is on contract for a two-Phase development effort. Phase 1 deshelters five systems, adds SBIRS Geosynchronous (GEO) scanner capability (FY 2012-15) and updates hardware/software/communication systems. Phase 2 activities include stereo SBIRS GEO starrer sensor data and Net Centric capabilities (FY 2016-19). JROC-Memos 197-12 and 113-13 directs fielding of JTAGS P3I Block 2 Phase 1 by FY15 and Phase 2 by FY 2017.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Execute Block 1 Upgrades	0.200	0.200	-
Articles:	-	-	-
Description: Funding is to be provided for the following effort			
FY 2013 Accomplishments: Information Assurance (IA) Testing and Software Upgrades			
FY 2014 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0208053A / Joint Tactical Ground System	Project (Number/Name) 635 / Joint Tact Grd Station-P3I(MIP)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Information Assurance (IA) Testing and Software Upgrades			
Title: JTAGS Test and Evaluation Support	0.885	0.898	1.743
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2013 Accomplishments: JTAGS Block 1 and Block 2 Phase 1 Testing			
FY 2014 Plans: JTAGS Block 2 Phase 1 Test			
FY 2015 Plans: JTAGS Block 2 Phase 1 and Phase 2 Test			
Title: JTAGS P3I Block 2 Phase 1 Development (Deshelterization; Hardware/Software Upgrades).	28.102	6.006	8.466
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2013 Accomplishments: Continue P3I Phase 1 Development			
FY 2014 Plans: Continue P3I Phase 1 Development			
FY 2015 Plans: Complete P3I Phase 1 Development			
Accomplishments/Planned Programs Subtotals	29.187	7.104	10.209

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2015</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u>	<u>Total Cost</u>
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	
• SSN BZ8401: SSN BZ8401, Joint Tactical Ground Station (JTAGS)	2.676	9.899	5.286	-	5.286	3.939	8.491	-	5.480	Continuing	Continuing
Remarks											

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0208053A / <i>Joint Tactical Ground System</i>	Project (Number/Name) 635 / <i>Joint Tact Grd Station-P3I(MIP)</i>

D. Acquisition Strategy

Under this program element, critical improvements will be developed making maximum use of Non-Developmental Items (NDI)/Commercial Off-The-Shelf (COTS) components. After design and integration, the system will be subject to thorough developmental and validation/verification testing to verify performance, operational effectiveness and suitability. P3I Improvements will upgrade JTAGS to a new Block 2 configuration for operation with the next generation of Space Based Infrared System (SBIRS) satellites, and will improve warning tactical parameters and timeliness. JTAGS Block 2 P3I is on contract for a two-Phase development effort. Phase 1 deshelers five systems, adds SBIRS Geosynchronous (GEO) scanner capability (FY 2012-15) and updates hardware/software/communication systems. Phase 2 activities include stereo SBIRS GEO starer sensor data and Net Centric capabilities (FY 2016-19). JROC-Memos 197-12 and 113-13 directs fielding of JTAGS P3I Block 2 Phase 1 by FY15 and Phase 2 by FY 2017.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0208053A / Joint Tactical Ground System				635 / Joint Tact Grd Station-P31(MIP)							
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Program Management	Various	various : various	47.347	3.449		3.279		2.599		-		2.599	Continuing	Continuing	Continuing
Subtotal			47.347	3.449		3.279		2.599		-		2.599	-	-	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JTAGS Block 1 Engineering Services Hardware/Software	SS/CPFF	Northrop Grumman : Colorado Springs, CO/Various	39.482	0.200		0.200		-		-		-	Continuing	Continuing	Continuing
P31 Phase 1 Development	SS/CPIF	Northrop Grumman : Colorado Springs, CO/Various	18.038	22.232		0.627		4.598		-		4.598	Continuing	Continuing	Continuing
P31 Phase 2 Development SSCPIF	SS/CPIF	Northrop Grumman : Colorado Springs, CO/Various	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
Government Furnished Equipment	TBD	Various : Various	1.510	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			59.030	22.432		0.827		4.598		-		4.598	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	Various	various : various	25.245	2.421		2.100		1.269		-		1.269	Continuing	Continuing	Continuing
Subtotal			25.245	2.421		2.100		1.269		-		1.269	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0208053A / Joint Tactical Ground System	Project (Number/Name) 635 / Joint Tact Grd Station-P3I(MIP)
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Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support (ATEC/JITC/ETC)	Various	various : various	6.177	0.885		0.898		1.743		-		1.743	Continuing	Continuing	Continuing
Subtotal			6.177	0.885		0.898		1.743		-		1.743	-	-	-

Remarks
N/A-Not Applicable

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	137.799	29.187	7.104	10.209	-	10.209	-	-	-

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0208053A / <i>Joint Tactical Ground System</i>	Project (Number/Name) 635 / <i>Joint Tact Grd Station-P3I(MIP)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
P3I JTAGS Block 2	3	2012	3	2019
P3I H/W & S/W Block 2 Phase 1 Deshelterization and Geosynchronous (GEO) Scanner	4	2012	3	2015
P3I GEO Starer and Net Centric Upgrade (P3I Block 2 Phase 2 Upgrade)	1	2016	3	2019
Future Sensor Integration and Technology Refresh	2	2019	4	2019

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army I BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0208058A I Joint High Speed Vessel (JHSV)
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	0.032	-	-	-	-	-	-	-	-	Continuing	Continuing
JH1: JOINT HIGH SPEED VESSEL MANUFACTURING TECHNOLOGY	-	0.032	-	-	-	-	-	-	-	-	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Joint High Speed Vessel (JHSV) program is a merger of the Army's Theater Support Vessel (TSV) program and the Marine Corps/Navy High Speed intra-theater surface Connector (HSC) program into a joint (multi-service) High Speed Vessel program.

The JHSV program takes advantage of inherent commonality hull forms to create a more flexible asset for the Department of Defense and leverage the Navy's core competency in ship acquisition. The JHSV program will provide high speed intra-theater surface connector capability to rapidly deploy troops and equipment together and then immediately transition to execute, even in the absence of developed infrastructure, and conduct deployment and sustainment activities in support of multiple simultaneous, distributed, decentralized battles and campaigns. The primary missions include: support to Theater Security Cooperation Program (TSCP) and Global War on Terrorism (GWOT), littoral maneuver, and seabasing support. Department of Army (DA) and Department of Navy (DoN) will maintain separate and distinct funding streams to support this joint program. DA will resource to the critical Army requirement set validated for the joint Initial Capabilities Document (ICD) for High Speed Intra-theater Surface Connector (HSC) and the Capability Development Document (CDD) for JHSV. DA and DoN will focus on the development of common capabilities, each Department will source their unique developmental costs for unique service capabilities that cannot be incorporated into a combined solution set. FY10/11 funding will procure for the Army Integrated Logistics Support (ILS)/Integrated Electronic Technical Manuals.(IETMs).

B. Program Change Summary (\$ in Millions)

	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>
Previous President's Budget	0.035	-	-	-	-
Current President's Budget	0.032	-	-	-	-
Total Adjustments	-0.003	-	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-0.003	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0208058A / Joint High Speed Vessel (JHSV)				Project (Number/Name) JH1 / JOINT HIGH SPEED VESSEL MANUFACTURING TECHNOLOGY			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
JH1: JOINT HIGH SPEED VESSEL MANUFACTURING TECHNOLOGY	-	0.032	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Per the Memorandum of Agreement signed 2 May 2011, "The Army funding contained in the Program Objective Memorandum FY13-17 will be transferred to the Navy via a budget based transfer from the Army to the Navy."

A. Mission Description and Budget Item Justification

The Joint High Speed Vessel (JHSV) program is a merger of the Army's Theater Support Vessel (TSV) program and the Marine Corps/Navy High Speed intra-theater surface Connector (HSC) program into a joint (multi-service) High Speed Vessel program. The JHSV program takes advantage of inherent commonality hull forms to create a more flexible asset for the Department of Defense and leverage the Navy's core competency in ship acquisition. The JHSV program will provide high speed intra-theater surface connector capability to rapidly deploy troops and equipment together and then immediately transition to execute, even in the absence of developed infrastructure, and conduct deployment and sustainment activities in support of multiple simultaneous, distributed, decentralized battles and campaigns. The primary missions include: support to Theater Security Cooperation Program (TSCP) and Overseas Contingency Operations (OCO), littoral maneuver, and seabasing support. Department of Army (DA) and Department of Navy (DoN) will maintain separate and distinct funding streams to support this joint program. DA will resource to the critical Army requirement set validated for the joint Initial Capabilities Document (ICD) for High Speed Intra-theater Surface Connector (HSC) and the Capability Development Document (CDD) for JHSV. DA and DoN will focus on the development of common capabilities, each Department will source their unique developmental costs for unique service capabilities that cannot be incorporated into a combined solution set. FY12 funding will allow the Army to develop and design Army-unique Command, Control, Communications, Computers and Intelligence (C4I) and Anti-Terrorist/Force Protection Capabilities in support of the Army JHSV concept of operations.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: JHSV PROGRAM SUPPORT	0.032	-	-
Articles:	-	-	-
Description: Funding is provided for program support			
FY 2013 Accomplishments: Program Support			
Accomplishments/Planned Programs Subtotals	0.032	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0208058A / <i>Joint High Speed Vessel (JHSV)</i>	Project (Number/Name) JH1 / <i>JOINT HIGH SPEED VESSEL MANUFACTURING TECHNOLOGY</i>

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

N/A

Remarks

D. Acquisition Strategy

The JHSV program will combine the two separate programs (Theater Support Vessel (TSV) - Army and High Speed Connector (HSC) - Navy) and take advantage of inherent commonality of hull forms to create a more flexible asset for the Department of Defense. Based on the efforts accomplished and data collected to date by the two services, it appears that a hardware solution will incorporate the evolutionary development of commercial based high speed vessel technology employing integrated military unique capabilities/adaptations. The JHSV would be acquired competitively and production would be based in the United States. The Joint High Speed Vessel (JHSV) program's updated Acquisition Strategy is currently under development. The JHSV program Milestone A Defense Acquisition Board (DAB) was in April 2006. Milestone B occurred November 2008.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014				
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)								
2040 / 7				PE 0208058A / Joint High Speed Vessel (JHSV)				JH1 / JOINT HIGH SPEED VESSEL MANUFACTURING TECHNOLOGY								
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Program Management Support	Various	PM Force Projection, TACOM, : Warren, MI	7.094	0.032		-		-		-		-	Continuing	Continuing	Continuing	
SBIR/STTR	Various	PM Force Projection, TACOM, : Warren, MI	0.086	-		-		-		-		-	Continuing	Continuing	Continuing	
Subtotal			7.180	0.032		-		-		-		-	-	-	-	
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Acquisition/Documentation Development	Various	PEO Ships : Washington DC	9.047	-		-		-		-		-	Continuing	Continuing	Continuing	
Subtotal			9.047	-		-		-		-		-	-	-	-	
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Integrated Logistics Support (ILS)/Integrated Electronic Technical Manuals (IETMs)	Various	NSWCCD : Norfolk, VA	4.138	-		-		-		-		-	Continuing	Continuing	Continuing	
Subtotal			4.138	-		-		-		-		-	-	-	-	
Project Cost Totals			20.365	0.032		-		-		-		-	-	-	-	
Remarks																

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0301359A / <i>SPECIAL ARMY PROGRAM</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	-	-	-	-	-	-	-	-	-	-	-
000: <i>SPECIAL ARMY PROGRAM</i>	-	-	-	-	-	-	-	-	-	-	-	-

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This program is reported in accordance with the Title 10, United States Code, Section 119(a)(1) in the Special Access Program Annual Report to Congress.

B. Program Change Summary (\$ in Millions)

	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	-	-	-
Total Adjustments	-	-	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0301359A / <i>SPECIAL ARMY PROGRAM</i>	Project (Number/Name) 000 / <i>SPECIAL ARMY PROGRAM</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
000: <i>SPECIAL ARMY PROGRAM</i>	-	-	-	-	-	-	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Not Applicable

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

N/A

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

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303028A / <i>Security and Intelligence Activities</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	6.778	7.596	12.525	-	12.525	12.459	12.059	12.197	12.360	Continuing	Continuing
H13: <i>Information Dominance Center (IDC) - Tiara</i>	-	6.778	7.596	12.525	-	12.525	12.459	12.059	12.197	12.360	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

The increase in RDTE funding in FY15 is in accordance with the approved phased growth plan to rapidly equip Army cyber forces.

A. Mission Description and Budget Item Justification

INSCOM's RDTE program provides the Army with low-density, high-demand, extremely advanced offensive cyberspace technologies designed to degrade, deny, disrupt, or destroy adversary C4I and shape the operational warfighting environment in order to create conditions favorable to the application of other elements of national power.

Justification: INSCOM conducts RDTE of offensive Cyberspace technologies in direct support of the full range of missions called for in the National Defense Strategy, Comprehensive National Cyber-Security Initiative, National Security Strategy, National Defense Guidance, NSPD-38, NSPD-54 and HSPD-23.

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	7.591	7.600	7.740	-	7.740
Current President's Budget	6.778	7.596	12.525	-	12.525
Total Adjustments	-0.813	-0.004	4.785	-	4.785
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	4.785	-	4.785
• Other Adjustments 1	-0.813	-0.004	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0303028A / Security and Intelligence Activities				Project (Number/Name) H13 / Information Dominance Center (IDC) - Tiara			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
H13: Information Dominance Center (IDC) - Tiara	-	6.778	7.596	12.525	-	12.525	12.459	12.059	12.197	12.360	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

INSCOM's RDTE program provides the Army with low-density, high-demand, extremely advanced offensive cyberspace technologies designed to degrade, deny, disrupt, or destroy adversary C4I and shape the operational warfighting environment in order to create conditions favorable to the application of other elements of national power.

Justification: INSCOM conducts RDTE of offensive Cyberspace technologies in direct support of the full range of missions called for in the National Defense Strategy, Comprehensive National Cyber-Security Initiative, National Security Strategy, National Defense Guidance, NSPD-38, NSPD-54 and HSPD-23.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Cyberspace technologies	6.778	7.596	12.525
Articles:	-	-	-
Description: INSCOM's RDTE program provides the Army with low-density, high-demand, extremely advanced offensive cyberspace technologies designed to degrade, deny, disrupt, or destroy adversary C4I and shape the operational warfighting environment in order to create conditions favorable to the application of other elements of national power.			
FY 2013 Accomplishments: Utilized to support cyberspace technologies designed to degrade, deny, disrupt, or destroy adversary C4I and shape the operational warfighting environment in order to create conditions favorable to the application of other elements of national power. Supported the conduct of offensive Cyberspace technologies in direct support of the full range of missions called for in the National Defense Strategy, Comprehensive National Cyber-Security Initiative, National Security Strategy, National Defense Guidance, NSPD-38, NSPD-54 and HSPD-23.			
FY 2014 Plans: Utilize to support cyberspace technologies designe to degrade, deny, disrupt, or destroy adversary C4I and shape the operational warfighting environment in order to create conditions favorable to the application of other elements of national power. Supports			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303028A / <i>Security and Intelligence Activities</i>	Project (Number/Name) H13 / <i>Information Dominance Center (IDC) - Tiara</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
the conduct of offensive Cyberspace technologies in direct support of the full range of missions called for in the National Defense Strategy, Comprehensive National Cyber-Security Initiative, National <i>FY 2015 Plans:</i> Will utilize to support cyberspace technologies designed to degrade, deny, disrupt, or destroy adversary C4I and shape the operational warfighting environment in order to create conditions favorable to the application of other elements of national power. Will support the conduct of offensive Cyberspace technologies in direct support of the full range of missions called for in the National Defense Strategy, Comprehensive National Cyber-Security Initiative, National Security Strategy, National Defense Guidance, NSPD-38, NSPD-54 and HSPD-23.			
Accomplishments/Planned Programs Subtotals	6.778	7.596	12.525

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

N/A

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0303028A / Security and Intelligence Activities				Project (Number/Name) H13 / Information Dominance Center (IDC) - Tiara							
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Mobile Objects/ PHAEDRUS	Various	TBD : TBD	20.111	6.778		7.596		12.525		-		12.525	Continuing	Continuing	Continuing
Subtotal			20.111	6.778		7.596		12.525		-		12.525	-	-	-
			Prior Years	FY 2013	FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals			20.111	6.778		7.596		12.525		-		12.525	-	-	-

Remarks

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0303140A / Information Systems Security Program
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	14.314	9.351	14.175	-	14.175	19.054	19.318	20.811	19.057	Continuing	Continuing
491: Information Assurance Development	-	7.547	5.110	7.201	-	7.201	9.619	9.912	10.795	8.809	Continuing	Continuing
501: Army Key Mgt System	-	6.767	1.305	1.184	-	1.184	2.303	2.154	2.466	-	-	16.179
DV4: Key Management Infrastructure (KMI)	-	-	1.501	2.164	-	2.164	2.364	2.169	2.072	3.333	Continuing	Continuing
DV5: Crypto Modernization (Crypto Mod)	-	-	1.435	3.626	-	3.626	4.768	5.083	5.478	6.915	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY15 the following adjustments were made:

Adjustment 1: DV4 Key Management Infrastructure was decreased \$.489 Million while DV5 Crypto Modernization was increased \$.852 Million, for a net increase of \$0.363 Million.

Adjustment 2: Army Key MGT System funding was reduced by \$1.227 Million.

Adjustment 3: Information Assurance funding was reduced by \$2.443 Million.

A. Mission Description and Budget Item Justification

Information Assurance Development supports the implementation of the National Security Agency (NSA) developed Communications Security (COMSEC) technologies into the Army by providing COMSEC system capabilities through encryption, trusted software or standard operating procedures, and integrating these mechanisms into specific systems in support of securing the National Network Enterprise. This entails architecture studies, system integration, testing, certification, and accreditation of COMSEC systems and equipment. COMSEC technology ensures total signal and data security for all Army information systems to include any operational enhancement and specialized Army configurations. The program also assesses, develops, and integrates COMSEC tools (hardware and software) which provide protection for fixed infrastructure posts, camp or station networks as well as tactical networks. The cited work is consistent with Strategic Planning Guidance and the Army Modernization Strategy.

Information Assurance Development funding supports the technical assessment and specifications documentation of cryptographic, key management and Information Assurance (IA) technologies developed under the direction of the National Security Agency (NSA), the Defense Information Systems Agency (DISA), Joint Services,

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>
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and commercial developers to secure National Security Systems (NSS) and National Security Information (NSI). Technical evaluations assess the security, operational effectiveness and network interoperability of advanced concept technologies to identify fundamental building blocks for Army IA solutions.

The Army Key Management System (AKMS) is the Army's implementation of the National Security Agency's (NSA) Electronic Key Management System (EKMS) program automating the functions of Communications Security (COMSEC) key management, control, and distribution, thereby limiting adversarial access to, and reducing the vulnerability of, Army Command, Control, Communications, Computers, Intelligence (C4I) systems. NSA's legacy EKMS infrastructure began its transition to the Key Management Infrastructure (KMI) in FY2012. The transition is set to be completed by the EKMS sunset date of December 2017 and will require a minimum of 528 Management Client Nodes (MGCs) to transition the existing Army COMSEC accounts from Local COMSEC Management System (LCMS) to KMI.

Key Management Infrastructure (KMI) provides an integrated, operational environment that will bring essential key management personnel and functions in-band. KMI achieves an over the network key (OTNK) management solution to support emerging cryptographically modernized systems. The KMI client nodes are the Army's subset of the National Security Agency's (NSA's) KMI Program supporting DoD Global Information Grid (GIG) Net Centric and Crypto Modernization Initiatives and supports emerging requirements transitioned from the Army Key Management System (AKMS). The Mission Planning/Mission Support System (MP/MSS) Interface for KMI will create a secure and highly automated interface to enable transparent provisioning of KMI products. The interface shall facilitate transparent communications between MP/MSS and KMI to achieve integration by bridging the gap between provisioning services and the communications net plan of the Warfighter.

The Crypto Modernization program supports the implementation of the National Security Agency (NSA) developed Communications Security (COMSEC) technologies into the Army by providing COMSEC system capabilities through encryption, trusted software or standard operating procedures, and integrating these mechanisms into specified systems in support of securing the National Network Enterprise in as transparent a manner as possible.

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	15.961	9.357	17.482	-	17.482
Current President's Budget	14.314	9.351	14.175	-	14.175
Total Adjustments	-1.647	-0.006	-3.307	-	-3.307
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-0.833	-0.003	0.363	-	0.363
• Other Adjustments 2	-0.814	-0.001	-1.227	-	-1.227
• Other Adjustments 3	-	-0.002	-2.443	-	-2.443

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) 491 / <i>Information Assurance Development</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
<i>491: Information Assurance Development</i>	-	7.547	5.110	7.201	-	7.201	9.619	9.912	10.795	8.809	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note
PE 0303140A, project 491 includes funding for the Army CIO/G6 and Project Director (PD) COMSEC.

A. Mission Description and Budget Item Justification

This program supports the implementation of the National Security Agency (NSA) developed Communications Security (COMSEC) technologies into the Army by providing COMSEC system capabilities through encryption, trusted software or standard operating procedures, and integrating these mechanisms into specified systems in support of securing the National Network Enterprise in as transparent a manner as possible.

This entails architecture studies, system integration and testing, installation kits, and certification and accreditation of Automation Information Systems. The program assesses, develops and integrates Information Assurance (IA)/COMSEC tools (hardware and software) which provide protection for fixed infrastructure post, camp and station networks as well as efforts on tactical networks. The cited work is consistent with Strategic Planning Guidance and the Army Modernization and Strategy Plan.

Funding supports the technical assessment and specifications documentation of cryptographic, key management and IA technologies developed under the direction of the NSA, the Defense Information Systems Agency (DISA), Joint Services, and commercial developers to secure National Security Systems (NSS) and National Security Information (NSI). Technical evaluations assess the security, operational effectiveness and network interoperability of advanced concept technologies to identify fundamental building blocks for Army IA solutions. (CIO/G6)

Develop and publish the strategy to identify and manage the insertion of new security capabilities to bridge operational gaps, providing timely security and performance improvements to the Army's network through the performance of interoperability and standards testing, conducting IA System of System Network Vulnerability Assessments IA SoS NVA) of Army Capability Sets, and develops and integrates IA/COMSEC capabilities to provide protections for fixed infrastructure post, camp and station networks. Develop Army migration strategies of COMSEC equipment to ensure fully IA-compliant solutions that meet the objective for LandWarNet (LWN) 2020 and beyond. (CIO/G6)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Assessing emerging COMSEC hardware and software systems and products	0.835	-	0.112
Articles:	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) 491 / <i>Information Assurance Development</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>Description: This program researches, assesses, tests and plans for cryptographic and information assurance technology insertions within the existing and future network infrastructure. It provides the basis for adjusting COMSEC capabilities and policies to reflect the latest technologies. Supports risk mitigation of IA networked vulnerabilities in end-to-end network operations and common operating environment.</p> <p>FY 2013 Accomplishments: This program researches new cryptographic, information assurance technologies, perform operational assessments, concept exploration and validation to develop strategies and policies capitalizing on and leveraging emerging cryptographic technologies. Continuing to provide information, knowledge sharing and new equipment capabilities, limitations, and impacts on the Army network to assist in bridging the gap between the tactical edge and the Army Enterprise Network. Test proof of concept devices and provide infrastructure support to facilitate information assurance technology transition. Continue to provide guidance for the adjustment of COMSEC programs and ensure COMSEC policies remains in synchronization with the latest COMSEC technologies.</p> <p>FY 2015 Plans: This program researches new cryptographic, information assurance technologies, perform operational assessments, concept exploration and validation to develop strategies and policies capitalizing on and leveraging emerging Cryptographic technologies. Continuing to provide information, knowledge sharing and new equipment capabilities, limitations, and impacts on the Army network to assist in bridging the gap between the tactical edge and the Army Enterprise Network. Test proof of concept devices and provide infrastructure support to facilitate information assurance technology transition. Continue to provide guidance for the adjustment of COMSEC programs and ensure COMSEC policies remains in synchronization with the latest COMSEC technologies.</p>			
<p>Title: Cryptographic Systems Test and Evaluation</p> <p align="right">Articles:</p> <p>Description: This program supports the Army Cryptographic Modernization Transformational Initiative. This is accomplished by providing test and evaluation capabilities to the COMSEC community in order to assess emerging technologies before being released and approved for Army use; testing can be performed on hardware, software, or network systems.</p> <p>FY 2013 Accomplishments: The program will continue to test and evaluate advanced prototypes and cryptographic devices to confirm capability and interoperability on Army networks and systems as well as identifying risk areas for compliance with COMSEC regulations and procedures. Continuing to evaluate performance of Cryptographic Modernization (CM) compliant devices, including the initial Suite B Internet Protocol Security (IPSec) devices built based on commercial standards. This is the first step in the migration to</p>	2.205 -	1.914 -	- -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) 491 / <i>Information Assurance Development</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<p>NSA approved COTS devices for Secret and below information in place of Government Off-The-Shelf (GOTS) devices. Started evaluation of Secure Smartphones based on COTS platform for Mobile secure use. Evaluating KMI CI-2, Spiral 2 initial release and migration of initial HAIPE 4.0 compliant crypto devices to KMI based key delivery. Development plan for delivery of NSA produced keys for COTS devices. Complete evaluation of the performance of initial EKMS / AKMS to KMI transition strategies. These efforts will support network operations from end-to-end throughout the force and the Common Operating Environment (COE) thus mitigating Information Assurance (IA) vulnerabilities to the national network enterprise.</p> <p>FY 2014 Plans: The program tests and evaluates systems to confirm capability and interoperability on Army networks and tactical systems as well as identifying risk areas for compliance with COMSEC regulations and procedures. The program tests and evaluates Crypto Systems compliant devices, Suite B IPsec devices built on commercial standards, Cryptographic High Value Product (CHVP), Commercial Solutions for Classified (CSfC) Standards, and new software releases to HAIPE 4.X devices in accordance with AR 700-142 Rapid Action Revision dated October 16, 2008. Develops interfaces and provides ways to insert Data At Rest (DAR) and Data In Transit (DIT) technology within the existing and future network infrastructure. Evaluates performance of technologies and provide direction on where technology will converge to insure the lowest impact on performance while providing the greatest protection from loss of sensitive data.</p>				
<p>Title: Research and insertion of emerging Cryptographic and IA technologies, operational value, and performance improvement to shape policies and guidance (CIO/G6)</p> <p align="right">Articles:</p> <p>Description: This program provides oversight and guidance for technical research and evaluation of Cryptographic and Key Management capabilities for IA compliance. This effort gained IT efficiencies and improved the performance on the Network by leveraging standardized COMSEC capabilities that are interoperable and supportable in Army, Joint and coalition networks/systems. Army Collaborated and participated in Joint and Army Capability Technology Demonstrations to improve, define, develop and publish IA standards for new/modernized technology to support the LWN 2020 and Beyond. Assessed risk mitigation of IA network vulnerabilities in end-to-end Army network operations and Common Operating Environment.</p> <p>FY 2013 Accomplishments: This program researches new and emerging Cryptographic and IA technologies to bridge the operational gaps to enable secure communications between the tactical edge, the Army Enterprise Network and the DoD Joint Information Environment (JIE). Review operational needs, operation assessments, identify fundamental building blocks for IA solutions and risk reduction lab test commercial products for Army insertion. Participate in DOD pilot programs. Develop strategies and policies capitalizing on leveraging emerging cryptographic and key management technologies to enhance cyber security, prevent any undue risk and limitations and maximize performance to the Army networks. Effectively provide strategies, policies, and documentation to protect</p>		4.507 -	3.196 -	7.089 -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) 491 / <i>Information Assurance Development</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
information, and knowledge sharing on the LandWarNet to secure the edge. Provide guidance for the adjustment of COMSEC programs and ensure COMSEC policies remains in synchronization with the latest COMSEC technologies. (G6 OA22)			
FY 2014 Plans: This program researches new and emerging Cryptographic and IA technologies to bridge the operational gaps to enable secure communications between the tactical edge, the Army Enterprise Network and the DoD Joint Information Environment (JIE). Review operational needs, operation assessments, identify fundamental building blocks for IA solutions and risk reduction lab test commercial products for Army insertion. Participate in DOD pilot programs. Develop strategies and policies capitalizing on leveraging emerging cryptographic and key management technologies to enhance cyber security, prevent any undue risk and limitations and maximize performance to the Army networks. Effectively provide strategies, policies, and documentation to protect information, and knowledge sharing on the LandWarNet to secure the edge. Provide guidance for the adjustment of COMSEC programs and ensure COMSEC policies remains in synchronization with the latest COMSEC technologies. (G6 OA22)			
FY 2015 Plans: The COMSEC Modernization effort determines the maturity and viability of Cryptographic and Information Assurance (IA) technologies to ensure resolution of key interoperability issues prior to implementation while increasing operational availability and more rapid integration, document their operational value and provide a more secure network resulting in delivery of performance based standards consistent with the COE and the DoD Joint Information Environment (JIE). Review operational needs, operation assessments, identify fundamental building blocks for IA solutions and perform risk reduction lab tests of commercial products for Army insertion. Exercise oversight and evaluation aimed at improving process and technical solutions before making investment strategy decisions aimed at reducing or eliminating duplication. Participate in operational assessment and technology documentation of NSA, DoD, Joint Staff and Service led Joint Capability Technology Demonstrations (JCTD) aligned to documented Army and Service capability gaps for National Security Systems. Develop strategies and policies that leverage emerging cryptographic and key management tools and services. (CIO/G6)			
Accomplishments/Planned Programs Subtotals	7.547	5.110	7.201

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>			<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• DV5: <i>Cryptographic Systems RDTE</i>	-	1.435	3.626	-	3.626	4.768	5.083	5.478	6.915	Continuing	Continuing
• TA0600: <i>Information System Security Program - ISSP</i>	37.139	13.245	2.113	-	2.113	0.204	0.111	-	0.003	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) 491 / <i>Information Assurance Development</i>

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

Line Item	FY 2013	FY 2014	FY 2015	FY 2015	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	Cost To	
			Base	OCO	Total					Complete	Total Cost
• B96002: <i>Cryptographic Systems OPA2</i>	-	4.334	18.151	-	18.151	19.567	21.616	20.476	20.576	Continuing	Continuing
• BS9716: <i>NON PEO-SPARES</i>	-	2.093	3.521	-	3.521	2.551	2.597	2.680	3.225	Continuing	Continuing

Remarks

0303140A DV5 - Cryptographic System - RDTE funds
 TA0600 - Information System Security Program - OPA2 funds
 B96002 - Cryptographic Systems - OPA2 funds
 BS9716 - NON PEO-SPARES - OPA4 funds

D. Acquisition Strategy

The objective of this program is to integrate and validate hardware and software solutions that will secure current and objective architecture and electronic business/commerce transactions. The objective of the Cryptographic Systems program is to provide adaptive, flexible, and programmable cryptographic systems using best practices, lessons learned and programmatic management to meet the challenge of modernizing the Army's aging cryptographic systems. The network operations effort will support the network operations from end-to-end throughout the force and the Common Operating Environment (COE) thus mitigating Information Assurance (IA) networked vulnerabilities to National information security systems.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0303140A / Information Systems Security Program				Project (Number/Name) 491 / Information Assurance Development							
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering	C/CPFF	CECOM RDEC : CECOM RDEC APG, MD	73.320	0.821		0.842		0.112		-		0.112	Continuing	Continuing	Continuing
Information Assurance System Engineering Support	C/FFP	DSCI Consulting : APG, MD	6.396	0.485		0.225		-		-		-	-	7.106	-
Engineering Support	C/CPFF	CACI : APG, MD	3.600	0.915		0.503		-		-		-	Continuing	Continuing	Continuing
Engineering Support	C/CPFF	Booz Allen Hamilton : APG, MD	2.730	0.334		0.344		-		-		-	-	3.408	-
Engineering Support	C/FP	CSC : APG, MD	16.448	-		-		-		-		-	-	16.448	-
Engineering Support (G6/OA22)	C/FP	CACI : APG, MD	0.000	1.513		1.219		2.647	Mar 2014	-		2.647	Continuing	Continuing	Continuing
System Engineering (G6/OA22)	SS/LH	CECOM RDEC : APG, MD	0.000	-		-		1.673		-		1.673	Continuing	Continuing	Continuing
Engineering Support (G6/OA22)	C/CPFF	Booz Allen Hamilton : APG, MD	0.000	1.530		1.277		0.951	Mar 2014	-		0.951	Continuing	Continuing	Continuing
Engineering Support (G6/OA22)	C/FFP	AASKI : Edgewood, MD	0.000	-		-		0.632		-		0.632	Continuing	Continuing	Continuing
Service (G6/OA22)	SS/LH	ARL/SLAD : White Sand Missile Range (WSMR)	0.000	1.464		0.700		1.186		-		1.186	Continuing	Continuing	Continuing
Hardware/Software Engineering	C/FFP	CECOM RDEC : APG, MD	5.224	-		-		-		-		-	Continuing	Continuing	Continuing
Information Assurance System Engineering Support	C/FFP	MITRE : McLean, VA	3.328	-		-		-		-		-	-	3.328	-
C2 Protect Common Tools	C/FFP	CECOM RDEC : APG, MD	9.899	-		-		-		-		-	-	9.899	-
Engineering Support	C/FFP	VIATECH : APG, MD	8.119	0.485		-		-		-		-	-	8.604	-
Mission Planning Mission Support System (MPMSS) Interface	C/IDIQ	NSA (SAIC) : San Diego, CA	4.500	-		-		-		-		-	-	4.500	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) 491 / <i>Information Assurance Development</i>
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Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Network Operations	C/IDIQ	TBD : TBD	1.941	-		-		-		-		-	-	1.941	-
Subtotal			135.505	7.547		5.110		7.201		-		7.201	-	-	-

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support	C/CPFF	TBD : TBD	1.598	-		-		-		-		-	-	1.598	-
Subtotal			1.598	-		-		-		-		-	-	1.598	-

Remarks
Not Applicable

	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	137.103	7.547	5.110	7.201	-	7.201	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) 491 / <i>Information Assurance Development</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
TEST & EVALUATION OF SMALL TACTICAL INE																												
CRYPTO STRATEGY (CIO/G6)																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) 491 / <i>Information Assurance Development</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
TEST & EVALUATION OF SMALL TACTICAL INE	1	2014	4	2015
CRYPTO STRATEGY (CIO/G6)	1	2014	4	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) 501 / <i>Army Key Mgt System</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
<i>501: Army Key Mgt System</i>	-	6.767	1.305	1.184	-	1.184	2.303	2.154	2.466	-	-	16.179
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Army Key Management System (AKMS) is the Army's implementation of the National Security Agency's (NSA) Electronic Key Management System (EKMS) program automating the functions of Communications Security (COMSEC) key management, control, and distribution, thereby limiting adversarial access to, and reducing the vulnerability of, Army Command, Control, Communications, Computers, Intelligence (C4I) systems.

NSA's legacy EKMS infrastructure began its transition to the Key Management Infrastructure (KMI) in FY2012. The transition is set to be completed by the EKMS sunset date of December 2017 and will require a minimum of 528 Management Client Nodes (MGCs) to transition the existing Army COMSEC accounts from Local COMSEC Management System (LCMS) to KMI.

AKMS supports the Mission Planning/Mission Support System (MP/MSS), a critical component of the transition to the Army Key Management Infrastructure (AKMI). MP/MSS creates a secure, highly automated interface enabling transparent provisioning of KMI products. MP/MSS is developed by NSA. Each service is responsible for integration efforts specific to their infrastructure requirements. Updates to the MP/MSS Interface Specification and additional capabilities for the base interface will be completed in FY2014.

The KOV 21 card, previously in production through NSA for use in the Simple Key Loader (SKL) and the Secure DTD 2000 System (SDS), is nearing the end of life due to unavailability of parts. Redesigning and developmental efforts using modern and readily available components for use in the Army's SKL devices are currently underway. The redesign of the current KOV 21 card has been dubbed the KOV 21-A and is an extension of the KOV 21 card as a technology insertion.

AKMS also supports the efforts of Over the Network Keying (OTNK) and Over the Air Rekeying (OTAR) for legacy devices including the Simple Key Loader (SKL). OTNK is a requirement in the Next Generation Load Device (NGLD) CPD and KMI CI-2 CPD. OTNK will allow KMI to extend Distribution Services to Type 1 devices over the network thus simplifying key change-over and task reorganization. OTAR is the method of updating and changing encryption keys in a two-way radio system over the radio channel. The use of OTAR drastically reduces the distribution of physical keying material and the physical process of loading cryptographic devices with key tapes. OTNK and OTAR developments are expected to begin in FY2016 and continue throughout the POM. Developing this capability in the SKL will allow the ~1.5M legacy End Crypto Units (ECUs) to be recognized on the KMI network until they can be upgraded to be KMI aware.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Mission Planning Mission Support System (MP/MSS) Interface	6.767	1.305	1.184
Articles:	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) 501 / <i>Army Key Mgt System</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>Description: The Mission Planning/Mission Support System (MP/MSS) creates a secure, highly automated interface to enable transparent provisioning of Key Management Infrastructure (KMI) products. The MP/MSS system is to be used by both the KMI system developer and MP/MSS developers to have a standard interface to electronically exchange information, enabling Warfighter Operations, achieving integration between provisioning.</p> <p>FY 2013 Accomplishments: Additional Mission Planning Mission Support System (MP/MSS) base capabilities were initiated during FY 13 to include 1) the addition of missing mission planning data fields based on the Communications-Electronics Research, Development and Engineering Center (CERDEC) evaluation of Sprint 9/Release 1, 2) the Release 1 backlog, along with other core software requirements related to security, and 3) the addition of access controls based on current login procedures (via medium assurance PKI, Login/Password, and KMI certificate).</p> <p>FY 2014 Plans: The final installment of the base capabilities for the Mission Planning/ Mission Support System (MP/MSS) will be conducted. The final result of this initiative will complete 1) the addition of missing mission planning data fields based on the CERDEC evaluation of Sprint 9/Release 1, 2) the Release 1 backlog along with other core software requirements related to security, and 3) the addition of access controls based on current login procedures via PLI, Login/Password, and KMI certificates. Additional MP/MSS capabilities will be developed in the Army Key Management Infrastructure (AKMI) program.</p> <p>FY 2015 Plans: Development of Army-Specific software MP/MSS API will begin in FY 15 and be carried out through FY 16. These installments of the MP/MSS effort are a continuing effort to the base capabilities developed in the Army Key Management System (AKMS) program and will ensure maximum use of KMI architecture by Army's legacy ECUs. This effort will commence after KMI MP/MSS software code is completed and delivered to the Army.</p>			
Accomplishments/Planned Programs Subtotals	6.767	1.305	1.184

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• BA1201: TSEC - AKMS	24.502	13.890	10.382	-	10.382	10.719	11.142	11.298	12.640	Continuing	Continuing
• B96004: Key Management Infrastructure	-	3.377	41.113	-	41.113	16.853	33.328	40.418	75.171	Continuing	Continuing
• DV4: Key Management Infrastructure	-	1.501	2.164	-	2.164	2.364	2.169	2.072	3.333	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) 501 / <i>Army Key Mgt System</i>

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks

Line Item & Title:
 BA1201: TSEC-AKMS (OPA2)
 B96004: Key Management Infrastructure (OPA2)
 DV4: Key Management Infrastructure (RDTE)

D. Acquisition Strategy

Army Key Management System (AKMS) Milestone III was conducted/ approved in FY 1999. Local COMSEC Management System (LCMS) completed fielding of software v5.1.0.5 in FY 2013 and is anticipating software v5.2EE fielding to begin in FY 2014 to all Communications Security (COMSEC) custodians in order to provide encrypted key capabilities. LCMS hardware refresh began 2QFY10. AKMS supports the transition from NSA's EKMS infrastructure to the Key Management Infrastructure (KMI).

The AKMS acquisition strategy to procure Simple Key Loaders (SKLs) was updated in an Acquisition Decision Memorandum (ADM) approved by the PEO C3T Milestone Decision Authority (MDA) 3QFY02. Science Applications International Corporation (SAIC) began SKL Post Deployment Software Support (PDSS) efforts in 1QFY09. Software upgrades are released annually. SKL is currently operating on version 8.0 with version 9.0 expected in late FY 2014. In FY 2013, an Engineering Change Proposal (ECP) was initiated to address hardware obsolescence issues that impact operational mission.

The Automated Communications Engineering Software (ACES) is currently undergoing a hardware refresh to be completed in FY 2014. ACES is currently operating on version 3.3. Continued enhancements and support of AKMS next generation software tools to meet emerging Army systems' requirements are also underway.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) 501 / <i>Army Key Mgt System</i>
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Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MP/MSS	MIPR	NSA : Linthicum, MD	0.000	2.250		0.600		-		-		-	Continuing	Continuing	Continuing
MP/MSS	C/TBD	TBD : TBD	0.000	-		-		1.184		-		1.184	Continuing	Continuing	Continuing
Subtotal			0.000	2.250		0.600		1.184		-		1.184	-	-	-

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MP/MSS	MIPR	NSA : Linthicum, MD	0.000	2.186		0.353		-		-		-	Continuing	Continuing	-
Subtotal			0.000	2.186		0.353		-		-		-	-	-	-

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MP/MSS	MIPR	NSA : Linthicum, MD	0.000	2.331		0.352		-		-		-	Continuing	Continuing	-
Subtotal			0.000	2.331		0.352		-		-		-	-	-	-

			Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	6.767	1.305	1.184	-	1.184	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) 501 / <i>Army Key Mgt System</i>

FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Mission Planning Mission Support System (MP/MSS) Interface	
SKL Over the Network Keying/Over the Air Rekeying	

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) 501 / <i>Army Key Mgt System</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Mission Planning Mission Support System (MP/MSS) Interface	1	2013	4	2015
SKL Over the Network Keying/Over the Air Rekeying	1	2016	4	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>				Project (Number/Name) DV4 / <i>Key Management Infrastructure (KMI)</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DV4: <i>Key Management Infrastructure (KMI)</i>	-	-	1.501	2.164	-	2.164	2.364	2.169	2.072	3.333	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Key management Infrastructure (KMI) (DV4) was realigned from project 491 in FY2014. KMI supports infrastructure requirements in support of Key Management.

A. Mission Description and Budget Item Justification

Key Management Infrastructure (KMI) provides an integrated, operational environment that brings essential key management personnel and functions in-band. KMI achieves an over the network keying (OTNK) solution to support emerging cryptographically modernized systems. The Army Key Management Infrastructure (AKMI) is the Army's subset of the National Security Agency's (NSA's) KMI Program supporting Department of Defense (DoD) Global Information Grid (GIG) Net Centric and Crypto Modernization Initiatives and supports emerging requirements transitioned from the Army Key Management System (AKMS).

The Mission Planning/Mission Support System (MP/MSS) for KMI creates a secure and highly automated interface to enable transparent provisioning of KMI products. The interface facilitates transparent communications between MP/MSS and KMI to achieve integration by bridging the gap between provisioning services and the communications net plan of the WarFighter. The MP/MSS Interface Specification defines the interface between the KMI Management Client Node (MGC) and the Mission Planning System operating on the Secure Internet Protocol Router Network (SIPRNET). This interface definition covers the key ordering, management, and distribution transactions that were decomposed based upon an Army Mission Planning System collaborating with KMI to fulfill mission requirements in a highly automated manner. The initial developmental efforts for MP/MSS were carried in the AKMS line through FY 2014. Continuing support relative to KMI requirements and additional capabilities for the interface are scheduled to begin in FY2015. Activities include Application Programming Interface (API) requirements that are defined in the MGC Spiral II. Major capabilities include development of mission planning data fields, access control, signature validation, Tier 3 Accounting Data Exchange, MP/MSS registration with KMI, and product request management. These interfaces are required for integration into the Army's existing Key Management Planner, Automated Communications Engineering Software/Joint-Automated Communications Electronics Operating Instruction Systems (ACES/JACS).

AKMI also supports efforts of OTNK and Over the Air Rekeying (OTAR) for emerging devices including the Simple Key Loader (SKL). OTNK is the KMI interface for providing net-centric services to the customers of KMI. OTNK is expected to allow KMI to extend Distribution Services to Type 1 devices. OTAR is the method of updating or changing encryption keys in a two-way radio system over the radio channel. The use of OTAR drastically reduces the distribution of physical keying material and the physical process of loading cryptographic devices with key tapes. OTNK and OTAR developments are expected to begin in FY2016 and continue throughout the POM.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) DV4 / <i>Key Management Infrastructure (KMI)</i>
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The KOV 21 card, previously in production through NSA for use in the Simple Key Loader (SKL) and the Secure DTD 2000 System (SDS), is nearing the end of life due to unavailability of parts. Redesigning and developmental efforts using modern and readily available components for use in the Army's SKL and NGLD devices are currently underway. The redesign of the current KOV 21 card has been dubbed the KOV 21-A and is an extension of the KOV 21 card as a technology insertion. The KOV 21-A will also address requirements codified in the NGLD CPD and the KMI CPD that were technologically unachievable with the KOV 21 card. Through insertion of the KOV-21A into a technologically enhanced SKL, NGLD Medium requirements and OTNK can be achieved to take full advantage of the KMI architecture.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
<p>Title: KOV-21-A Development</p> <p>Description: The KOV 21 card, previously in production through NSA for use in the Simple Key Loader (SKL) and the Secure DTD 2000 System (SDS), is nearing the end of life due to unavailability of parts. Redesigning and developmental efforts using modern and readily available components for use in the Army's SKL and NGLD devices are currently underway. The redesign of the current KOV 21 card has been dubbed the KOV 21-A and is an extension of the KOV 21 card as a technology insertion. The KOV 21-A will also address requirements codified in the NGLD CPD and the KMI CPD that were technologically unachievable with the KOV 21 card.</p> <p>FY 2015 Plans: Development of technology refresh to the existing KOV 21 card for use in NGLD.</p>	-	-	2.164
<p>Title: Key Management Infrastructure (KMI) Awareness</p> <p align="right">Articles:</p> <p>Description: Key Management Infrastructure Awareness initiative creates a secure, highly automated interface in providing future Over the Network Keying (OTNK) capability to legacy End Crypto Units (ECUs). This initiative will allow ECUs to receive, authenticate, and decrypt OTNK messages and increases WarFighter survivability by minimizing the need for Soldiers to travel to obtain keys.</p> <p>FY 2014 Plans: Additional Mission Planning/ Mission Support System (MP/MSS) capabilities projected to be developed include 1) registration of MP/MSS identities, 2) validations required for digital signature based on Key Management Infrastructure (KMI) and other medium assurance Public Key Infrastructure (PKI), 3) allowing the exchange of an electronic equivalent of a signed SF-153 (Hand Receipt, Destruction, Inventory, etc) and 4) integrating MP/MSS Application Program Interface (API) into the Army Mission Planner - Joint Tactical Network Environment NetOps Toolkit (JTNT).</p>	- -	1.501 -	- -
Accomplishments/Planned Programs Subtotals	-	1.501	2.164

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) DV4 / <i>Key Management Infrastructure (KMI)</i>

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

Line Item	FY 2013	FY 2014	FY 2015	FY 2015	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	Cost To	
			Base	OCO	Total					Complete	Total Cost
• B96004: <i>Key Management Infrastructure</i>	-	3.377	41.113	-	41.113	16.853	33.328	40.418	75.171	Continuing	Continuing
• BA1201: <i>TSEC - Army Key Mgt Sys (AKMS)</i>	24.502	13.890	10.382	-	10.382	10.719	11.142	11.298	12.640	Continuing	Continuing
• 501: <i>Army Key Management System (AKMS)</i>	6.767	1.305	1.184	-	1.184	2.303	2.154	2.466	-	-	16.179

Remarks

Line Item & Title:
 B96004: Key Management Infrastructure (OPA2)
 BA1201: TSEC-AKMS (OPA2)
 501: Army Key Management System (RDTE)

D. Acquisition Strategy

Army Key Management Infrastructure (AKMI) is the Army's implementation of the National Security Agency's (NSAs) Key Management Infrastructure (KMI) ACAT ID program. The initial Army Acquisition Program Baseline (APB) for its implementation of KMI was signed on 26 Jan 2012. KMI Clients purchased in FY2012 were Low Rate Initial Production (LRIP) Management Clients (MGCs). Deliveries of LRIPS began in FY 2013. KMI MGCs purchased in FY2013 were Full Rate Production (FRP) MGCs with deliveries beginning 12 months after FRP contract award which occurred in 4QFY13. RDTE efforts are underway to provide communication within the KMI architecture for legacy devices. Current sunset for Electronic Key Management System (EKMS) is scheduled for December 2017. The Next Generation Load Device (NGLD) Capability Production Document (CPD) was signed 03 September 2013 and anticipated procurements of NGLD Small and NGLD Medium devices were slated to begin in FY14 but are delayed due to the Bipartisan Budget Act decrements. Modifications to the existing Automated Communications Engineering Software (ACES) will be made to support planning requirements and key distribution for KMI.

E. Performance Metrics

N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) DV4 / <i>Key Management Infrastructure (KMI)</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
KOV-21-A Development																												
KMI Awareness																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) DV4 / <i>Key Management Infrastructure (KMI)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
KOV-21-A Development	1	2015	4	2019
KMI Awareness	1	2014	4	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>				Project (Number/Name) DV5 / <i>Crypto Modernization (Crypto Mod)</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
DV5: <i>Crypto Modernization (Crypto Mod)</i>	-	-	1.435	3.626	-	3.626	4.768	5.083	5.478	6.915	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

DV5 - The Crypto Modernization line was established in Sept 2012.

A. Mission Description and Budget Item Justification

This program supports the implementation of the National Security Agency (NSA) developed Communications Security (COMSEC) technologies into the Army by providing COMSEC system capabilities through encryption, trusted software or standard operating procedures, and integrating these mechanisms into specified systems in support of securing the National Network Enterprise in as transparent a manner as possible.

This entails architecture studies, system integration and testing, installation kits, and certification and accreditation of Automation Information Systems. The program assesses, develops and integrates emerging Information Assurance (IA)/COMSEC tools (hardware and software) which provide protection for fixed infrastructure post, camp and station networks as well as efforts on tactical networks. The cited work is consistent with Strategic Planning Guidance and the Army Modernization and Strategy Plan.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Crypto Solutions for Low Bandwidth Communications at the Tactical Edge	-	0.520	-
Articles:	-	-	-
Description: This program creates tools that can be used with current and future methodologies in order to determine what amount of cryptographic solutions can be deployed at the tactical edge. This experimentation will allow for the WarFighter to have optimized solutions tailored for their specific program requirements while also showing trade-offs between competing solutions. Examples of common analysis to be performed are comparisons in encryption implementations, network initialization overhead, comparison of emerging Commercial Solutions for Classified architectures with COMSEC architectures, development of new network security and management protocols optimized for low-bandwidth environments and impact of emerging dynamic capabilities that evade or obstruct the adversary.			
FY 2014 Plans: Develop software for use in NS-2 and/or OPNet environments to target specific comparisons in COMSEC diversity and also comparisons with Commercial Solutions for Classified architectures. Study existing network security and management protocols			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) DV5 / <i>Crypto Modernization (Crypto Mod)</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
to identify areas of improvement and propose optimizations and new protocol designs. Identify optimal placement of network discovery servers and key management infrastructure. Investigate use of single packet authorization and propose improvements that make networks and hosts less detectable				
<p>Title: VINSON/ANDVT (Advanced Narrowband Digital Voice Terminal) Cryptograph Modernization (VACM) program</p> <p align="right">Articles:</p> <p>Description: This program researches, assesses, tests, plans and works to integrate VACM products for the Army. The VACM program is a NSA mandated program established to replace legacy external cryptographic devices such as the KY-57, KY-99A, KY-58, KY-100 and CV- 3591 /KYV-5. In order to ensure the confidentiality, integrity and availability of classified communications, the cryptographic modules must be tested for interoperability and form fit to ensure a successful fielding. Each software release will require testing to insure comparability and interoperability.</p> <p>FY 2014 Plans: The program tests and evaluates developmental VACM devices to confirm capability and interoperability on Army networks and tactical systems as well as identifying risk areas for compliance with COMSEC regulations and procedures.</p> <p>FY 2015 Plans: The program will test and evaluate Low Rate Initial Production (LRIP) of VACM devices to confirm capability and interoperability on Army networks and tactical systems as well as identifying risk areas for compliance with COMSEC regulations and procedures.</p>		-	0.915	0.500
<p>Title: Cryptographic Systems Test and Evaluation</p> <p>Description: This program supports the Army Cryptographic Modernization Transformational Initiative. This is accomplished by providing test and evaluation capabilities to the COMSEC community in order to assess emerging technologies before being released and approved for Army use; testing can be performed on hardware, software, or network systems.</p> <p>FY 2015 Plans: The program tests and evaluates COMSEC devices to confirm capability and interoperability on Army networks and tactical systems as well as identifying risk areas for compliance with COMSEC regulations and procedures. The program will test and evaluate Crypto Systems compliant devices, Suite B IPsec devices built on commercial standards, Cryptographic High Value Product (CHVP), Commercial Solutions for Classified (CSfC) Standards, and new software releases to HAIPE 4.X devices in accordance with AR 700-142 Rapid Action Revision dated October 16, 2008. Tests interfaces and provides ways to insert Data At Rest (DAR) and Data In Transit (DIT) technology within the existing and future network infrastructure. Evaluates performance of technologies and provide direction on were technology will converge to insure the lowest impact on performance while providing the greatest protection from loss of sensitive data.</p>		-	-	3.126
Accomplishments/Planned Programs Subtotals		-	1.435	3.626

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) DV5 / <i>Crypto Modernization (Crypto Mod)</i>

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>			<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• 491: <i>Information Assurance Development</i>	-	5.110	7.201	-	7.201	9.619	9.912	10.795	8.809	Continuing	Continuing
• TA0600: <i>Information System Security Program - ISSP</i>	37.139	13.245	2.113	-	2.113	0.204	0.111	-	0.003	Continuing	Continuing
• B96002: <i>Cryptographic Systems (Crypto Sys)</i>	-	4.334	18.151	-	18.151	19.567	21.616	20.476	20.576	Continuing	Continuing
• BS9716: <i>NON PEO-SPARES</i>	-	2.093	3.521	-	3.521	2.551	2.597	2.680	3.225	Continuing	Continuing

Remarks

491 - Information Assurance Development - RDTE funds - funding executed by PM and CIO/G6
 TA0600 - Information System Security Program - OPA2 funds
 B96002 - Cryptographic Systems - OPA2 funds
 BS9716 - NON PEO-SPARES - OPA4 funds

D. Acquisition Strategy

The objective of this program is to integrate and validate hardware and software solutions to provide COMSEC superiority in order to protect against threats, increase battlefield survivability/lethality, and enable critical Mission Command activities. The objective of the Cryptographic Systems program is to provide adaptive, flexible, and programmable cryptographic systems using best practices, lessons learned and programmatic management to meet the challenge of modernizing the Army's aging cryptographic systems. The effort will support the network operations from end-to-end throughout the force and the Common Operating Environment (COE) thus mitigating Information Assurance (IA) networked vulnerabilities to National information security systems.

E. Performance Metrics

N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) DV5 / <i>Crypto Modernization (Crypto Mod)</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
VACM INTEROPERABILITY																												
TEST AND EVALUATION OF SMALL TACTICAL INE																												
TEST AND EVALUATION OF LEF SOFTWARE																												
TEST AND EVALUATION OF INE SOFTWARE																												
TEST AND EVALUATION OF SECURE VOICE SOFTWARE																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303140A / <i>Information Systems Security Program</i>	Project (Number/Name) DV5 / <i>Crypto Modernization (Crypto Mod)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
VACM INTEROPERABILITY	4	2013	4	2016
TEST AND EVALUATION OF SMALL TACTICAL INE	4	2013	4	2019
TEST AND EVALUATION OF LEF SOFTWARE	4	2013	4	2019
TEST AND EVALUATION OF INE SOFTWARE	4	2013	4	2019
TEST AND EVALUATION OF SECURE VOICE SOFTWARE	4	2013	4	2019

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	108.506	41.203	4.527	-	4.527	3.340	2.505	0.311	0.317	Continuing	Continuing
083: <i>Global Combat Support Sys - Army</i>	-	86.625	22.603	2.036	-	2.036	1.655	1.597	0.311	0.317	Continuing	Continuing
08A: <i>Army Enterprise System Integration Program</i>	-	21.881	18.600	2.491	-	2.491	1.685	0.908	-	-	-	45.565

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Global Combat Support System-Army (GCSS-Army) program has two components: a functional component titled GCSS-Army and a technology enabler component titled Army Enterprise Systems Integration Program (AESIP) (formerly Product Lifecycle Management Plus (PLM+)). GCSS-Army coupled with AESIP are information and communications technology investments that will provide key enabling support to the transformation of the Army into a network-centric, knowledge-based future force. The GCSS-Army approved Joint Capability Description Document (CDD) requires an enterprise approach to replace current logistics and maintenance Standard Army Management Information Systems (STAMIS). GCSS-Army will provide the Army's Sustainment Support for the warfighter with a seamless flow of timely, accurate, accessible and secure information management that gives combat forces a decisive edge. AESIP will provide the system's enterprise hub services, centralized master data management and cross-functional business intelligence/analytics. GCSS-Army will implement best business practices to streamline supply, accountability, maintenance, distribution, and reporting procedures in support of the future force transition path of the Army Campaign Plan.

B. Program Change Summary (\$ in Millions)

	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>
Previous President's Budget	120.927	41.225	5.640	-	5.640
Current President's Budget	108.506	41.203	4.527	-	4.527
Total Adjustments	-12.421	-0.022	-1.113	-	-1.113
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-8.961	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-1.113	-	-1.113
• Other Adjustments 1	-3.460	-0.022	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>				Project (Number/Name) 083 / <i>Global Combat Support Sys - Army</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
083: <i>Global Combat Support Sys - Army</i>	-	86.625	22.603	2.036	-	2.036	1.655	1.597	0.311	0.317	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

GCSS-Army is the tactical unit / installation logistics and financial system for the U.S. Army. GCSS-Army is an Enterprise Resource Planning (ERP) solution that will track supplies, spare parts and organizational equipment. It will track unit maintenance, total cost of ownership and other financial transactions related to logistics for all Army units. This modernized application will subsume outdated Standard Army Management Information Systems (STAMIS) that are not financially compliant and integrate about 40,000 local supply and logistics databases into a single, enterprise-wide authoritative system. GCSS-Army will be financially compliant and is a key component for the Army Enterprise strategy to be financially auditable by the end of FY17. When fully deployed, GCSS-Army will affect every supply room, motor pool, direct support repair shop, warehouse, DOL and property book office in the Army.

GCSS-Army will modernize automated logistics by implementing best business practices to streamline supply operations, maintenance operations, property accountability, and tactical logistics and financial management and integration procedures in support of the Future Force transition path of the Army Campaign Plan. GCSS-Army is a key component of the Federated ERP Integration solution that will optimize tactical logistics and finance domain business processes into a single federated approach. It will eliminate the need for extensive maintenance and modification of aging, diverse software systems resulting in improved and efficient change control and configuration management through implementation of an enterprise system.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: PM Operations	10.021	-	-
Articles:	-	-	-
Description: Provide functional support across a wide array of specialty areas to sustain product development and evaluation.			
FY 2013 Accomplishments: Continue to provide functional support across a wide array of specialty areas to continue product development, evaluation and begin fielding.			
Title: Production and Deployment Phase Contract Activity	73.984	22.119	-
Articles:	-	-	-
Description: Manage a myriad of Government contracts associated with work relating to acquisition, engineering, planning and integration activities supporting Global Combat Support System-Army (GCSS-Army). These contracts support an evolutionary development strategy using Systems Applications & Products (SAP) products and architecture. The current efforts support			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>	Project (Number/Name) 083 / <i>Global Combat Support Sys - Army</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>the Milestone Decision Authority's approved federated approach. It is also synchronized with the Army Enterprise Systems Integration Program (AESIP), the Logistics Modernization Program (LMP), and the General Fund Enterprise Business System (GFEBS) to enable end-to-end integration of the Army's logistical and financial Enterprise Resource Planning (ERP) programs.</p> <p>FY 2013 Accomplishments: After a Lead Site Verification Test, the program will begin fielding Wave 1 of GCSS-Army. Work will continue on the design and build phases for Release 1.2 (Wave 2). In the 1st Qtr FY 2013 the program successfully obtained FDD.</p> <p>FY 2014 Plans: Agile Development work on Release 1.2 (Wave 2) will continue with an operational assessment planned for 1Q15.</p>			
<p>Title: Government System Test and Evaluation</p> <p align="right">Articles:</p>	2.620 -	0.484 -	2.036 -
<p>Description: Plans, conducts and reports on developmental tests and assists in planning, conducting, and reporting of operational and interoperability tests, assessments, and experiments in order to provide essential information for the acquisition and fielding of warfighting systems.</p> <p>FY 2013 Accomplishments: Conducted Lead Site Verification with ATEC in 1st Qtr FY 2013.</p> <p>FY 2014 Plans: The program will continue development testing as part of the agile development process on Release 1.2 (Wave 2) work.</p> <p>FY 2015 Plans: An Operational Assessment, lead by ATEC and DOT&E, will be conducted in 1Q15 in accordance with the Program's FDD Acquisition Program Baseline requirements.</p>			
Accomplishments/Planned Programs Subtotals	86.625	22.603	2.036

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• W00800: GCSS-Army Other Procurement, Army STACOMP (OPA)	110.158	71.236	117.524	-	117.524	126.980	119.860	25.517	33.609	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>	Project (Number/Name) 083 / <i>Global Combat Support Sys - Army</i>

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2015</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• GCSS-Army Sustainment: <i>GCSS-Army Operations & Maintenance, Army (OMA)</i>	45.306	74.618	94.197	-	94.197	93.926	101.663	87.751	88.744	Continuing	Continuing

Remarks

PM GCSS-Army Other Procurement, Army (OPA) and Operations & Maintenance, Army (OMA) funding supports acquisition, deployment, and implementation followed by the associated sustainment of GCSS-Army capabilities.

D. Acquisition Strategy

GCSS-Army has an evolutionary acquisition strategy as defined in DoD Directive 5000.01 and DoD Instruction 5000.02 and will define, develop and produce/deploy an initial, militarily useful (and supportable) operational capability based upon proven technology, time-phased requirements, projected threat assessments, and demonstrated manufacturing capabilities in as short a time as possible. The system will be developed in multiple releases as functional capabilities are defined and as integration and synchronization opportunities with related systems present opportunities for subsequent releases. Release 1.2 (Wave 2) will be a viable stand alone capability that will not require subsequent releases to be operational.

GCSS-Army is being implemented in three releases to ensure program success.

Release 1.0 replaces: Standard Army Retail Supply System (SARSS) at one Direct Support Unit (DSU) in the 11th Armored Cavalry Regiment (ACR), Fort Irwin, California. An Operational Assessment (OA) was conducted on Release 1.0 and information is gathered through Continuous Evaluation.

Release 1.1 subsumes Release 1.0 and replaces the SARSS, Property Book Unit Supply Enhanced (PBUSE), Standard Army Maintenance System - Enhanced (SAMS-E) and Standard Army Maintenance System Installation Enhanced (SAMS-IE) legacy systems. Moreover, it includes: Supply (Tactical and Installation Warehouse and Materiel Management); Field-level and Installation Based Maintenance; Property Accountability (Property Book, Unit Level Supply, and Unit Basic Load Ammunition); Force Element and Defense Forces Public Security (Allows Task Organization of Personnel, Equipment and Associated Property Accountability, Maintenance and Finance Actions); Store and Forward capability; Interoperability with STAMIS systems; Tactical and Installation Finance (Cost Management, Funds Distribution and Execution, Fund Status Reporting, and General Fund Enterprise Business System (GFEBS) Data Synchronization); Hub services; and Enterprise Master Data Management. Release 1.1 provides over 80% of the required GCSS-Army capability; it subsumes Release 1.0 and replaces the SARSS, Property Book Unit Supply Enhanced (PBUSE), Standard Army Maintenance System - Enhanced (SAMS-E) and Standard Army Maintenance System Installation Enhanced (SAMS-IE) legacy systems.

Release 1.2 (Wave 2) provides enhanced capabilities such as disconnected operations, increased financial capabilities, expanded enterprise master data management and interface with the Aviation Logistics Enterprise - Platform (ALE-P) Program. Release 1.2 (Wave 2) does not by itself replace any additional Systems. Release 1.2 (Wave 2) represents the complete baseline with all required capabilities provided.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>	Project (Number/Name) 083 / <i>Global Combat Support Sys - Army</i>

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>	Project (Number/Name) 083 / <i>Global Combat Support Sys - Army System</i>
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
1. PMO Operations - PM GCSS-Army PMO Operations	Various	PM GCSS-Army : FT LEE	98.562	5.369		-		-		-		-	-	103.931	62.385
Subtotal			98.562	5.369		-		-		-		-	-	103.931	62.385

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
1. Enterprise Resource Planning (ERP) design and development	C/FPAF	Northrop Grumman Information Systems : Chester, VA	371.639	72.838		22.119		-		-		-	-	466.596	453.329
Government Developer Subject Matter Experts	IA	ASA (FM&C), CASCOC and GFEBIS : Various Locations	21.169	1.146	Nov 2013	-		-		-		-	Continuing	Continuing	19.730
Subtotal			392.808	73.984		22.119		-		-		-	-	-	473.059

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
1. PM Support - Independent Verification and Validation (IV&V)	C/T&M	CAP Gemini : 2250 Corporate Park Dr, Herndon, VA 20171	0.847	0.184		-		-		-		-	-	1.031	1.031
2. PM Support - Program Management Support Services A	C/T&M	Engility Corporation : 3750 Centerview Drive Chantilly, VA 20151	0.907	0.479		-		-		-		-	-	1.386	25.580
3. PM Support - Program Management Support Services B	C/T&M	Logistics Management	38.112	3.989		-		-		-		-	-	42.101	34.531

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014				
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)								
2040 / 7				PE 0303141A / Global Combat Support System				083 / Global Combat Support Sys - Army								
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
		Institute : Colonial Heights, VA														
Subtotal			39.866	4.652		-		-		-		-	-	44.518	61.142	
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
1. Test and Evaluation - Test and Evaluation	IA	AEC, ATEC, OTC and JITC : Various Locations	31.658	2.620		0.484		2.036		-		2.036	Continuing	Continuing	-	
Subtotal			31.658	2.620		0.484		2.036		-		2.036	-	-	-	
Project Cost Totals			562.894	86.625		22.603		2.036		-		2.036	-	-	596.586	
Remarks																

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>	Project (Number/Name) 083 / <i>Global Combat Support Sys - Army</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Release 1.1 Stabilization	2	2011	1	2013
Lead Site Verification	1	2013	1	2013
Release 1.1 Full Deployment Decision	1	2013	1	2013
Field Wave 1	1	2013	2	2016
GCSS-Army Release 1.2 (Wave 2) Plan, Analyze, Design, Build & Test	3	2011	1	2015
Release 1.2 (Wave 2) In Progress Review	1	2015	1	2015
Field Wave 2	1	2015	4	2017

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>	Project (Number/Name) 08A / <i>Army Enterprise System Integration Program</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
08A: <i>Army Enterprise System Integration Program</i>	-	21.881	18.600	2.491	-	2.491	1.685	0.908	-	-	-	45.565
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

Army Enterprise Systems Integration Program (AESIP), mission is to integrate Army business processes by providing a single source for enterprise hub services, centralized master data management, and business intelligence and analytics. AESIP is the principle GCSS-Army Business Intelligence system and will aggregate data for enterprise reporting. AESIP will support the Army's federated approach and enable the integration of end-to-end logistical and financial processes. The Army has successfully addressed concerns about the lack of integration of ERPs by leveraging AESIP core capabilities and expanding those benefits across the Army enterprise. AESIP will be an Army specific commercial off-the-shelf (COTS) web portal implementation via the NetWeaver Platform from developer Systems Applications and Products (SAP) American Group to support Army process scenarios and requirements that will provide core competencies:

- Enterprise Service Bus (Hub Services) - For a Service oriented, Single Point of Entry to connect, mediate, and control the exchange of data.
- Enterprise Business Intelligence/Business Warehouse - Aggregates data from ERP and non-ERP systems to provide flexible Enterprise level reporting.
- Enterprise Master Data Management - For a single source of authoritative data and improved workflow and business processes.

The AESIP solution establishes a framework for a fully integrated ERP centric environment that will ultimately provide Commanders Total Visibility from Factory to Battlefield thereby ensuring delivery of the right equipment to the right unit at the right time, while reducing backlogs of material on the battlefield.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: System Development and Demonstration (SDD) Phase Contract Activity	2.637	14.000	-
Articles:	-	-	-
Description: Manage a myriad of Government contracts associated with work relating to acquisition, engineering, planning and integration activities supporting production and deployment. These contracts support an evolutionary development strategy for enterprise hub services, centralized master data management and business intelligence/business warehouse applications using Systems Applications & Products (SAP) products and architecture. The current efforts support the Milestone Decision Authority federated approach. It is also synchronized with the Global Combat Support System-Army (GCSS-Army), the Logistics			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>	Project (Number/Name) 08A / <i>Army Enterprise System Integration Program</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<p>Modernization Program (LMP), and the General Fund Enterprise Business System (GFEBS) to enable end-to-end integration of the Army's logistical and financial Enterprise Resource Planning (ERP) programs.</p> <p>FY 2013 Accomplishments: Continue to manage a myriad of Small Business and Government contracts associated with work relating to acquisition, engineering, planning and integration activities supporting production and deployment. The focus of work planned for FY13 includes designing, building and testing hub services and the MM interfaces required for GCSS-Army Rel 1.2 and complete MM 3.3, 3.5 release functionality. Funding will continue to support the convergence of the ERP programs IAW the federated approach. The plan for application server hosting and enterprise disaster recovery support remains unchanged at Redstone Arsenal and ALTESS respectively.</p> <p>FY 2014 Plans: Continue to manage a myriad of Small Business and Government contracts associated with work relating to acquisition, engineering, planning and integration activities supporting production and deployment. The focus of work planned for FY14 continues designing, building and testing hub services and the MM interfaces required for GCSS-Army Rel 1.2. Funding will continue to support the convergence of the ERP programs IAW the federated approach. The plan for application server hosting and enterprise disaster recovery support remains unchanged at Redstone Arsenal and ALTESS respectively.</p>				
<p>Title: Production & Full Deployment Phases Contract Activity</p> <p align="right">Articles:</p> <p>Description: Manage a myriad of Government contracts associated with work relating to acquisition, engineering, planning and integration activities supporting Army Enterprise Systems Integration Program (AESIP). These contracts support an evolutionary development strategy using Systems Applications & Products (SAP) products and architecture. The current efforts support the Milestone Decision Authority's approved federated approach. It is also synchronized with the Global Combat Support System-Army (GCSS-Army), the Logistics Modernization Program (LMP), and the General Fund Enterprise Business System (GFEBS) to enable end-to-end integration of the Army's logistical and financial Enterprise Resource Planning (ERP) programs.</p> <p>FY 2014 Plans: Manage a myriad of Government contracts associated with work relating to acquisition, engineering, planning and integration activities supporting Army Enterprise Systems Integration Program (AESIP). These contracts support an evolutionary development strategy using Systems Applications & Products (SAP) products and architecture. The current efforts support the Milestone Decision Authority's approved federated approach. Provides synchronization between the Global Combat Support</p>		-	3.079	1.887
		-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>	Project (Number/Name) 08A / <i>Army Enterprise System Integration Program</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
System-Army (GCSS-Army), the Logistics Modernization Program (LMP), and the General Fund Enterprise Business System (GFEBs) to enable end-to-end integration of the Army's logistical and financial Enterprise Resource Planning (ERP) programs. FY 2015 Plans: Funding is required for AESIP to address system enhancement requests from users, events in the development of other systems, and critical requirements from CASCOM or LOGSA during the GCSS-Army full fielding. Additionally, funding is required to expand the AESIP Business Analytics capability across the Army that provides users access to data from ERP and non-ERP systems.				
Title: PM Operations Description: Provide functional support across a wide array of specialty areas to sustain product development. FY 2013 Accomplishments: Continue to provide functional support across a wide array of specialty areas to sustain product development.		Articles: 12.790 -	- -	- -
Title: Government System Test and Evaluation Description: Plans, conducts and reports on developmental tests and assists in planning, conducting, and reporting of operational and interoperability tests, assessments, and experiments in order to provide essential information for the acquisition and fielding of warfighting systems. FY 2013 Accomplishments: Continue ATEC and JITC testing and evaluation of Enterprise Service Bus (Hub Services) products including but not limited to Business Intelligence/Business Warehouse, Material Master Data and Equipment Master Data applications for full deployment. FY 2014 Plans: Continue developmental and operational (ATEC and JITC) testing and evaluation of AESIP Hub Services products. FY 2015 Plans: Continue developmental and operational (ATEC and JITC) testing and evaluation of AESIP Hub Services products as well as participate in GCSS-Army's 1Q15 Operational Assessment.		Articles: 0.190 -	0.956 -	0.544 -
Title: Small Business Innovative Research/Small Business Technology Transfer Programs Description: Small Business Innovative Research/Small Business Technology Transfer Programs FY 2013 Accomplishments:		Articles: 6.264 -	0.565 -	0.060 -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>	Project (Number/Name) 08A / <i>Army Enterprise System Integration Program</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Continue to transition systems integration to small business firms through Market Research to identify potential vendors and Source Selection Evaluation Boards (SSEB) to offer them fair opportunity competitions for TO Award.			
FY 2014 Plans: Continue to transition systems integration to small business firms through Market Research to identify potential vendors and Source Selection Evaluation Boards (SSEB) to offer them fair opportunity competitions for TO Award.			
FY 2015 Plans: Continue to transition systems integration to small business firms through Market Research to identify potential vendors and Source Selection Evaluation Boards (SSEB) to offer them fair opportunity competitions for TO Award.			
Accomplishments/Planned Programs Subtotals	21.881	18.600	2.491

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>			<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• Single Army Logistic Enterprise OPA: <i>AESIP Other Procurement, Army (OPA) (SSN W11001)</i>	3.011	0.700	1.076	-	1.076	3.420	2.740	2.183	1.250	Continuing	Continuing
• AESIP Sustainment: <i>AESIP Operations & Maintenance Army (OMA)</i>	19.364	19.881	37.555	-	37.555	36.503	36.800	32.490	33.075	Continuing	Continuing

Remarks

D. Acquisition Strategy

As the technical component of GCSS-Army, AESIP employs an evolutionary acquisition strategy as defined in DoD Directive 5000.1 and DoD Instruction 5000.2, and will define, develop and produce/deploy an initial operational capability based upon proven technology, time-phased requirements, projected threat assessments, and demonstrated manufacturing capabilities in as short a time as possible. The system will be developed in multiple releases then integrated and synchronized with related systems presenting opportunities for subsequent increments.

AESIP will support the Release 1.1 and 1.2 (Wave 2) schedules of GCSS-Army by providing Enterprise Service Bus (Hub Services), Enterprise Master Data Management, and Enterprise Business Intelligence/Business Warehouse capabilities. Provide support to GCSS-Army program to include various data trading partners namely; Logistics Modernization Program (LMP), General Fund Enterprise Business System (GFEBS) and Logistics Support Agency (LOGSA).

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>	Project (Number/Name) 08A / <i>Army Enterprise System Integration Program</i>

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>	Project (Number/Name) 08A / <i>Army Enterprise System Integration Program</i>
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
1. PMO Operations - PM AESIP PMO Operations	Various	PM AESIP : 5911 Kingstowne Village Pkwy, Alexandria VA 22315	20.329	5.761		-		-		-		-	-	26.090	26.090
Subtotal			20.329	5.761		-		-		-		-	-	26.090	26.090

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
1. Enterprise Resource Planning (ERP) Implementation Systems Integration	C/T&M	Computer Sciences Corporation (CSC) : 3160 Fairview Park Drive, Falls Church, VA 22042	118.445	-		-		-		-		-	-	118.445	118.445
2. Enterprise Resource Planning (ERP) Implementation - Technical Support Services	FFRDC	MITRE Corporation : 7615 Colshire Drive, McLean, VA 22102	6.820	0.359		-		-		-		-	-	7.179	7.179
3. Enterprise Resource Planning (ERP) - Government Lead Systems Integrator	IA	US Army ARDEC : Picatinny Arsenal NJ 08706	48.421	1.079		-		-		-		-	Continuing	Continuing	Continuing
4. Enterprise Resource Planning (ERP) - Technical Support Services	C/T&M	Systems Applications and Services (SAP) : 1300 Pennsylvania Ave, Washington DC 20004	12.462	0.664		3.079		-		-		-	Continuing	Continuing	Continuing
5. Enterprise Resource Planning (ERP) - ERP/SAP Technical and Management Support Services	C/T&M	iLuMina Solution Inc. : 23330 Cottonwood, California MD 20619	4.978	0.335		-		-		-		-	-	5.313	5.313

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>	Project (Number/Name) 08A / <i>Army Enterprise System Integration Program</i>
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Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
6. Enterprise Resource Planning (ERP) - Enterprise Application Services A	C/T&M	Attain, LLC : 8000 Towers Crescent Dr., Vienna VA 22182	7.996	0.935		-		-		-		-	Continuing	Continuing	Continuing
7. Enterprise Resource Planning (ERP) - Enterprise Application Services B	C/T&M	Insap Services Inc. : 12000 Lincoln Dr. Marlton, NJ 08053	0.010	0.010		-		-		-		-	Continuing	Continuing	Continuing
8. Enterprise Resource Planning (ERP) - Enterprise Application Services C	C/T&M	Oakland Consulting Group Inc : 9501 Sheridan Lanham MD 20706	8.627	3.270		-		-		-		-	Continuing	Continuing	Continuing
Enterprise Resource Planning (ERP) - Enterprise Application Services D	C/T&M	TBD : TBD	0.000	-		14.565		1.947		-		1.947	-	16.512	-
9. Enterprise Resource Planning (ERP) - Enterprise Integration Services	C/T&M	EDC Consulting LLC : 1104 Good Hope Rd SE Washington DC 20020	1.364	-		-		-		-		-	Continuing	Continuing	Continuing
10. Enterprise Resource Planning (ERP) - Infrastructure Services	C/T&M	TBD : TBD	0.050	0.050		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			209.173	6.702		17.644		1.947		-		1.947	-	-	-

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
1. PM Support - Program Management Support Services A	C/FFP	L3 Services Inc. (MPRI Division) : 1320 Braddock PL, Alexandria, 22314	6.846	0.094		-		-		-		-	-	6.940	6.940

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>	Project (Number/Name) 08A / <i>Army Enterprise System Integration Program</i>
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Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
2. PM Support - Program Management Support Services B	C/T&M	LMI Government Consulting : 2000 Corporate Ridge, McLean, VA 22102	21.324	4.884		-		-		-		-	-	26.208	26.208
3. PM Support - Program Management Support Services C	C/T&M	Science Applications Internation Corporation (SAIC) : 1710 SAIC Dr., McLean, VA 22102	3.366	3.654		-		-		-		-	-	7.020	7.020
4. PM Support - Indepent Verification and Validation (IV&V)	C/T&M	CAP Gemini : 2250 Corporate Park Dr, Herndon, VA 20171	1.508	0.596		-		-		-		-	-	2.104	2.104
Subtotal			33.044	9.228		-		-		-		-	-	42.272	42.272

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
1. Test and Evaluation - Test and Evaluation	IA	AEC, ATEC, OTC and JITC : Various Locations	2.096	0.190		0.956		0.544		-		0.544	Continuing	Continuing	Continuing
Subtotal			2.096	0.190		0.956		0.544		-		0.544	-	-	-

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		264.642	21.881		18.600		2.491		-	2.491	-	-	-

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303141A / <i>Global Combat Support System</i>	Project (Number/Name) 08A / <i>Army Enterprise System Integration Program</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Increment 1 Enterprise Service Bus (Hub Services)	4	2008	4	2017
Increment 1 Enterprise Master Data Management	4	2008	4	2017
Increment 1 - Enterprise Business Intelligence/Business Warehouse	4	2008	4	2017
MM Release 3.3	4	2012	1	2015
MM Release 3.4	1	2013	1	2014
MM Release 3.5	4	2012	4	2013
GCSS-Army Release 1.1 - Full Deployment Decision (FDD)	1	2013	1	2013
GCSS-Army Release 1.1 - Fielding	1	2013	2	2016
GCSS-Army Release 1.2 (Wave 2) Plan, Analyze, Design, Build & Test	3	2011	4	2014
GCSS-Army Release 1.2 (Wave 2) -In Progress Review	2	2014	1	2015
ACBA	4	2013	1	2015
MM 3.4	4	2013	1	2014
CVS 2.0	2	2013	2	2014
MM 3.5	4	2013	4	2014

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	14.101	18.188	11.011	-	11.011	12.131	13.724	13.683	13.883	Continuing	Continuing
253: Dscs-Dcs (Phase II)	-	5.139	5.556	4.179	-	4.179	5.287	5.375	5.494	6.160	Continuing	Continuing
456: MILSATCOM System Engineering	-	8.962	12.632	2.952	-	2.952	2.959	5.441	8.189	7.723	Continuing	Continuing
EA3: Transportable Tactical Cmd Comms (T2C2)	-	-	-	3.880	-	3.880	3.885	2.908	-	-	-	10.673

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Military Satellite Communication (MILSATCOM) systems are joint program/project efforts to satisfy ground mobile requirements for each Service, the Joint Chiefs of Staff (JCS), the National Command Authority, the combatant commanders, the Office of the Secretary of Defense, and other governmental, non-DoD users. The worldwide MILSATCOM systems are: the Super High Frequency (SHF) Defense Satellite Communications System (DSCS); the Wideband Global SATCOM (WGS); the MILSTAR Extremely High Frequency (EHF) Low Data Rate (LDR) and Medium Data Rate (MDR); the Advanced Extremely High Frequency (AEHF); and future MILSATCOM capabilities. All of these systems are required to support legacy, interim and emerging communication space architectures and Future Force requirements. The Army is responsible for materiel development, acquisition, product improvement, testing, fielding and integrated logistics support of ground satellite terminals and SATCOM control subsystems and all associated equipment used to provide range extension of Mission Command Networks and Systems. The Army also participates in the development of MILSATCOM programs, including architectures, payloads, waveforms, antennas and terminal developments to ensure US Army equities are appropriately addressed with our sister services. This includes technology assessment efforts associated with the integration of MILSATCOM components to US Army Landwarnet. This responsibility also includes maintaining the life cycle logistics support required to achieve end-to-end connectivity and interoperability, satisfying JCS network operations in support of the President, JCS, combatant commanders, Military Departments, Department of State, and other government Departments and Agencies.

This program is designated as a DoD Space Program.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303142A / <i>SATCOM Ground Environment (SPACE)</i>
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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	15.756	18.197	18.428	-	18.428
Current President's Budget	14.101	18.188	11.011	-	11.011
Total Adjustments	-1.655	-0.009	-7.417	-	-7.417
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-1.655	-0.009	-7.417	-	-7.417

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)	Project (Number/Name) 253 / Dscs-Dcs (Phase II)
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
253: Dscs-Dcs (Phase II)	-	5.139	5.556	4.179	-	4.179	5.287	5.375	5.494	6.160	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project provides funds to develop Satellite Communication (SATCOM) ground subsystem equipment and software in support of Joint Chiefs of Staff (JCS) validated Mission Command Network and Systems requirements for the worldwide Defense Enterprise Wideband SATCOM System (DEWSS). DEWSS is composed of the Super High Frequency (SHF) Defense Satellite Communications System (DSCS) and Wideband Global SATCOM (WGS) programs, which are required to support legacy, interim and emerging communication space architectures and future Force requirements. Expansion of the WGS constellation and upgrades to both DSCS and WGS are vital to support the Army's emerging power projection and rapid deployment role. DSCS and WGS provide multiple channels of tactical end-to-end connectivity and interoperability with strategic networks and national decision-makers, satisfying JCS network operations in support of the President, JCS, combatant commanders, military departments, Department of State and other government departments and agencies.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
<p>Title: Netcentric System Engineering and Analysis</p> <p style="text-align: right;">Articles:</p> <p>Description: Funding is provided for the following effort:</p> <p>FY 2013 Accomplishments: Conducted Netcentric System Engineering and Analysis</p> <p>FY 2014 Plans: Fund analysis for Netcentric System Engineering</p> <p>FY 2015 Plans: Fund analysis for Netcentric System Engineering</p>	<p>5.139</p> <p>-</p>	<p>2.014</p> <p>-</p>	<p>1.518</p> <p>-</p>
<p>Title: Jam Resistant Secure Communications (JRSC)</p> <p style="text-align: right;">Articles:</p> <p>Description: Funding is provided for the following effort:</p> <p>FY 2014 Plans:</p>	<p>-</p> <p>-</p>	<p>1.970</p> <p>-</p>	<p>-</p> <p>-</p>

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)	Project (Number/Name) 253 / Dscs-Dcs (Phase II)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Fund Jam Resistant Secure Communications (JRSC) risk mitigation.			
Title: Future analysis of Wideband SATCOM Operational Management System (WSOMS) database consolidation effort.	-	1.572	1.123
Articles:	-	-	-
Description: Funding is provided for the following effort:			
FY 2014 Plans: WSOMS database consolidation effort to evaluate existing database schemas (structure) for each independent Wideband Control subsystem. The result of the analysis will be to define a structure of a consolidated database along with a transition plan. The desired impact will be to reduce total cost of ownership for multiple subsystems in terms of recurring annual licensing costs and shorten logistics trail with associated database storage equipment.			
FY 2015 Plans: WSOMS database consolidation effort to evaluate existing database schemas (structure) for each independent Wideband Control subsystem. The result of the analysis will be to define a structure of a consolidated database along with a transition plan. The desired impact will be to reduce total cost of ownership for multiple subsystems in terms of recurring annual licensing costs and shorten logistics trail with associated database storage equipment.			
Title: Protected SATCOM Modem	-	-	1.538
Description: Funding is provided for the following effort:			
FY 2015 Plans: Fund modem pilot program to address Anti-Jam (AJ) and Anti-Scintillation (AS) for the WGS constellation.			
Accomplishments/Planned Programs Subtotals	5.139	5.556	4.179

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 24: Defense Enterprise Wideband SATCOM Systems (DEWSS) (BB8500)	151.435	57.725	118.085	-	118.085	129.187	137.606	110.383	158.005	Continuing	Continuing
Remarks											

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)	Project (Number/Name) 253 / Dscs-Dcs (Phase II)

D. Acquisition Strategy

FY15 funding finances Project Manager, Defense Communications and Army Transmission Systems (PM DCATS) netcentric systems engineering, modem risk mitigation, and DoD Information Assurance Certification Accreditation Process (DIACAP) support. Funding provides for SATCOM terminal upgrades, enhancement of baseband throughput capabilities, technology insertion and upgrades which enhance decision support capabilities, allowing for full utilization of Wideband Global SATCOM (WGS) capabilities. Both the Wideband SATCOM Operational Management System (WSOMS) and the Enterprise Wideband SATCOM Terminal System (EWSTS) Capability Production Documents (CPDs) contain Netcentric-Ready Key Performance Parameters (NR-KPPs) as required by CJCSI 6212.01C. Netcentric efforts are required to facilitate the migration from the current trunk-based communications systems to Internet Protocol (IP) based systems and to engineer, test and integrate IP based capabilities into EWSTS and WSOMS systems. Studies, risk mitigation, system integration and advanced demonstrations for netcentric baseband and policy based control will accommodate technology insertion, data sharing, remote operations, architecture efforts and use of commercial technology, thus ensuring the life of the Defense Enterprise Wideband System (DEWSS) terminal family beyond 2025 and reducing lifecycle costs and enterprise requirements on the WGS and Defense Satellite Communication System (DSCS) satellites in the future.

E. Performance Metrics

N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)	Project (Number/Name) 253 / Dscs-Dcs (Phase II)

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Netcentric System Engineering	[REDACTED]																											
Conduct System Engineering Studies/Analysis	[REDACTED]																											
Advanced Demonstrations for Baseband and Policy Based Control	[REDACTED]																											
Jam Resistant Secure Communications (JRSC)	[REDACTED]																											
Conduct Analysis of WSOMS Database Consolidation	[REDACTED]																											
WSOMS Net Migration	[REDACTED]																											
Protected SATCOM Modems	[REDACTED]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)	Project (Number/Name) 253 / Dscs-Dcs (Phase II)

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Netcentric System Engineering	1	2006	4	2019
Conduct System Engineering Studies/Analysis	1	2006	4	2019
Advanced Demonstrations for Baseband and Policy Based Control	1	2010	4	2019
Jam Resistant Secure Communications (JRSC)	1	2014	4	2014
Conduct Analysis of WSOMS Database Consolidation	1	2014	4	2015
WSOMS Net Migration	1	2016	4	2016
Protected SATCOM Modems	1	2015	4	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)				Project (Number/Name) 456 / MILSATCOM System Engineering			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
456: MILSATCOM System Engineering	-	8.962	12.632	2.952	-	2.952	2.959	5.441	8.189	7.723	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Military Satellite Communications (MILSATCOM) System Engineering (SE) provides centralized funding for US Army participation in the joint development of MILSATCOM programs. This includes engineering, technical and cost related analyses supporting architecture, payloads, network and terminal requirement and design decisions across all MILSATCOM programs.

Develop Protected Communications on the Move (PCOTM) terminals by participating in the FY14 Department of Defense Analysis of Alternatives/USAF Broad Agency Announcement (BAA) and applying the study results and leverage/transition low profile Ka/Q band antenna technology to satisfy the Army's PCOTM requirement. Provides technology maturation and risk reduction for capability insertion into Project Manager Warfighter Information Network – Tactical (PM WIN-T) program of record and insures interoperability with Joint satellite constellations.

Develop a low size, weight and power (SWaP) Ku/Ka band SATCOM antennas for Army's Wideband Global SATCOM (WGS) on the move requirement and reduce programmatic technical risk for WIN-T Program of Record (PoR) integration. Leverage tech base development efforts of multiband, low cost, low profile antennas for a lower cost capability for current and future heavy combat vehicles (M-1, Bradley).

FY15 funds support the continued systems engineering required to mature technology options that demonstrate potential based on the results of the AoA and BAA studies. These efforts have a direct impact on the ability of the WIN-T Military Wideband SATCOM, Commerical SATCOM, and Protected SATCOM on the move for WIN-T with minimal development and programmatic risk.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Protected Communications System Engineering	1.811	2.075	1.727
Articles:	-	-	-
Description: Protected Communications System Engineering			
FY 2013 Accomplishments: Protected Advanced EHF (AEHF) Communications System Engineering			
FY 2014 Plans: Protected Advanced EHF (AEHF) Communications System Engineering			
FY 2015 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)	Project (Number/Name) 456 / MILSATCOM System Engineering		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Protected Communications System Engineering				
Title: Wideband Global SATCOM (WGS) Communications System Engineering Description: Wideband Global SATCOM (WGS) Communications System Engineering FY 2013 Accomplishments: Wideband Global SATCOM (WGS) Communications System Engineering and Intelligence, Surveillance, Reconnaissance (ISR) Migration FY 2014 Plans: Wideband Global SATCOM (WGS) Communications System Engineering and Intelligence, Surveillance, Reconnaissance (ISR) Migration FY 2015 Plans: Wideband Global SATCOM (WGS) Communications System Engineering to improve Ku/Ka antenna SWAP		1.901 -	1.725 -	1.225 -
Title: Experimentation, development, testing and certification of critical SATCOM and Satellite-On-The-Move (SOTM) communication and network technologies. Description: Experimentation, development, testing and certification of critical SATCOM and SOTM communication and network technologies. FY 2013 Accomplishments: Experimentation, development, testing and certification of critical SATCOM and SOTM communication and network technologies. FY 2014 Plans: Experimentation, development, testing and certification of critical SATCOM and SOTM communication and network technologies.		1.338 -	2.553 -	- -
Title: Federal Communications Commission/ International Telecommunications Union (FCC/ITU) Satellite Communications On the Move (SOTM) Regulatory Proposals/Analyses/Modifications Description: Federal Communications Commission/ International Telecommunications Union (FCC/ITU) SOTM Regulatory Proposals/Analyses/Modifications FY 2013 Accomplishments:		0.605 -	0.600 -	- -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)	Project (Number/Name) 456 / MILSATCOM System Engineering		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Federal Communications Commission/ International Telecommunications Union (FCC/ITU) SOTM Regulatory Proposals/ Analyses/Modifications FY 2014 Plans: Federal Communications Commission/ International Telecommunications Union (FCC/ITU) SOTM Regulatory Proposals/ Analyses/Modifications				
Title: Protected Terminal COTM and Wide Area Network (WAN) Prototyping Description: Protected Wide Area Network (WAN) and Terminal Prototyping FY 2013 Accomplishments: Protected Terminal COTM and Wide Area Network (WAN) Prototyping FY 2014 Plans: Protected Terminal COTM and Wide Area Network (WAN) Prototyping		Articles: 0.425 -	1.475 -	- -
Title: Transportable Tactical Command Communications (T2C2) Description: T2C2 Development: Achieve Materiel Development Decision (MDD), Conduct Analysis of Alternatives (AoA), Preparation for Milestone C, procure Low Rate Initial Production (LRIP), conduct Initial Operational Testing and Evaluation (IOT&E), Support Full Rate Production Decision FY 2013 Accomplishments: T2C2 Development: Achieve Material Development Decision (MDD), Conduct Analysis of Alternatives (AoA), Preparation for Milestone C, Support Full Rate Production Decision FY 2014 Plans: T2C2: Preparation for Milestone C, procure Low Rate Initial Production (LRIP), conduct Initial Operational Testing and Evaluation (IOT&E), Support Full Rate Production Decision		Articles: 2.882 -	4.204 -	- -
Accomplishments/Planned Programs Subtotals		8.962	12.632	2.952
C. Other Program Funding Summary (\$ in Millions) N/A Remarks				

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)	Project (Number/Name) 456 / MILSATCOM System Engineering

D. Acquisition Strategy

This project funds advanced systems engineering, research, development, test and evaluation of new and emerging technologies to optimize terminal performance and communications control. Once the technologies are mature and deemed feasible, funding and management responsibility for implementation of the technology will transition to WIN-T and related PoRs.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)	Project (Number/Name) 456 / MILSATCOM System Engineering
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Oversight	MIPR	PM WIN T : PEO C3T	1.914	0.500		0.500		0.100		-		0.100	Continuing	Continuing	Continuing
Advanced Architecture/ Advanced Wideband System Architecture	MIPR	MIT Lincoln Labs : Lexington , MA	11.474	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			13.388	0.500		0.500		0.100		-		0.100	-	-	-

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Protected Communications and WGS Communications SE	TBD	PM WIN-T : Various	25.720	1.100		1.050		0.300		-		0.300	Continuing	Continuing	Continuing
Experimentation, development, testing & certification of SATCOM & SOTM communication & networking.	MIPR	PM WIN-T : Various	22.051	1.150		1.438		-		-		-	Continuing	Continuing	Continuing
FCC/ITU SOTM Regulatory Proposals/ Analyses/Modifications	MIPR	John Hopkins Universtiy Applied Physics Lab : Laurel, MD	1.450	0.605		0.600		-		-		-	Continuing	Continuing	Continuing
Protected COTM Tactical Reference Terminal Prototyping and Protected Wide Area Network Prototyping	TBD	PEO C3T PM WIN-T : Various	19.450	0.300		1.000		-		-		-	Continuing	Continuing	Continuing
Purchase of prototype hardware and engineering studies	C/CPFF	PEO C3T : PM WIN-T	0.000	1.164		-		-		-		-	Continuing	Continuing	Continuing
T2C2 Development Analysis of AoA activity associated with the	TBD	PEO C3T : PM WIN-T	0.000	0.400		-		-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)	Project (Number/Name) 456 / MILSATCOM System Engineering
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Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
evaluation and award of T2C2 contract															
Includes conducting market research on T2C2 candidate technologies	TBD	PEO C3T : PM WIN-T	0.000	0.100		0.250		-		-		-	-	0.350	0.100
T2C2 preparation of Milestone C Documentation	TBD	PEO C3T : PM WIN-T	0.000	-		1.694		-		-		-	-	1.694	-
Subtotal			68.671	4.819		6.032		0.300		-		0.300	-	-	-

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Engineering (In House)	MIPR	PM WIN T : Core, Matrix	24.038	1.250		1.900		1.300		-		1.300	Continuing	Continuing	Continuing
Engineering Contractors Support	C/CPFF	PM WIN-T : Contractor TBD	37.635	0.700		0.600		0.500		-		0.500	Continuing	Continuing	Continuing
System Architecture & Analysis	Various	CERDEC : PM WIN T	17.193	0.143		0.165		-		-		-	Continuing	Continuing	Continuing
T2C2 preparation for Milestone C; Request for Proposal and solcitation preparation	TBD	PEO C3T PM WIN T : Various	0.000	0.200		0.300		-		-		-	Continuing	Continuing	Continuing
Subtotal			78.866	2.293		2.965		1.800		-		1.800	-	-	-

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)	Project (Number/Name) 456 / MILSATCOM System Engineering

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
WGS/Wideband SE	1	2004	4	2019
Development, Testing and Certification of SOTM Technology	1	2012	4	2014
Wideband Technology Development/Prototyping	1	2004	4	2014
Prototype Advanced COTM Terminal PACT (AEHF)	1	2010	4	2014
MILSATCOM SE Protected COTM Terminal Engineering	1	2015	4	2019
FCC/ITU SOTM Regulatory Proposals/Analyses/Modifications	1	2009	4	2014
T2C2 Product development and M/S C preparation	3	2013	4	2014
T2C2 IOT&E & MS C	4	2014	4	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)				Project (Number/Name) EA3 / Transportable Tactical Cmd Comms (T2C2)			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EA3: Transportable Tactical Cmd Comms (T2C2)	-	-	-	3.880	-	3.880	3.885	2.908	-	-	-	10.673
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Funds in this program element are a realignment of funds from the MILSATCOM System Engineering line (PE 0303142A, PROJECT 456) for more efficient, effective program management. The T2C2 efforts were previously funded under PE 0303142A, PROJECT 456 in FY13 & FY14. This project element is not a new start.

A. Mission Description and Budget Item Justification

Transportable Tactical Command Communications (T2C2) extends the WIN-T Network to small company and team sized early entry units that don't have organic WIN-T. T2C2 provides robust voice and data communications capabilities in the early phases of Joint operations. T2C2 will also integrate these users into the higher capacity Warfighter Information Network Tactical (WIN-T) network and extend that network to the tactical edge. Funding will be used for testing the T2C2 systems (Lite & Heavy) in preparation of Full Material Release (FMR) and Full-Rate Production (FRP) scheduled for FY2017, along with T2C2, with testing in FY2013-2016, specifically Interoperability certification, Environmental testing and network testing FY2015/2016, and Initial Operational Test & Evaluation (IOT&E) and Joint Integration Test Command (JITC) certification in FY2016.

T2C2 Lite (formerly Variant 1) enables small team reporting and situational awareness for early entry and initial phases of Joint operations.

T2C2 Heavy (formerly Variant 2) supports the small command post in phases three through five of Joint operations.

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

	FY 2013	FY 2014	FY 2015
Title: T2C2 Testing	-	-	3.869
Description: Testing requirements to achieve Full Rate Production (FRP), including Electromagnetic testing, Environmental testing, Army Interoperability Certification (AIC) testing, a Network test and Initial Operational Test & Evaluation (IOT&E).			
FY 2015 Plans: Testing requirements to achieve FRP, including Electromagnetic testing, Environmental testing, AIC testing, a Network test and IOT&E.			
Title: T2C2 Transportation of Equipment	-	-	0.011
Description: Transportation of test assets to the testing location.			
FY 2015 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)	Project (Number/Name) EA3 / Transportable Tactical Cmd Comms (T2C2)

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Transportation of test assets to the testing location.			
Accomplishments/Planned Programs Subtotals	-	-	3.880

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• Transportable Tactical Command Comm: <i>Transportable Tactical Command Communications (T2C2) (B85800)</i>	1.819	0.598	13.999	-	13.999	40.372	46.754	44.047	63.521	-	211.110

Remarks

D. Acquisition Strategy

Funding will be used for testing the T2C2 systems (Lite & Heavy) in preparation of Full Material Release (FMR) and Full-Rate Production (FRP) anticipated 2QTR FY2017.

E. Performance Metrics

N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)	Project (Number/Name) EA3 / Transportable Tactical Cmd Comms (T2C2)

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019							
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
T2C2 Milestone C Preparation					████████████████																											
T2C2 Milestone C									██																							
Initial Operational Capability															██																	
T2C2 Equipment Testing													████████████████																			
T2C2 Full Material Release																																
T2C2 Full Rate Production																																

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303142A / SATCOM Ground Environment (SPACE)	Project (Number/Name) EA3 / Transportable Tactical Cmd Comms (T2C2)

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
T2C2 Milestone C Preparation	1	2014	3	2015
T2C2 Milestone C	3	2015	3	2015
Initial Operational Capability	4	2016	4	2016
T2C2 Equipment Testing	4	2015	4	2016
T2C2 Full Material Release	2	2017	2	2017
T2C2 Full Rate Production	2	2017	2	2017

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303150A / <i>WWMCCS/Global Command and Control System</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	13.208	14.208	2.151	-	2.151	3.930	3.667	4.679	4.743	Continuing	Continuing
C86: <i>Army Global C2 System</i>	-	13.208	14.208	2.151	-	2.151	3.930	3.667	4.679	4.743	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

Change Summary Explanation: Funding decremented due to higher Army priorities.

A. Mission Description and Budget Item Justification

Global Command and Control System-Army (GCCS-A): This project is the Army component system that directly supports the implementation of the Global Command and Control System Family of Systems. GCCS-A provides automated command and control tools for Army Strategic and Operational Theater Commanders to enhance warfighter capabilities throughout the spectrum of conflict during joint and combined operations in support of the National Security. The GCCS-A developed software systems dramatically improves the Army's ability to analyze courses of action; develop and manage Army Forces; and ensure feasibility of war plans. In accordance with Army Command Post Computing Environment and Joint Command and Control objectives, GCCS-A will be re-architected away from a scalable process architecture based server - thick client architecture to a virtualized server - web client architecture hosted on Battle Command Common Services and Mission Command Workstation by the end of Fiscal Year 2015. GCCS-A strategic tools for readiness reporting have been modernized and replaced with the Defense Readiness Reporting System - Army (DRRS-A), a suite of web based applications for Army Readiness, Force Registration and Force Projection.

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	14.443	14.215	14.843	-	14.843
Current President's Budget	13.208	14.208	2.151	-	2.151
Total Adjustments	-1.235	-0.007	-12.692	-	-12.692
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-1.235	-0.007	-12.692	-	-12.692

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303150A / WWMCCS/Global Command and Control System	Project (Number/Name) C86 / Army Global C2 System
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
C86: Army Global C2 System	-	13.208	14.208	2.151	-	2.151	3.930	3.667	4.679	4.743	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Global Command and Control System-Army (GCCS-A): This project is the Army component of the Global Command and Control System (GCCS) Family of Systems (FoS). GCCS-A provides automated command and control tools, including Force readiness, planning and movement, and situational awareness, for Army Strategic and Operational Theater commanders to enhance warfighter capabilities throughout the spectrum of conflict during Joint and combined operations in support of National Security. GCCS-A dramatically improves the Army's ability to analyze courses of action, develop and manage Army forces and execute war plans. GCCS-A links the GCCS-Joint Common Operating Picture with the Army Mission Command systems. In accordance with Army Command Post Computing Environment and Joint Command and Control objectives, GCCS-A will be re-architected away from a scalable process architecture based server - thick client architecture to a virtualized server - web client architecture hosted on Battle Command Common Services and Mission Command Workstation by Fiscal Year 2015. GCCS-A strategic tools for readiness reporting have been modernized and replaced with the Defense Readiness Reporting System - Army (DRRS-A), a suite of web based applications for Army Readiness, Force Registration and Force Projection. DRRS-A is currently implementing the Global Force Management Data Initiative (GFMD-I) for consumption of authoritative force structure data.

Based on Congressional direction (Section 247 of Fiscal Year 2010 National Defense Authorization Act (NDAA)), the Secretary of Defense submitted reports to the congressional defense committees detailing the consolidation of the Net Enabled Command Capability system with the GCCS FoS. As part of that effort, it was determined that GCCS-A will be included in the modernization of the command and control systems within the DoD under the Joint C2 framework. While sustaining and synchronizing current fielded operations, the Army will modernize and enhance current capabilities to support both the Service and Joint warfighters as part of a synchronized, orchestrated DoD wide effort that will transition the GCCS FoS into a more agile, net-centric, service oriented environment by developing a virtualized server and web client based GCCS-A Global Lite-Army baseline ready for certification testing in Fiscal Year 2015.

Fiscal Year 2015 funding supports certification testing of the GCCS-A Bridge Effort in conjunction with Common Operating Environment testing to ensure that GCCS-A Bridge Effort software is successfully configured as a virtual machine on Battle Command Common Services and is interoperable with Army and Joint Mission Command Systems.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: GCCS-A/DRRS-A Software and System Engineering (Common Operating Environment (COE) System Engineering)	0.317	0.317	0.326
Articles:	-	-	-
Description: Software and System Engineering for GCCS-A and DRRS-A Modernization			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303150A / WWMCCS/Global Command and Control System	Project (Number/Name) C86 / Army Global C2 System		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<p>FY 2013 Accomplishments: Software and System Engineering for GCCS-A and DRRS-A Modernization</p> <p>FY 2014 Plans: Software and System Engineering for GCCS-A and DRRS-A Modernization</p> <p>FY 2015 Plans: Software and System Engineering for GCCS-A and DRRS-A Modernization</p>				
<p>Title: GCCS-A/DRRS-A Data Engineering (COE Data Engineering)</p> <p>Description: Data Engineering for GCCS-A and DRRS-A Modernization</p> <p>FY 2013 Accomplishments: Data Engineering for GCCS-A and DRRS-A Modernization</p> <p>FY 2014 Plans: Data Engineering for GCCS-A and DRRS-A Modernization</p> <p>FY 2015 Plans: Data Engineering for GCCS-A and DRRS-A Modernization</p>		1.005 -	1.385 -	0.678 -
<p>Title: GCCS-A/DRRS-A Software Development of Automated Command and Control Tools (COE Automated Command and Control Tools)</p> <p>Description: Software Development of Automated Command and Control Tools for GCCS-A and DRRS-A Modernization</p> <p>FY 2013 Accomplishments: Software Development of Automated Command and Control Tools for GCCS-A and DRRS-A Modernization</p> <p>FY 2014 Plans: Software Development of Automated Command and Control Tools for GCCS-A and DRRS-A Modernization</p>		10.300 -	10.920 -	- -
<p>Title: GCCS-A/DRRS-A Test and Evaluation</p> <p>Description: Test and Evaluation for GCCS-A and DRRS-A Modernization</p>		0.643 -	0.643 -	0.662 -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303150A / WWMCCS/Global Command and Control System	Project (Number/Name) C86 / Army Global C2 System

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<i>FY 2013 Accomplishments:</i> Test and Evaluation for GCCS-A and DRRS-A Modernization			
<i>FY 2014 Plans:</i> Test and Evaluation for GCCS-A and DRRS-A Modernization			
<i>FY 2015 Plans:</i> Test and Evaluation for GCCS-A and DRRS-A Modernization			
<i>Title:</i> GCCS-A/DRRS-A Program Support and Management	0.943	0.943	0.485
<i>Description:</i> Support and Management for GCCS-A and DRRS-A Modernization	Articles: -	-	-
<i>FY 2013 Accomplishments:</i> Program Support and Management for GCCS-A and DRRS-A Modernization			
<i>FY 2014 Plans:</i> Program Support and Management for GCCS-A and DRRS-A Modernization			
<i>FY 2015 Plans:</i> Program Support and Management for GCCS-A and DRRS-A Modernization			
Accomplishments/Planned Programs Subtotals	13.208	14.208	2.151

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• BA8250A: Global Command & Control System-Army (GCCS-A)	10.834	2.590	-	-	-	-	-	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

GCCS-A was slated for replacement by the future DoD Command and Control (C2) system, the Net Enabled Command Capability (NECC) program. The NECC program was cancelled by the Defense Acquisition Executive (DAE) on 2 November 2009. Under current plans, GCCS-A will be modernized to meet the requirements defined in the Joint C2 Capability Development Document (CDD), as well as align with the Joint and Army Enterprise architectures and Common Operating Environment (COE) standards.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303150A / <i>WWMCCS/Global Command and Control System</i>	Project (Number/Name) C86 / <i>Army Global C2 System</i>
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GCCS-A must be maintained as a system until replaced by a new joint command and control capability. GCCS-A will be modernized as part of the Joint Command and Control (C2) way forward. In accordance with the Joint Requirements Oversight Committee (JROC) Memorandum (JROCM) 145-09 which states, "The JROC endorses efforts to develop and implement programmatic recommendations to support the "Do No Harm" Strategy", GCCS-A continues to sustain, synchronize and modernize along with the GCCS Family of Systems (FoS). In Fiscal Year 2011 the Joint C2 Overarching Integrated Product Team concurred with the Analysis of Alternatives (AoA) results and endorsed the proposed modernization of the GCCS FoS.

On May 17, 2012 the Under Secretary of Defense, Acquisition, Technology, and Logistics approved the Joint C2 Capability AoA recommendations to implement the Joint C2 sustainment and modernization strategy based on creating and maintaining a federated Joint C2 Family of Programs. An Acquisition Decision Memorandum (ADM) was prepared by Assistant Secretary of the Army for Acquisition, Logistics, and Technology (ASA(ALT)) and signed by the Army Acquisition Executive (AAE) on September 7, 2012. The ADM directs that the Modernization Strategy will consist of two separate program efforts. (1) A three-year (Fiscal Years 2012-2015) (FY12-15) Bridge effort, Acquisition Category (ACAT) III level with Milestone Decision Authority (MDA) and authority to conduct a Materiel Development Decision (MDD) delegated down to Program Executive Office (PEO) Command, Control, Communications - Tactical (C3T), and (2) a Modernization development effort for the Army's Joint and Strategic command and Control capabilities and Common Operating Environment (COE) infrastructure software products, with an MDD no later than (NLT) FY2015 at which time ACAT level will be determined. The GCCS-A modernization development effort will be scoped and resourced once a validated Army requirement is approved. GCCS-A must be maintained as a system until replaced by a new Joint Command and Control (C2) capability. Based on the Joint C2 AoA determination, services are directed to transform the GCCS Family of Systems to a more agile, net-centric, service oriented environment.

In accordance with the Training and Doctrine Command (TRADOC) requirements document approved in 2011, entitled Net Enabled Mission Command (NeMC) Initial Capabilities Document (ICD), software capability will be developed in 2-year increments as capability sets designed to Collaborate, Collapse and Converge Mission Command products. The product development funded under this R-Form is an integral part of the Mission Command System of Systems, under a strategy designed to optimize opportunity for improved interoperability among the systems, to capture the benefits of competition where possible and to ensure the rapid integration of new capability into warfighter systems. This strategy is designed to reduce the physical footprint, logistics support requirements and increase operational efficiency through deployment as a virtualized server on Battle Command Common Services and a web client on Mission Command Workstation; GCCS-A Global Lite will meet this requirement and will be undergo certification testing in Fiscal Year 2015.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0303150A / WWMCCS/Global Command and Control System				Project (Number/Name) C86 / Army Global C2 System							
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Management	Various	PM Mission Command : Aberdeen Proving Ground, Maryland	13.164	0.943		0.943	Dec 2013	0.485	Dec 2014	-		0.485	Continuing	Continuing	Continuing
Subtotal			13.164	0.943		0.943		0.485		-		0.485	-	-	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development (Completed Contracts)	Various	Lockheed Martin Corp (LMC) : Springfield, VA	156.206	-		-		-		-		-	-	156.206	156.206
GCCS-A and DRRS-A Bridge Effort Software Development (Completed Contract)	C/CPAF	Lockheed Martin Corp (LMC) : Springfield, VA	21.312	-		-		-		-		-	-	21.312	21.312
GCCS-A/DRRS-A Bridge Effort Software Development (Current Contract)	Various	Software Engineering Center : Aberdeen Proving Ground, MD	6.142	8.927		-		-		-		-	-	15.069	16.304
Defense Readiness Reporting System-Army Bridge Effort Software Development (Current Contract)	Various	Software Engineering Center : APG, MD	9.217	1.000		-		-		-		-	-	10.217	10.217
GCCS-A Bridge Effort Software Development (Future Contract)	C/CPAF	TBD : APG, MD	0.000	-		4.893	Sep 2013	-		-		-	Continuing	Continuing	Continuing
DRRS-A Bridge Effort Software Development (Future Contract)	C/CPAF	TBD : APG, MD	0.000	-		5.724	Aug 2013	-		-		-	Continuing	Continuing	Continuing
Matrix	Various	CECOM : Aberdeen Proving Ground, MD	6.479	0.373		0.303	Dec 2013	-		-		-	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)					Project (Number/Name)						
2040 / 7				PE 0303150A / WWMCCS/Global Command and Control System					C86 / Army Global C2 System						
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering	Various	Various : Various	6.091	0.317		0.317	Dec 2013	0.326	Dec 2014	-		0.326	Continuing	Continuing	Continuing
Subtotal			205.447	10.617		11.237		0.326		-		0.326	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Support Contractors	C/FP	Various : Various	14.265	1.005		1.385	Mar 2014	0.678	Dec 2014	-		0.678	Continuing	Continuing	Continuing
Subtotal			14.265	1.005		1.385		0.678		-		0.678	-	-	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ATEC/JTIC/CTSF/SEC	MIPR	Various : Various	3.540	0.643		0.643	Dec 2013	0.662	Dec 2014	-		0.662	Continuing	Continuing	Continuing
Subtotal			3.540	0.643		0.643		0.662		-		0.662	-	-	-
Project Cost Totals			236.416	13.208		14.208		2.151		-		2.151	-	-	-
Remarks															

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0303150A / WWMCCS/Global Command and Control System	Project (Number/Name) C86 / Army Global C2 System

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
GCCS-A and DRRS-A Bridge Effort Software Development COE v1	1	2012	4	2014
Integration & Test COE 1	1	2013	4	2013
GCCS-A and DRRS-A Bridge Effort Software Development COE v2	1	2014	4	2016
Integration & Test COE 2	1	2015	4	2015
GCCS-A Modernization Software Development COE v3	1	2016	4	2018
Integration & Test COE v3	1	2017	4	2017
GCCS-A and DRRS-A Modernization Software Development COE v4	1	2019	4	2020
Hardware Fielding	1	2007	3	2014
Software Fielding	1	2007	4	2020

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0304348A / <i>Advance Geospatial Intelligence (AGI)</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	-	-	-	-	-	-	-	-	-	-	-
N17: <i>Advance Geospatial Intelligence (AGI)</i>	-	-	-	-	-	-	-	-	-	-	-	-

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The details for this program are reported in accordance with Title 10, United States Code, Section 119(a)(1)

B. Program Change Summary (\$ in Millions)	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	-	-	-
Total Adjustments	-	-	-	-	-
• Congressional General Reductions	-	-	-	-	-
• Congressional Directed Reductions	-	-	-	-	-
• Congressional Rescissions	-	-	-	-	-
• Congressional Adds	-	-	-	-	-
• Congressional Directed Transfers	-	-	-	-	-
• Reprogrammings	-	-	-	-	-
• SBIR/STTR Transfer	-	-	-	-	-

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305204A / <i>Tactical Unmanned Aerial Vehicles</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	28.466	33.515	22.870	-	22.870	16.690	11.566	12.710	8.171	Continuing	Continuing
11A: <i>Advanced Payload Develop & Spt (MIP)</i>	-	6.239	5.554	5.271	-	5.271	5.036	3.050	3.265	3.304	Continuing	Continuing
11B: <i>Tsp Development (MIP)</i>	-	17.906	24.678	12.904	-	12.904	7.138	4.375	4.685	-	-	71.686
123: <i>Joint Technology Center System Integration</i>	-	4.321	3.283	4.695	-	4.695	4.516	4.141	4.760	4.867	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Project 11A: The Advanced Payloads Development project line is a shared funding line between multiple Payload programs. These Payload programs support the Army's transformation by developing Reconnaissance, Surveillance and Target Acquisition (RSTA) and Intelligence, Surveillance and Reconnaissance (ISR) payload systems for Brigade Combat Teams, Divisions, and Corps Unmanned Aircraft Systems (UAS). This is in accordance with Headquarters Department of the Army (HQDA) and Training and Doctrine Command (TRADOC) UAS priorities.

Small Tactical Radar - Lightweight (STARLite) Synthetic Aperture Radar/Ground Moving Target Indicator (SAR/GMTI) is a lightweight, high performance, all weather, multi-functional radar system for the Gray Eagle Unmanned Aircraft System (UAS). The STARLite system provides wide area, near real time Reconnaissance, Surveillance and Target Acquisition (RSTA) capabilities. It operates throughout the UAS flight mission profile in adverse weather and through battlefield obscurants. The SAR mode generates quality images for the battlefield commander for detection, classification and location of stationary commercial wheeled vehicle-size targets. The GMTI mode detects moving ground targets, to include man-sized detection, and provides location information and performs cross-cue with the Electro-Optic/Infrared (EO/IR) sensors. STARLite is increasing its software (S/W) capabilities based on IOT&E results which will increase automation and upgrade to a common Graphical User Interface (GUI) to align with the Common Operating Environment (COE) requirement to enable Sensor Processing and Exploitation (SPE).

Common Sensor Payload (CSP) - Electro Optical / Infra Red / Laser Designator (EO/IR/LD) provides High Definition (HD) Full Motion Video (FMV) in both the Electro Optical and Mid Wave IR spectrums with day/night capability to collect and display continuous imagery with the ability to designate targets of interest for attack by laser guided precision weapons. It is the EO/IR/LD sensor for Gray Eagle UAS which supports force applications, battlespace awareness, force protection, and net-centric operations across the battlefield to provide wide area, near real time RSTA capabilities. Additional initiatives will continue to focus on the transition of technologies directly supporting emerging requirements and the Army's Current and Future Force. CSP is being procured for the Gray Eagle UAS program and has potential application to other platforms.

Project 11B: The Tactical Signals Intelligence (SIGINT) Payload (TSP) is a SIGINT sensor, currently under development for the Gray Eagle that detects radio frequency (RF) emitters. The TSP system will provide a SIGINT capability to the tactical commander. The TSP system will be a modular, scalable payload using an architecture that is software reconfigurable to allow for growth and flexibility as technology, and as the adversaries use of technology, changes. This flexible architecture allows for

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305204A / <i>Tactical Unmanned Aerial Vehicles</i>
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third party software applications to be integrated into the TSP system. The TSP system processing, control and data dissemination is integrated into the Distributed Common Ground System - Army (DCGS-A) via the Operational Ground Station. It supports Manned/Unmanned (MUM) teaming with Brigade Combat Team ground SIGINT Terminal Guidance (STG) teams and manned airborne assets. The TSP system improves situational awareness and shortens the targeting cycle by detecting and identifying emitters associated with high value targets (HVTs). The TSP system is capable of processing conventional signals, standard military signals, and modern signals of interest. This includes detection, recognition, identification, direction finding, and high confidence geo-location. The TSP system operates in two modes, passive and active to provide an enhanced Aerial Precision Geolocation (APG) capability.

Project 123: The Unmanned Aircraft System (UAS) Joint Technology Center/Systems Integration Laboratory (JTC/SIL) is a Joint facility that develops, integrates, and supports the enhancement of its Multiple Unified Simulation Environment (MUSE) capability for Army systems and operational concepts. The JTC/SIL conducts prototype hardware and software development, builds the UAS Institutional Mission Simulator (IMS) trainers for the Shadow, Hunter, and Gray Eagle programs, and provides modeling and simulation support. The MUSE is a real-time, operator in-the-loop simulation that may be integrated with larger simulations in support of Army and Joint training and exercises. The MUSE is also employed as a Mission Rehearsal Tool for ongoing combat operations. This project funds the management of the JTC/SIL and MUSE enhancements. This system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	31.303	33.533	26.261	-	26.261
Current President's Budget	28.466	33.515	22.870	-	22.870
Total Adjustments	-2.837	-0.018	-3.391	-	-3.391
• Congressional General Reductions	-2.837	-0.018			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-	-	-3.391	-	-3.391

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305204A / <i>Tactical Unmanned Aerial Vehicles</i>				Project (Number/Name) 11A / <i>Advanced Payload Develop & Spt (MIP)</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
11A: <i>Advanced Payload Develop & Spt (MIP)</i>	-	6.239	5.554	5.271	-	5.271	5.036	3.050	3.265	3.304	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

The Advanced Payloads Development project is a shared funding line between multiple Payload programs. These Payload programs support the Army's transformation by developing Reconnaissance, Surveillance and Target Acquisition (RSTA) and Intelligence, Surveillance and Reconnaissance (ISR) payload systems for Brigade Combat Teams, Divisions, and Corps Unmanned Aircraft Systems (UAS). This is in accordance with Headquarters Department of the Army (HQDA) and Training and Doctrine Command (TRADOC) UAS priorities.

Small Tactical Radar - Lightweight (STARLite) Synthetic Aperture Radar/Ground Moving Target Indicator (SAR/GMTI) is a lightweight, high performance, all weather, multi-functional radar system for the Gray Eagle Unmanned Aircraft System (UAS). The STARLite system provides wide area, near real time Reconnaissance, Surveillance and Target Acquisition (RSTA) capabilities. It operates throughout the UAS flight mission profile in adverse weather and through battlefield obscurants. The SAR mode generates quality images for the battlefield commander for detection, classification and location of stationary commercial wheeled vehicle-size targets. The GMTI mode detects moving ground targets, to include man-sized detection, and provides location information and performs cross-cue with the Electro-Optic/Infrared (EO/IR) sensors. STARLite is increasing its software (S/W) capabilities based on IOT&E results which will increase automation and upgrade to a common Graphical User Interface (GUI) to align with the Common Operating Environment (COE) requirement to enable Sensor Processing and Exploitation (SPE).

Common Sensor Payload (CSP) - Electro Optical / Infra Red / Laser Designator (EO/IR/LD) provides High Definition (HD) Full Motion Video (FMV) in both the Electro Optical and Mid Wave IR spectrums with day/night capability to collect and display continuous imagery with the ability to designate targets of interest for attack by laser guided precision weapons. It is the EO/IR/LD sensor for Gray Eagle UAS which supports force applications, battlespace awareness, force protection, and net-centric operations across the battlefield to provide wide area, near real time RSTA capabilities. Additional initiatives will continue to focus on the transition of technologies directly supporting emerging requirements and the Army's Current and Future Force. CSP is being procured for the Gray Eagle UAS program and has potential application to other platforms.

FY 2015 base development dollars in the amount of \$5.271 million is for software development to improve STARLite SPE.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305204A / <i>Tactical Unmanned Aerial Vehicles</i>	Project (Number/Name) 11A / <i>Advanced Payload Develop & Spt (MIP)</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: CSP High Definition (HD) - EO/IR/LD Articles: Description: Development, testing and integration FY 2013 Accomplishments: CSP HD Development, testing and integration	3.567 -	- -	- -
Title: CSP HD Target Location Accuracy (TLA) - EO/IR/LD Articles: Description: Target Location Accuracy (TLA) - Non Recurring Engineering (NRE), design, integrate and test of TLA FY 2013 Accomplishments: Contract Prep Work - RFP, SOW and contract award for FY14 TLA Development	2.672 -	- -	- -
Title: Software Development to improve CSP and STARLite Sensor Processing and Exploitation (SPE) Articles: Description: Development, Testing and Integration FY 2014 Plans: Software Development to improve CSP and STARLite Sensor Processing and Exploitation FY 2015 Plans: Software Development to improve STARLite SPE	- -	5.554 -	5.271 -
Accomplishments/Planned Programs Subtotals	6.239	5.554	5.271

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• A00020: MQ-1 PAYLOAD - UAS - A00020	173.911	97.781	-	-	-	-	-	-	-	-	271.692
• A01003: SAR/MTI (MIP)	-	-	3.686	-	3.686	2.451	1.348	-	-	-	7.485
• A01005: CSP FMV (MIP)	-	-	8.409	-	8.409	4.813	4.485	-	-	-	17.707

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305204A / <i>Tactical Unmanned Aerial Vehicles</i>	Project (Number/Name) 11A / <i>Advanced Payload Develop & Spt (MIP)</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks
 MQ-1 PAYLOAD - UAS - A00020: Shared Aircraft Procurement, Army (APA) procurement funding line for CSP, STARLite, Tactical Signals Intelligence (SIGINT) Payload (TSP) and Advanced Payloads.
 SAR/MTI (MIP) - A01003: Procurement funding line for STARLite; under parent line MQ-1 Payloads (MIP) - A01001.
 CSP FMV (MIP) - A01005: Procurement funding line for CSP; under parent line MQ-1 Payloads (MIP) - A01001.

D. Acquisition Strategy

STARLite SAR/GMTI is a threshold requirement for the Gray Eagle UAS. The acquisition strategy for STARLite program was based on a full and open competition for the Army. A five year competitive production contract was awarded in April 2008 to Northrop Grumman for the build, integration, test and delivery of STARLite systems with preplanned improvements for Extended Range and Increased Reliability. FRP was successfully achieved in June 2013. A follow-on production contract is planned for award in February 2014 for 3 years that will procure all remaining STARLite Payloads required for the Gray Eagle platform. A STARLite system support contract was awarded in September 2013 to provide system sustainment. STARLite is increasing its S/W capabilities based on IOT&E results which will increase automation and upgrade to a common Graphical User Interface (GUI) to align with the Common Operating Environment (COE) requirement to enable Sensor Processing and Exploitation (SPE).

Common Sensor Payload (CSP) EO/IR/LD is a KPP (Key Performance Parameter) requirement for the Gray Eagle UAS. The acquisition strategy for the CSP program was based on a full and open competition for the Army. It was briefed and approved at the Army Systems Acquisition Review Council (ASARC) in Dec 2006. A competitive contract was awarded in Nov 2007 to Raytheon for the build, integration, test and delivery of the CSP. FRP was completed June 2013. CSP program was approved by HQDA for fifty-five (55) High Definition (HD) payloads. Forty-One (41) systems are being upgraded via retrofit to HD while fourteen (14) are being procured in FY14 as HD.

The acquisition strategy for FY15 is software development to improve the STARLite SPE capability by utilizing existing contract vehicles.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0305204A / Tactical Unmanned Aerial Vehicles				11A / Advanced Payload Develop & Spt (MIP)							
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Mgmt Personnel	Various	PM ABS / PM ARES : Aberdeen, MD	7.957	0.567	Dec 2012	0.500	Dec 2013	0.500	Dec 2014	-		0.500	Continuing	Continuing	Continuing
PM ARES Funding for TSP	Allot	PM, ARES : Aberdeen, MD	11.255	-		-		-		-		-	-	11.255	11.255
Subtotal			19.212	0.567		0.500		0.500		-		0.500	-	-	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
STARLite Extended Range (ER) (SAR/GMTI)	C/CPFF	Northrop Grumman : Linthicum, MD	6.786	-		-		-		-		-	-	6.786	6.786
CSP EO/IR/LD	C/FFP	Raytheon : McKinney, TX	48.500	-		-		-		-		-	-	48.500	48.500
CSP HD (High Definition)	MIPR	NSWC Crane : Crane, IN	10.850	-		-		-		-		-	-	10.850	10.850
CSP TLA - NRE, Build and Test - Contract Closeout	MIPR	NSWC Crane : Crane, IN	22.000	2.672		-		-		-		-	-	24.672	Continuing
Improvements to Sensor Processing and Exploitation	MIPR	Northrop Grumman : Linthicum, MD	0.000	-		5.054	Mar 2014	4.771	Mar 2015	-		4.771	Continuing	Continuing	Continuing
Subtotal			88.136	2.672		5.054		4.771		-		4.771	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Gray Eagle Integration Support (STARLite, CSP, HD & TLA)	MIPR	PM UAS / General Atomics : Huntsville, AL	24.535	1.500		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			24.535	1.500		-		-		-		-	-	-	-

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305204A / <i>Tactical Unmanned Aerial Vehicles</i>	Project (Number/Name) 11A / <i>Advanced Payload Develop & Spt (MIP)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
STARLite (SAR/GMTI) Production	3	2008	3	2016
CSP (EO/IR/LD) Production	1	2008	2	2015
CSP HD (EO/IR/LD) Development	2	2012	2	2013
CSP HD (EO/IR/LD) Testing	1	2013	3	2013
CSP HD (EO/IR/LD) Production	2	2013	2	2016
CSP HD Retrofit	4	2013	4	2016
Advanced Payloads Development	1	2014	4	2021
Improvements to STARLite Sensor Processing and Exploitation	1	2014	2	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305204A / <i>Tactical Unmanned Aerial Vehicles</i>	Project (Number/Name) 11B / <i>Tsp Development (MIP)</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
11B: <i>Tsp Development (MIP)</i>	-	17.906	24.678	12.904	-	12.904	7.138	4.375	4.685	-	-	71.686
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

The FY 2015 OCO Request will be submitted at a later date.

Note
TSP efforts in FY11 and prior years were carried in both Projects 11A (Advanced Payload Development) and 11B (TSP Development). All TSP funding in FY12 and beyond is carried in Project 11B.

A. Mission Description and Budget Item Justification
The Tactical Signals Intelligence (SIGINT) Payload (TSP) is a SIGINT sensor, currently under development for the Gray Eagle that detects radio frequency (RF) emitters. The TSP system will provide a SIGINT capability to the tactical commander. The TSP system will be a modular, scalable payload using an architecture that is software reconfigurable to allow for growth and flexibility as technology, and as the adversaries use of technology, changes. This flexible architecture allows for third party software applications to be integrated into the TSP system. The TSP system processing, control and data dissemination is integrated into the Distributed Common Ground System - Army (DCGS-A) via the Operational Ground Station. It supports Manned/Unmanned (MUM) teaming with Brigade Combat Team ground SIGINT Terminal Guidance (STG) teams and manned airborne assets. The TSP system improves situational awareness and shortens the targeting cycle by detecting and identifying emitters associated with high value targets (HVTs).

The TSP system is capable of processing conventional signals, standard military signals, and modern signals of interest. This includes detection, recognition, identification, direction finding, and high confidence geo-location. The TSP system operates in two modes, passive and active to provide an enhanced Aerial Precision Geolocation (APG) capability.

FY2015 Base funding in the amount of \$12.904 Million supports engineering corrective actions, regression testing, Government Developmental testing and Initial Operational Test and Evaluation (IOT&E).

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>Title: TSP Engineering Manufacturing Development (EMD) and Low Rate Initial Production Research and Development (R&D) Support</p> <p style="text-align: right;">Articles:</p> <p>Description: EMD Development and Equipment; LRIP R&D: Logistics, Training, corrective action engineering support and test activities.</p> <p>FY 2013 Accomplishments:</p>	<p>17.906</p> <p>-</p>	<p>24.678</p> <p>-</p>	<p>12.904</p> <p>-</p>

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305204A / <i>Tactical Unmanned Aerial Vehicles</i>	Project (Number/Name) 11B / <i>Tsp Development (MIP)</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Continues TSP Block 1, Commences Increment 1 Test and Evaluation including Contractor Flight Test.			
FY 2014 Plans: Complete TSP Block 1, Increment 1 Engineering Manufacturing Development (EMD) Phase and supports corrective actions, and regression testing. Also, includes completion of Operational Ground Station and MQ-1C Integration and Test.			
FY 2015 Plans: Continues TSP Block 1. Includes Contractor/ Government Developmental Testing, MQ-1C air worthiness release, System Support Package development, Key Personnel Training, Logistics Demonstration, and prepares for the IOT&E. Begins preparation for TSP Block 2 activities.			
Accomplishments/Planned Programs Subtotals	17.906	24.678	12.904

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

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• A00020: <i>A00020 - MQ-1 Payload (MIP)</i>	173.911	97.871	-	-	-	-	-	-	-	-	271.782
• A01004: <i>A01004 - SIGINT (MIP)</i>	-	-	14.818	-	14.818	51.506	49.388	31.878	-	-	147.590
• TSP Theater Net-Centric Geolocation: <i>TSP Theater Netcentric Geolocation (TNG)</i>	-	-	0.550	-	0.550	0.050	0.050	0.050	0.050	-	0.750

Remarks

MQ-1 PAYLOAD - UAS - A00020: Shared Aircraft Procurement, Army (APA) procurement funding line for CSP, STARLite, TSP, and Advanced Payloads.

SIGINT (MIP) - A01004: Procurement funding line for TSP Payloads. Under Parent Line MQ-1 Payloads (MIP) - A01001.

TSP Theater Net-Centric Geolocation (TNG) - TNG funding included in Tactical Exploitation of National Capabilities (TENCAP) funding line.

D. Acquisition Strategy

TSP is a threshold requirement for the MQ-1C Gray Eagle UAS. The TSP program entered the Engineering and Manufacturing Development (EMD) phase with a Milestone B decision in September 2011. The TSP Program EMD contract award was based on full-and-open competition and was focused on integration and test onto the Gray Eagle platform and integration and test of TSP software into the Operational Ground Station. The TSP EMD program is a derivative of systems that were fielded as a Quick Reaction Capability on the MQ-1C UAS and a variety of other manned platforms. The demonstrated scalability of these fielded materiel solutions allows the TSP EMD program to leverage effort that directly supports the TSP EMD program.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305204A / <i>Tactical Unmanned Aerial Vehicles</i>	Project (Number/Name) 11B / <i>Tsp Development (MIP)</i>

The TSP program Acquisition Strategy was modified to accommodate the FY 2012 Appropriation that reduced the 11B Funding Line by \$14.100 Million. The modified TSP program followed an incremental Acquisition Strategy with a TSP Block 0, Block 1 and Block 2. Schedule adjusted in accordance with the TSP Acquisition Decision Memorandum dated 22 Mar 2012. Block 0 was to be the QRC system to provide an early operational capability for the MQ-1C. The TSP Block 1 is the current Program of Record that entered EMD in FY 2011 to meet all the threshold requirements in the approved Capability Production Document (CPD). Block 2 was to address future objective needs.

Based on available funding, the TSP acquisition strategy has been revised to merge Block 0 and current Block 1 capabilities into a single Block of capability. Current capabilities that have not been integrated into the Block 1 are deferred and included in the Block 2 suite of requirements.

Block 1 is the initial production capability, with Block 2 being a continuation of the TSP program of record and will integrate the remaining CPD threshold requirements.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0305204A / Tactical Unmanned Aerial Vehicles				Project (Number/Name) 11B / Tsp Development (MIP)							
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management-Gov	RO	PM SAI : APG	6.222	0.837	Dec 2012	0.641	Dec 2013	0.406	Dec 2014	-		0.406	-	8.106	-
Program Management Support	MIPR	Various : APG	3.180	0.675	Mar 2013	0.720	Mar 2014	-		-		-	-	4.575	Continuing
FFRDC Support	FFRDC	MITRE : APG	0.644	0.557	Mar 2013	0.647	Mar 2014	-		-		-	-	1.848	-
Subtotal			10.046	2.069		2.008		0.406		-		0.406	-	14.529	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
TSP EMD	C/CPHF	BAE Systems, : Nashua, NH	6.385	13.821	Sep 2013	-		-		-		-	-	20.206	-
TSP Engineering Changes	SS/CPFF	BAE Systems : Nashua, NH	0.000	-		7.495	Apr 2014	0.800	Dec 2014	-		0.800	-	8.295	-
MQ-1C and OGS Integration	SS/CPFF	Various : Various	0.000	-		4.630	Feb 2014	-		-		-	-	4.630	-
TSP System Support (Logistics, Training, & Test)	SS/CPFF	Various : Various	0.000	-		6.870	Apr 2014	3.143	Dec 2014	-		3.143	-	10.013	-
Subtotal			6.385	13.821		18.995		3.943		-		3.943	-	43.144	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support	MIPR	Various : Various	1.790	1.276	Mar 2013	0.975	Mar 2014	0.579	Mar 2015	-		0.579	-	4.620	-
Subtotal			1.790	1.276		0.975		0.579		-		0.579	-	4.620	-

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305204A / <i>Tactical Unmanned Aerial Vehicles</i>	Project (Number/Name) 11B / <i>Tsp Development (MIP)</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
TSP Block 1 EMD	██████████																											
TSP Block 1 (LRIP) Milestone C					████																							
TSP Block 1 (LRIP) Contract Award					████																							
TSP Block 1 Integration and Test					████████████████████																							
TSP Block 1 LRIP Engineering Changes					██████████																							
Gov't Development Test and Evaluation									████																			
Operational Assessment Report									████																			
MQ-1C Integration and Test					██████████																							
TSP/MQ-1C Air Worthiness Release									██████████																			
Contractor / Gov't Development Test and Evaluation													██████████															
TSP Initial Operational Test and Evaluation													████															
TSP Block 1 Full Production Decision																	████											
Block 2 Preparation													████████████████████															

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305204A / <i>Tactical Unmanned Aerial Vehicles</i>	Project (Number/Name) 11B / <i>Tsp Development (MIP)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
TSP Block 1 EMD	4	2011	2	2014
TSP Block 1 (LRIP) Milestone C	2	2014	2	2014
TSP Block 1 (LRIP) Contract Award	2	2014	2	2014
TSP Block 1 Integration and Test	2	2014	3	2016
TSP Block 1 LRIP Engineering Changes	2	2014	4	2014
Gov't Development Test and Evaluation	4	2014	4	2014
Operational Assessment Report	1	2015	1	2015
MQ-1C Integration and Test	2	2014	1	2015
TSP/MQ-1C Air Worthiness Release	1	2015	3	2015
Contractor / Gov't Development Test and Evaluation	3	2015	1	2016
TSP Initial Operational Test and Evaluation	1	2016	1	2016
TSP Block 1 Full Production Decision	3	2016	3	2016
Block 2 Preparation	2	2015	4	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305204A / <i>Tactical Unmanned Aerial Vehicles</i>				Project (Number/Name) 123 / <i>Joint Technology Center System Integration</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
123: <i>Joint Technology Center System Integration</i>	-	4.321	3.283	4.695	-	4.695	4.516	4.141	4.760	4.867	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Unmanned Aircraft System (UAS) Joint Technology Center/Systems Integration Laboratory (JTC/SIL) is a Joint facility that develops, integrates, and supports the enhancement of its Multiple Unified Simulation Environment (MUSE) capability for Army systems and operational concepts. The JTC/SIL conducts prototype hardware and software development, builds the UAS Institutional Mission Simulator (IMS) trainers for the Shadow, Hunter, and Gray Eagle programs, and provides modeling and simulation support. The MUSE is a real-time, operator in-the-loop simulation that may be integrated with larger simulations in support of Army and Joint training and exercises. The MUSE is also employed as a Mission Rehearsal Tool for ongoing combat operations. This project funds the management of the JTC/SIL and MUSE enhancements.

This system supports the Legacy to Objective transition path of the Transformation Campaign Plan (TCP).

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Product Development	1.826	1.500	2.313
Articles:	-	-	-
Description: Funding is provided for the following efforts.			
FY 2013 Accomplishments: Integration of a government owned visualization package. Develop more ease of use enhancements including standardized set up packages for the aircraft simulation. Evaluate Ground Control Station simulation improvements for fidelity and realism. Design, develop, implement, and release Build 8.8.			
FY 2014 Plans: Move to smart phone or more protable computing capabilities. Evaluate the adaptable environment that gives the user more flexibility by choosing which components to use for a more customized environment. Incorporate new sensor technologies. Incorporate new aircraft and avionics. Design, develop, implement, and release Build 9.04			
FY 2015 Plans: Continue Development of application based software for portable devices. Enhance mission planning software to facilitate ease of use and currency with UAS mission planning application capabilities. Develop and enhance Service Oriented Architecture			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305204A / <i>Tactical Unmanned Aerial Vehicles</i>	Project (Number/Name) 123 / <i>Joint Technology Center System Integration</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
to support Cloud computing for US military exercises. Develop new sensors simulation capabilities to reflect Service UAS capabilities.				
Title: Support OSD Joint UAS Interoperability Requirements and Activities		1.995	1.465	2.000
Articles:		-	-	-
Description: Funding is provided for the following efforts.				
FY 2013 Accomplishments: Develop UCS Architecture environment and compliance tools. Develop and publish multiple new USIPs based on OSD prioritization. Provide technical and administrative support to I IPT and associated WGs.				
FY 2014 Plans: Continue development of UCS Architecture environment and compliance tools. Continue to develop and publish multiple new USIPs based on OSD prioritization. Continue to provide technical and administrative support to I IPT and associated WGs.				
FY 2015 Plans: Continue development of UCS Architecture environment and compliance tools. Continue to develop and publish multiple new USIPs based on OSD prioritization. Continue to provide technical and administrative support to I IPT and associated WGs.				
Title: Management Services		0.500	0.318	0.382
Articles:		-	-	-
Description: Funding is provided for the following efforts.				
FY 2013 Accomplishments: Continue coordination and oversight of MUSE product development and OSD Interoperability Requirements and tool development.				
FY 2014 Plans: Continue coordination and oversight of MUSE product development and OSD Interoperability Requirements and tool development.				
FY 2015 Plans: Continue coordination and oversight of MUSE product development.				
Accomplishments/Planned Programs Subtotals		4.321	3.283	4.695

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305204A / <i>Tactical Unmanned Aerial Vehicles</i>	Project (Number/Name) 123 / <i>Joint Technology Center System Integration</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PE 0603261N Navy: <i>PE 0603261N Navy</i>	2.000	2.000	2.000	-	2.000	-	-	-	-	Continuing	Continuing
• PE 0305206F Air Force: <i>PE 0305206F Air Force</i>	3.159	2.472	3.983	-	3.983	4.044	3.445	3.507	3.570	Continuing	Continuing

Remarks

The JTC/SIL and the MUSE receive funding from the Air Force and Navy through their POM processes. This effort is a continuing effort in support of Service UAS programs.

D. Acquisition Strategy

Continued MUSE development will be accomplished through a combination of Government in-house functional directorate support using a variety of existing contract vehicles.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0305204A / Tactical Unmanned Aerial Vehicles				Project (Number/Name) 123 / Joint Technology Center System Integration							
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	MIPR	AMC, AMCOM, AMRDEC, SED : Redstone Arsenal, AL	1.312	0.500	Nov 2012	0.318	Dec 2013	0.382	Dec 2014	-		0.382	Continuing	Continuing	Continuing
Subtotal			1.312	0.500		0.318		0.382		-		0.382	-	-	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
MUSE Development	MIPR	AMC, AMCOM, AMRDEC, SED : Redstone Arsenal, AL	5.487	1.826	Jan 2013	1.500	Feb 2014	2.313	Jan 2015	-		2.313	Continuing	Continuing	Continuing
Subtotal			5.487	1.826		1.500		2.313		-		2.313	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Interoperability Support	MIPR	AMC, RDECOM, AMRDEC : Redstone Arsenal, AL	4.000	1.995	Dec 2012	1.465	Feb 2014	2.000	Jan 2015	-		2.000	Continuing	Continuing	-
Subtotal			4.000	1.995		1.465		2.000		-		2.000	-	-	-
Project Cost Totals			10.799	4.321		3.283		4.695		-		4.695	-	-	-
Remarks															

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305208A / <i>Distributed Common Ground/Surface Systems</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	38.673	27.607	20.155	-	20.155	25.710	25.965	26.409	30.717	Continuing	Continuing
956: <i>Distributed Common Ground System (MIP)</i>	-	38.673	27.607	9.270	-	9.270	0.423	-	-	-	Continuing	Continuing
D07: <i>DCGS-A Common Modules (MIP)</i>	-	-	-	10.885	-	10.885	25.287	25.965	26.409	30.717	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Distributed Common Ground System - Army (DCGS-A) is the Intelligence, Surveillance and Reconnaissance (ISR) System of Systems (SoS) for Joint, Interagency, Allied, Coalition, and National data analysis, sharing and collaboration. The core functions of DCGS-A are: the vertical and horizontal synchronization of ISR Processing, Exploitation and Dissemination (PED) efforts; operations in a networked environment at multiple security levels; the control of select Army and joint sensor systems; the fusion of all acquired data and information, and distribution of relevant red (threat), gray (non-aligned), and environmental (weather and terrain) information; and providing the Warfighters' early warning and targeting capability. DCGS-A provides a single integrated ISR ground processing system composed of common components that are interoperable with sensors, other information sources, all Warfighting Functions, and the Defense Information & Intelligence Enterprise (DI2E) and Intelligence Community Information Technology Enterprise (ICITE). DCGS-A is fielded in Fixed and Mobile configurations emphasizing the use of reach and split based operations by improving accessibility of data in order to reduce forward deployed footprint. As enhanced capabilities are developed and tested, a continuing series of software releases will be integrated into Army Common/commodity hardware and fielded to units IAW the Army Force Generation (ARFORGEN) process.

The Army Acquisition Executive designated to PEO IEW&S and DCGS-A as the Command Post Computing Environment (CPCE) Lead. As such, DCGS-A is defining the architecture to fit within the Common Operating Environment (COE) as described by the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) (ASA(ALT)) COE Implementation Plan. This is in accordance with the G-3/5/7 priority to align all Army networks, procurements, and enhancements under one COE and one vision leveraging intelligence community investments.

DCGS-A consolidates, enhances, and modernizes the Tasking, Processing, Exploitation, and Dissemination (TPED) capabilities formerly found in nine Army intelligence programs of record (Common Ground Station (CGS), Guardrail Common Sensor (GRCS), Counterintelligence & Interrogator Operations Workstation (CI&I OPS WS), All Source Analysis System (ASAS), Enhanced TracWolf (ETW), Digital Topographic Support System (DTSS), Integrated Meteorological System (IMETS), Tactical Exploitation System (TES), and Prophet Control) and two Quick Reaction Capabilities (Joint Intelligence Operations Center – Iraq (JIOC-I) and Imagery Work Station(IWS)). DCGS-A provides these technologically advanced PED capabilities in tailored and scalable mobile and fixed configurations in all maneuver and maneuver support units from Company Intelligence Support Team to Army Service Component Command, and in select maneuver sustainment units battalion and above. The program develops software packages to be embedded in mission command and other select systems to provide required ISR/analytic capabilities. DCGS-A is a critical Army priority.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305208A / <i>Distributed Common Ground/Surface Systems</i>	
<p>DCGS-A software is tailored by echelon and scalable to each unit's mission. DCGS-A provides commanders and staffs the ability to maintain an accurate and up to date understanding of the operational environment. The DCGS-A contribution to commanders' visualization and situational awareness, rapid planning, and the synchronization of all warfighting functions, enable Army units to operate within the enemy's decision cycle. This capability enhances tactical and operational maneuver and the conduct of full spectrum operations across the range of military operations from humanitarian to major combat operations.</p> <p>The DCGS-A configurations range from laptops to systems integrated in tactical shelters and mounted on tactical vehicles to large commodity servers operating in a sanctuary based processing environment. The fundamental intent and tenet of this approach is to reduce forward deployed equipment/footprint by co-locating the advanced analytics capabilities within the DCGS-A baseline with the regional data centers, where the data is stored. This infrastructure consolidation simultaneously reduces processor and communications requirements in tactical units by limiting the number of large data files transported across tactical communications systems. Following a successful operational assessment and Milestone C in 2QFY12/Full Deployment Decision in 1QFY13, the program is deploying DCGS-A Increment 1 Release 1 Software Baseline capability throughout the Army.</p> <p>FY15 Base funding in the amount of \$9.270 million for 956, will be used for the continued development and testing of the DCGS-A Increment 1 Software Releases as well as the continued development and testing of the of the Command Post Computing Environment (CPCE) as it fits into the Army's overarching Common Operating Environment (COE) construct. The COE has been directed by the ASA(ALT) and concurred by the Army G3/5/7 as a priority effort to align all Army networks, procurements, and enhancements under one COE vision. Funds used for efforts associated with the development of the CPCE/COE will include the continued merger/collapse of capabilities across multiple Battlefield Functional Areas (BFAs) and the consolidation of hardware used across the BFAs. Funds used for efforts associated with the development of the software will include continued advancements in the Standard Sharable Geospatial Foundation to support the Tactical Common Operating Picture, as well as further investment into capabilities and widget development supporting All Source Intelligence, Signals Intelligence (SIGINT), Geospatial Intelligence (GEOINT), and emerging architectural and infrastructure enhancements. Furthermore, the program will update the commercial technologies to the latest version(s) to enable industry developed enhanced features. Testing activities requiring these funds will include Developmental Testing (DT) and Operational Testing (OT) for Release 3; Participation in Network Integration Evaluation and Exercises such as: Empire Challenge, ULCHI Freedom Guardian, and Joint Interoperability Certification test(s) for each software release. The result of these activities all serve to prove out the capabilities in Increment 1 Release 3 and COE Version 3 (COE V3).</p> <p>FY15 Base funding in the amount of \$10.885 million for D07, will continue the iterative DCGS-A software releases that will increase the Processing, Exploitation, and Dissemination capability our Army requires. Increment 2 of the DCGS-A program will continue critical updates to the All Source Intelligence and the overarching Intelligence Processing capability to the Army through the Cloud Computing capability. This approach will achieve Information Technology efficiencies through alignment with the Intelligence Community Information Technology Environment, while maintaining the incremental software updates required to remain current.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305208A / <i>Distributed Common Ground/Surface Systems</i>
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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	40.876	27.622	29.924	-	29.924
Current President's Budget	38.673	27.607	20.155	-	20.155
Total Adjustments	-2.203	-0.015	-9.769	-	-9.769
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-2.203	-0.015	-9.769	-	-9.769

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305208A / <i>Distributed Common Ground/Surface Systems</i>				Project (Number/Name) 956 / <i>Distributed Common Ground System (MIP)</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
956: <i>Distributed Common Ground System (MIP)</i>	-	38.673	27.607	9.270	-	9.270	0.423	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Beginning in FY15, a portion of the Project 956 (Increment 1) funding was shifted to Project D07 (Increment 2) in order to clearly delineate between DCGS-A Increment 1 and Increment 2 development efforts. DCGS-A development efforts continue on project line (D07) within the same program element.

A. Mission Description and Budget Item Justification

Distributed Common Ground System - Army (DCGS-A) is the Intelligence, Surveillance and Reconnaissance (ISR) System of Systems (SoS) for Joint, Interagency, Allied, Coalition, and National data analysis, sharing and collaboration. The core functions of DCGS-A are: the vertical and horizontal synchronization of ISR Processing, Exploitation and Dissemination (PED) efforts; operations in a networked environment at multiple security levels; the control of select Army and joint sensor systems; the fusion of all acquired data and information, and distribution of relevant red (threat), gray (non-aligned), and environmental (weather and terrain) information; and providing the Warfighters' early warning and targeting capability. DCGS-A provides a single integrated ISR ground processing system composed of common components that are interoperable with sensors, other information sources, all Warfighting Functions, and the Defense Information & Intelligence Enterprise (DI2E) and Intelligence Community Information Technology Enterprise (ICITE). DCGS-A is fielded in Fixed and Mobile configurations emphasizing the use of reach and split based operations by improving accessibility of data in order to reduce forward deployed footprint. As enhanced capabilities are developed and tested, a continuing series of software releases will be integrated into Army Common/commodity hardware and fielded to units IAW the Army Force Generation (ARFORGEN) process.

The Army Acquisition Executive designated to PEO IEW&S and DCGS-A as the Command Post Computing Environment (CPCE) Lead. As such, DCGS-A is defining the architecture to fit within the Common Operating Environment (COE) as described by the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) (ASA(ALT)) COE Implementation Plan. This is in accordance with the G-3/5/7 priority to align all Army networks, procurements, and enhancements under one COE and one vision leveraging intelligence community investments.

DCGS-A consolidates, enhances, and modernizes the Tasking, Processing, Exploitation, and Dissemination (TPED) capabilities formerly found in nine Army intelligence programs of records (Common Ground Station (CGS), Guardrail Common Sensor (GRCS), Counterintelligence & Interrogator Operations Workstation (CI&I OPS WS), All Source Analysis System (ASAS), Enhanced TracWolf (ETW), Digital Topographic Support System (DTSS), Integrated Meteorological System (IMETS), Tactical Exploitation System (TES), and Prophet Control) and two Quick Reaction Capabilities (Joint Intelligence Operations Center – Iraq (JIOC-I) and Imagery Work Station(IWS)). DCGS-A provides these technologically advanced PED capabilities in tailored and scalable mobile and fixed configurations in all maneuver and maneuver support units from Company Intelligence Support Team to Army Service Component Command, and in select maneuver sustainment units battalion and

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305208A / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) 956 / <i>Distributed Common Ground System (MIP)</i>
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above. The program also develops software packages to be embedded in mission command and other select systems to provide required ISR/analytic capabilities. DCGS-A is a critical Army priority.

DCGS-A software is tailored by echelon and scalable to each unit's mission. DCGS-A provides commanders and staffs the ability to maintain an accurate and up to date understanding of the operational environment. The DCGS-A contribution to commanders' visualization and situational awareness, rapid planning, and the synchronization of all warfighting functions, enable Army units to operate within the enemy's decision cycle. This capability enhances tactical and operational maneuver and the conduct of full spectrum operations across the range of military operations from humanitarian to major combat operations.

The DCGS-A configurations range from laptops to systems integrated in tactical shelters and mounted on tactical vehicles to large commodity servers operating in a sanctuary based processing environment. The fundamental intent and tenet of this approach is to reduce forward deployed equipment/footprint by co-locating the advanced analytics capabilities within the DCGS-A baseline with the regional data centers, where the data is stored. This infrastructure consolidation simultaneously reduces processor and communications requirements in tactical units by limiting the number of large data files transported across tactical communications systems. Following a successful operational assessment and Milestone C in 2QFY12/Full Deployment Decision in 1QFY13, the program is deploying DCGS-A Increment 1 Release 1 Software Baseline capability throughout the Army.

FY15 Base funding in the amount of \$9.270 million will be used for the continued development and testing of the DCGS-A Increment 1 Software Releases as well as the continued development and testing of the of the Command Post Computing Environment (CPCE) as it fits into the Army's overarching Common Operating Environment (COE) construct. The COE has been directed by the ASA(ALT) and concurred by the Army G3/5/7 as a priority effort to align all Army networks, procurements, and enhancements under one COE vision. Funds used for efforts associated with the development of the CPCE/COE will include the continued merger/collapse of capabilities across multiple Battlefield Functional Areas (BFAs) and the consolidation of hardware used across the BFAs. Funds used for efforts associated with the development of the software will include continued advancements in the Standard Sharable Geospatial Foundation to support the Tactical Common Operating Picture, as well as further investment into capabilities and widget development supporting All Source Intelligence, Signals Intelligence (SIGINT), Geospatial Intelligence (GEOINT), and emerging architectural and infrastructure enhancements. Furthermore, the program will update the commercial technologies to the latest version(s) to enable industry developed enhanced features. Testing activities requiring these funds will include Developmental Testing (DT) and Operational Testing (OT) for Release 3; Participation in Network Integration Evaluation and Exercises such as: Empire Challenge, ULCHI Freedom Guardian, and Joint Interoperability Certification test(s) for each software release. The result of these activities all serve to prove out the capabilities in Increment 1 Release 3 and COE Version 3 (COE V3).

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
<p>Title: Design and Development of DCGS-A enterprise level net-centric architecture</p> <p align="right">Articles:</p> <p>Description: Continue design and development of DCGS-A enterprise level net-centric architecture to include: Development & Integration of DCGS-A Software; DT/OT, Mobile Basic Contract Deliverables, and Program Management support costs. Global Unified Data Environment (Cloud) - development - to create direct Data Ingest of varying intelligence data types and development of analytical tools to exploit single -INT data, further enhancing Cloud Enterprise Account Management load distribution of</p>	24.509	13.964	-
	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305208A / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) 956 / <i>Distributed Common Ground System (MIP)</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>enterprise level complex searches. Development of Cloud to Cloud Data Synchronization technologies and enhanced data management applications between Cloud and Edge nodes.</p> <p>FY 2013 Accomplishments: Continue design and development of DCGS-A enterprise level net-centric architecture to include: Development & Integration of DCGS-A Software; DT/OT and Program Management support costs. Global Unified Data Environment (Cloud) - development - to create direct Data Ingest of varying intelligence data types and development of analytical tools to exploit single -INT data, further enhancing Cloud Enterprise Account Management load distribution of enterprise level complex searches. Development of Cloud to Cloud Data Synchronization technologies and enhanced data management applications between Cloud and Edge nodes.</p> <p>FY 2014 Plans: Continue design and development of DCGS-A enterprise level net-centric architecture to include: Development & Integration of DCGS-A Software; DT/OT and Program Management support costs. Global Unified Data Environment (Cloud) - development - to create direct Data Ingest of varying intelligence data types and development of analytical tools to exploit single -INT data, further enhancing Cloud Enterprise Account Management load distribution of enterprise level complex searches.</p>			
<p>Title: Matrix Support including SIL S/W Support</p> <p align="right">Articles:</p> <p>Description: Matrix Support including SIL S/W Support</p> <p>FY 2013 Accomplishments: Matrix Support including SIL S/W Support</p> <p>FY 2014 Plans: Matrix Support including SIL S/W Support</p> <p>FY 2015 Plans: Matrix Support including SIL S/W Support</p>	4.554 -	4.082 -	1.356 -
<p>Title: Army and Joint Testing/Development/Operational Test Support</p> <p align="right">Articles:</p> <p>Description: Ongoing Army and Joint interoperability testing and evaluation to include Operational Assessment (Network Integration Evaluation (NIE) Operational Assessment), JITC, and Operational Test</p> <p>FY 2013 Accomplishments:</p>	6.507 -	8.520 -	7.021 -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305208A / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) 956 / <i>Distributed Common Ground System (MIP)</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Ongoing Army and Joint interoperability testing and evaluation to include Operational Assessment (NIE Operational Assessment), JITC, and Operational Test FY 2014 Plans: Ongoing Army and Joint interoperability testing and evaluation to include Operational Assessment (NIE Operational Assessment), JITC, and Operational Test FY 2015 Plans: Ongoing Army and Joint interoperability testing and evaluation to include Operational Assessment (NIE Operational Assessment), JITC, and Operational Test			
Title: Support Costs and Management Services Description: Funding is provided for the following effort/Project Management Support FY 2013 Accomplishments: Provide matrix support and PMO efforts FY 2014 Plans: Provide matrix support and PMO efforts FY 2015 Plans: Provide matrix support and PMO efforts	Articles: 3.103 -	1.041 -	0.893 -
Accomplishments/Planned Programs Subtotals	38.673	27.607	9.270

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• DCGS-A (MIP) Procurement: <i>BZ7316 - Procurement</i>	274.119	118.090	128.207	-	128.207	284.696	259.717	286.822	322.675	Continuing	Continuing
• DCGS-A Increment 2 RDTE: <i>0305208A / D07</i>	-	-	10.885	-	10.885	25.287	25.965	26.409	30.717	Continuing	Continuing

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305208A / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) 956 / <i>Distributed Common Ground System (MIP)</i>

D. Acquisition Strategy

The Distributed Common Ground System-Army (DCGS-A) program was created in response to the Department of Defense (DoD) Distributed Common Ground/Surface System (DCGS) Mission Area Initial Capabilities Document (MA ICD) dated 13 Aug 2004, which captured the overarching requirements for an Intelligence, Surveillance, and Reconnaissance (ISR) Family of Systems (FoS) that will contribute to Joint and combined Warfighter needs. That ICD was updated as the Distributed Common Ground/Surface System (DCG/SS) Enterprise ICD, and approved by the Joint Requirements Oversight Council (JROC) 27 Feb 2009. The Army requirements were refined in the DCGS-A Capabilities Development Document (CDD), and approved by the JROC 31 Oct 2005. The DCGS-A program is currently in the Production and Deployment phase and was designated as a Major Automated Information System (MAIS) in OSD (AT&L) Memorandum, 29 Mar 2010.

DCGS-A is following an evolutionary acquisition approach to develop and field system capabilities over time to satisfy the requirements of the DCGS-A Capability Development Document (CDD). Following this approach, the first increment was defined and a Capability Production Document (CPD) was created with full consideration of all of the preceding supporting documents and analysis. As part of its initial staffing, a Cost Benefit Analysis was completed in support of the DCGS-A CPD. This analysis projected a significant cost avoidance/savings over the life cycle by not limiting the hardware configuration to a one size fits all unit types design but rather integrating the DCGS-A Software capabilities into common servers and other IT components fielded at that echelon. This approach was validated during the Milestone C and Full Deployment Decision process in FY2012 through the Office of the Secretary of Defense (OSD) Cost Assessment and Program Evaluation (CAPE) approval of the Economic Analysis. This Economic Analysis validated the cost savings achieved utilizing the acquisition approach outlined above.

The DCGS-A System Engineering Plan (SEP) updated the current development plan and was approved by OASD (R&E) on 5 Dec 2011. The DCGS-A Revised Acquisition Strategy (AS) was approved by the Defense Acquisition Executive (DAE) on 8 Aug 2013. The DCGS-A Acquisition Program Baseline was approved on 26 Feb 2013. The DCGS-A program received a Milestone C decision on 29 Feb 2012 and an operational test was completed in Jun 2012. A successful Full Deployment Decision (FDD) for Release 1 Initial Minimum Capability was obtained December 2012.

PM DCGS-A has been designated as the Command Post Computing Environment (CPCE) Lead for PEO IEW&S. As such, DCGS-A is currently aligning it's architecture to fit within the Common Operating Environment (COE) as described by the ASA(ALT) COE Implementation Plan. This alignment is in accordance with the G-3/5/7 priority to align all Army networks, procurements, and enhancements under one COE and one vision. Our acquisition strategy supports this initiative as we continue to collapse PORs and reduce footprint following our capability migration path and iterative development of software releases which continue to increase capabilities to satisfy the remaining CPD requirements beyond Initial Minimal Capability. As DCGS-A continues the path through Increment 1 and beyond, each release will focus on the COE and continually align the Command Post activities with DCGS-A Cloud and POR migration activities. The program office expects to continue as the DCGS-A System Integrator for software development and hardware integration, and will continue to access multiple vendors by leveraging a variety of competitively awarded contracts.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0305208A / Distributed Common Ground/Surface Systems				956 / Distributed Common Ground System (MIP)							
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management	Various	PM, DCGS-A : APG, MD	24.738	3.103	Sep 2013	1.041		0.893	Sep 2015	-		0.893	Continuing	Continuing	Continuing
Subtotal			24.738	3.103		1.041		0.893		-		0.893	-	-	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Metadata Catalog	Various	MITRE, : various	17.865	-		-		-		-		-	Continuing	Continuing	Continuing
Design & Develop DCGS-A Architecture	Various	Northrup Grumman, Various : Linthicum, MD, Various	223.368	24.509	Sep 2013	-		-		-		-	-	247.877	-
Design & Develop DCGS-A Incr 1 Software	Various	TBD, Various : TBD	0.000	-		13.964		-		-		-	Continuing	Continuing	-
Secure Common Data Link (SCDL)	Various	CUBIC : Orlando, Fla.	0.788	-		-		-		-		-	Continuing	Continuing	-
Global Unified Data Environment (Cloud) Development	Various	CERDEC/SEC : APG, MD	21.500	-		-		-		-		-	Continuing	Continuing	-
Subtotal			263.521	24.509		13.964		-		-		-	-	-	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support Government Test & Integration Lab	Various	CECOM : CECOM	14.180	4.554	Sep 2013	4.082		1.356	Dec 2014	-		1.356	Continuing	Continuing	Continuing
Subtotal			14.180	4.554		4.082		1.356		-		1.356	-	-	-

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305208A / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) 956 / <i>Distributed Common Ground System (MIP)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Full Deployment Decision	1	2013	1	2013
Inc 1 Rel 1 - 3 Developmental	1	2012	1	2016
Developmental Test/Operational Test Inc 1 Rel 2	2	2014	2	2015
Developmental Test/Operational Test Inc 1 Rel 3	4	2015	3	2016
Fielding & Training IAW ARFORGEN Rotations	1	2011	4	2018
Fielding & Training Inc 1 Rel 1	3	2013	4	2015
Inc 1 Rel 1 Initial Operational Capability	3	2013	3	2013
Fielding & Training Inc 1 Rel 2	1	2016	4	2019
Fielding & Training Inc 1 Rel 3	3	2017	4	2019

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305208A / <i>Distributed Common Ground/Surface Systems</i>				Project (Number/Name) D07 / <i>DCGS-A Common Modules (MIP)</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
D07: <i>DCGS-A Common Modules (MIP)</i>	-	-	-	10.885	-	10.885	25.287	25.965	26.409	30.717	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Project D07 (Increment 2) was created to clearly delineate between the DCGS-A Project 956 (Increment 1) development efforts beginning in FY15. D07 does not represent a New Start program; the funding in D07 has previously been included in Project 956 within the same Program Element..

A. Mission Description and Budget Item Justification

Distributed Common Ground System - Army (DCGS-A) is the Intelligence, Surveillance and Reconnaissance (ISR) System of Systems (SoS) for Joint, Interagency, Allied, Coalition, and National data analysis, sharing and collaboration. The core functions of DCGS-A are: the vertical and horizontal synchronization of ISR Processing, Exploitation and Dissemination (PED) efforts; operations in a networked environment at multiple security levels; the control of select Army and joint sensor systems; the fusion of all acquired data and information, and distribution of relevant red (threat), gray (non-aligned), and environmental (weather and terrain) information; and providing the Warfighters' early warning and targeting capability. DCGS-A provides a single integrated ISR ground processing system composed of common components that are interoperable with sensors, other information sources, all Warfighting Functions, compliant with standards providing the Defense Information & Intelligence Enterprise (DI2E) and Intelligence Community Information Technology Enterprise (ICITE). DCGS-A is fielded in Fixed and Mobile configurations emphasizing the use of reach and split based operations by improving accessibility of data in order to reduce forward deployed footprint. As enhanced capabilities are developed and tested, a continuing series of software releases will be integrated into Army Common/commodity hardware and fielded to units IAW the Army Force Generation (ARFORGEN) process.

The Army Acquisition Executive designated to PEO IEW&S and DCGS-A as the Command Post Computing Environment (CPCE) Lead. As such, DCGS-A is defining the architecture to fit within the Common Operating Environment (COE) as described by the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) (ASA(ALT)) COE Implementation Plan. This is in accordance with the G-3/5/7 priority to align all Army networks, procurements, and enhancements under one COE and one vision leveraging intelligence community investments.

The DCGS-A acquisition strategy incrementally consolidates, enhances, and modernizes the Tasking, Processing, Exploitation, and Dissemination (TPED) capabilities formerly found in nine Army intelligence programs of record (Common Ground Station (CGS), Guardrail Common Sensor (GRCS), Counterintelligence & Interrogator Operations Workstation (CI&I OPS WS), All Source Analysis System (ASAS), Enhanced TracWolf (ETW), Digital Topographic Support System (DTSS), Integrated Meteorological System (IMETS), Tactical Exploitation System (TES), and Prophet Control) and two Quick Reaction Capabilities (Joint Intelligence Operations Center – Iraq (JIOC-I) and Imagery Work Station(IWS)). DCGS-A provides these technologically advanced PED capabilities through iterative software releases delivered in tailored and scalable mobile and fixed configurations in all maneuver and maneuver support units from Company Intelligence Support Team to Army Service Component

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305208A / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) D07 / <i>DCGS-A Common Modules (MIP)</i>
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Command, and in select maneuver sustainment units battalion and above. The program develops software packages to be embedded in mission command and other select systems to provide required ISR/analytic capabilities. DCGS-A is a critical Army priority.

FY15 Base funding in the amount of \$10.885 million will continue the iterative DCGS-A software releases that will increase the Processing, Exploitation, and Dissemination capability our Army requires. Increment 2 of the DCGS-A program will continue critical updates to the All Source Intelligence and the overarching Intelligence Processing capability to the Army through the Cloud Computing capability. This approach will achieve Information Technology efficiencies through alignment with the Intelligence Community Information Technology Environment, while maintaining the incremental software updates required to remain current.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
<p>Title: Design & Develop DCGS-A Inc 2 Software</p> <p>Description: Design & Develop DCGS-A Inc 2 software to deliver capabilities in accordance with the DCGS-A Capability Description Document.</p> <p>FY 2015 Plans: Design & Develop DCGS-A Inc 2 software to deliver capabilities in accordance with the DCGS-A Capability Description Document.</p>	-	-	1.836
<p>Title: System reconfiguration/redesign</p> <p>Description: System Reconfiguration to enhance the systems to deliver higher performance to leverage industry enhancements in Cloud Technology and Solid State hardware.</p> <p>FY 2015 Plans: System Reconfiguration to enhance the systems to deliver higher performance to leverage industry enhancements in Cloud Technology and Solid State hardware.</p>	-	-	3.020
<p>Title: Matrix Support Government Test & Integration Lab</p> <p>Description: Matrix Support Government Test & Integration Lab support for software integration to the target platforms.</p> <p>FY 2015 Plans: Matrix Support Government Test & Integration Lab support for software integration to the target platforms.</p>	-	-	1.657
<p>Title: Project Management</p> <p>Description: Project Management support to manage the cost, schedule, and performance metrics for the program.</p> <p>FY 2015 Plans:</p>	-	-	1.054

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305208A / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) D07 / <i>DCGS-A Common Modules (MIP)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Project Management support to manage the cost, schedule, and performance metrics for the program.			
Title: Milestone preparation; Activities; AoA	-	-	3.318
Description: Milestone preparation; Activities; Development of the Analysis of Alternatives to define the acquisition approach and achieve a successful Milestone B for the Increment 2 program.			
FY 2015 Plans: Milestone preparation; Activities; Development of the Analysis of Alternatives to define the acquisition approach and achieve a successful Milestone B for the Increment 2 program.			
Accomplishments/Planned Programs Subtotals	-	-	10.885

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• 956: <i>DCGS-A (MIP) 0305208A/956</i>	38.673	27.607	9.270	-	9.270	0.423	-	-	-	Continuing	Continuing
• BZ7316 - <i>DCGS-A Procurement: BZ7316 - Procurement</i>	274.119	118.090	128.207	-	128.207	284.696	259.717	286.822	322.675	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Distributed Common Ground System-Army (DCGS-A) program was created in response to the Department of Defense (DoD) Distributed Common Ground/Surface System (DCGS) Mission Area Initial Capabilities Document (MA ICD) dated 13 Aug 2004, which captured the overarching requirements for an Intelligence, Surveillance, and Reconnaissance (ISR) Family of Systems (FoS) that will contribute to Joint and combined Warfighter needs. That ICD was updated as the Distributed Common Ground/Surface System (DCG/SS) Enterprise ICD, and approved by the Joint Requirements Oversight Council (JROC) 27 Feb 2009. The Army requirements were refined in the DCGS-A Capabilities Development Document (CDD), and approved by the JROC 31 Oct 2005. The DCGS-A program is currently in the Production and Deployment phase and was designated as a Major Automated Information System (MAIS) in OSD (AT&L) Memorandum, 29 Mar 2010. The Information Systems Capability Development Document (ISCDD), currently in staffing, is an update to the 2005 CDD.

DCGS-A is following an evolutionary acquisition approach to develop and field system capabilities over time to satisfy the requirements of the DCGS-A Capability Development Document (CDD). Following this approach, the first increment was defined and a Capability Production Document (CPD) was created with full consideration of all of the preceding supporting documents and analysis. As part of its initial staffing, a Cost Benefit Analysis was completed in support of the DCGS-A CPD. This analysis projected a significant cost avoidance/savings over the life cycle by not limiting the hardware configuration to a one size fits all unit types design but rather integrating the DCGS-A Software capabilities into common servers and other IT components fielded at that echelon. This approach was validated during the

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305208A / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) D07 / <i>DCGS-A Common Modules (MIP)</i>
<p>Milestone C and Full Deployment Decision process in FY2012 through the Office of the Secretary of Defense (OSD) Cost Assessment and Program Evaluation (CAPE) approval of the Economic Analysis. This Economic Analysis validated the cost savings achieved utilizing the acquisition approach outlined above.</p> <p>The DCGS-A Increment 2 Acquisition Strategy will be a competitive contract to a single vendor for managing the development, integration, documentation, and test for the Increment 2 Releases. Anticipate RFP release in 3QFY15 and contract award in 2QFY16.</p> <p>PM DCGS-A has been designated as the Command Post Computing Environment (CPCE) Lead for PEO IEW&S. As such, DCGS-A is currently aligning its architecture to fit within the Common Operating Environment (COE) as described by the ASA(ALT) COE Implementation Plan. This alignment is in accordance with the G-3/5/7 priority to align all Army networks, procurements, and enhancements under one COE and one vision. Our acquisition strategy supports this initiative as we continue to collapse PORs and reduce footprint following our capability migration path and iterative development of software releases which continue to increase capabilities to satisfy the remaining CPD requirements beyond Initial Minimal Capability. As DCGS-A continues the path through Increment 2, each release will focus on the COE and continually align the Command Post activities with the DCGS-A platforms. The program office expects to award a competitive contract for software development and hardware integration.</p> <p><u>E. Performance Metrics</u> N/A</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014				
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)								
2040 / 7				PE 0305208A / Distributed Common Ground/Surface Systems				D07 / DCGS-A Common Modules (MIP)								
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Project Management	C/TBD	TBD : TBD	0.000	-		-		1.054	Mar 2015	-		1.054	-	1.054	-	
Milestone preparation; Activities; AoA	C/TBD	TBD : TBD	0.000	-		-		3.318	Mar 2015	-		3.318	-	3.318	-	
Subtotal			0.000	-		-		4.372		-		4.372	-	4.372	-	
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Design & Develop DCGS-A Inc 2 software	C/TBD	TBD : TBD	0.000	-		-		1.836	Mar 2015	-		1.836	Continuing	Continuing	Continuing	
System reconfiguration/redesign	C/TBD	TBD : TBD	0.000	-		-		3.020	Mar 2015	-		3.020	-	3.020	-	
Subtotal			0.000	-		-		4.856		-		4.856	-	-	-	
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Matrix Support Government Test & Integration Lab	C/TBD	TBD : TBD	0.000	-		-		1.657	Dec 2014	-		1.657	-	1.657	-	
Subtotal			0.000	-		-		1.657		-		1.657	-	1.657	-	
Project Cost Totals			0.000	-		-		10.885		-		10.885	-	-	-	
Remarks																

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305208A / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) D07 / <i>DCGS-A Common Modules (MIP)</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Development and Test Inc 2																												
Development and Test Inc 2 Rel 1 Software																												
Development and Test Inc 2 Rel 2 Software																												
Operational Test Inc 2 Rel 1																												
Increment 2 MDD																												
RFP Release Increment 2																												
Development Contract Award Increment 2																												
Milestone B																												
Milestone C																												
Fielding Inc 2 Rel 1																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305208A / <i>Distributed Common Ground/Surface Systems</i>	Project (Number/Name) D07 / <i>DCGS-A Common Modules (MIP)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Development and Test Inc 2	2	2015	4	2019
Development and Test Inc 2 Rel 1 Software	2	2015	4	2018
Development and Test Inc 2 Rel 2 Software	2	2018	4	2019
Operational Test Inc 2 Rel 1	3	2018	4	2018
Increment 2 MDD	1	2015	1	2015
RFP Release Increment 2	3	2015	3	2015
Development Contract Award Increment 2	2	2016	2	2016
Milestone B	2	2016	2	2016
Milestone C	2	2019	2	2019
Fielding Inc 2 Rel 1	3	2019	4	2019

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0305219A / MQ-1 Gray Eagle UAV
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	68.694	10.895	46.472	-	46.472	-	-	-	-	-	126.061
MQ1: MQ-1 Gray Eagle - Army UAV (MIP)	-	68.694	10.895	46.472	-	46.472	-	-	-	-	-	126.061

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Gray Eagle provides Reconnaissance, Surveillance, Target Acquisition (RSTA), command and control, communications relay, Signals Intelligence (SIGNIT), battle damage assessment, and manned-unmanned teaming capability. Gray Eagle is a dedicated, assured, multi-mission Unmanned Aircraft System (UAS) fielded to all ten Army Divisions to support the commander's combat operations. The Army Special Operations Aviation Command (ARSOAC) Gray Eagle units and Aerial Exploitation Battalions (AEB) Gray Eagle units are self-contained Intelligence, Surveillance and Reconnaissance capabilities teamed with organic Processing, Exploitation and Dissemination that are a global rapidly deployable force and contribute to the Department of Defense Global ISR mission. A Gray Eagle unit consists of either 9 or 12 Aircraft, Universal Ground Control equipment, Standard Equipment Package and Payloads to include: Electro-Optical/Infrared Laser Range Finder/Laser Designator, synthetic aperture radar/ground moving target indicator, communication relay, and up to 4 HELLFIRE Missiles.

The Ground Based Sense and Avoid (GBSAA) system provides an alternative means of complying with Federal Aviation Administration "see and avoid" regulations.

Justification: FY 2015 funding of \$46.472 million will provide for completion of development and developmental testing of the Software Version 4.3 which will be used for Follow-on Test and Evaluation (FOT&E) and will complete Gray Eagle FOT&E test events. FY 2015 funds will also provide for GBSAA development and testing.

B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	74.618	10.901	17.609	-	17.609
Current President's Budget	68.694	10.895	46.472	-	46.472
Total Adjustments	-5.924	-0.006	28.863	-	28.863
• Congressional General Reductions	-5.924	-0.006			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	28.863	-	28.863

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305219A / MQ-1 Gray Eagle UAV				Project (Number/Name) MQ1 / MQ-1 Gray Eagle - Army UAV (MIP)			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
MQ1: MQ-1 Gray Eagle - Army UAV (MIP)	-	68.694	10.895	46.472	-	46.472	-	-	-	-	-	126.061
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Integration of the Universal Ground Products into the Gray Eagle System requires completion of a Follow-On Operational Test and Evaluation (FOT&E). FY2015 funds increase is required to accommodate the FOT&E move to FY2015.

A. Mission Description and Budget Item Justification

Gray Eagle provides Reconnaissance, Surveillance, Target Acquisition (RSTA), command and control, communications relay, Signals Intelligence (SIGINIT), battle damage assessment, and manned-unmanned teaming capability. Gray Eagle is a dedicated, assured, multi-mission Unmanned Aircraft System (UAS) fielded to all ten Army Divisions to support the commander's combat operations. The Army Special Operations Aviation Command (ARSOAC) Gray Eagle units and Aerial Exploitation Battalions (AEB) Gray Eagle units are self-contained Intelligence, Surveillance and Reconnaissance capabilities teamed with organic Processing, Exploitation and Dissemination that are a global rapidly deployable force and contribute to the Department of Defense Global ISR mission. A Gray Eagle unit consists of either 9 or 12 Aircraft, Universal Ground Control equipment, Standard Equipment Package and Payloads to include: Electro-Optical/Infrared Laser Range Finder/Laser Designator, synthetic aperture radar/ground moving target indicator, communication relay, and up to 4 HELLFIRE Missiles.

The Ground Based Sense and Avoid (GBSAA) system provides an alternative means of complying with Federal Aviation Administration "see and avoid" regulations.

Justification: FY 2015 funding of \$46.472 million will provide for completion of development and developmental testing of the Software Version 4.3 which will be used for Follow-on Test and Evaluation (FOT&E) and will complete Gray Eagle FOT&E test events. FY 2015 funds will also provide for GBSAA development and testing.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Gray Eagle Engineering and Manufacturing Development	12.487	-	-
Articles:	-	-	-
Description: Completed EMD contract efforts. Conducted Engineering Services efforts related to Link 16 and Universal product hardware development.			
FY 2013 Accomplishments: Completed EMD contract efforts. Conducted Engineering Services efforts related to Link 16 and Universal product hardware development.			
Title: Gray Eagle Software / Hardware Development	44.474	-	18.330

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305219A / MQ-1 Gray Eagle UAV	Project (Number/Name) MQ1 / MQ-1 Gray Eagle - Army UAV (MIP)		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Articles:		-	-	-
Description: Gray Eagle Software / Hardware Development				
FY 2013 Accomplishments: Began software development of the 4.3.X software, required for the introduction of the Universal Ground Control Station and other Universal products which will be tested in FOT&E.				
FY 2015 Plans: Complete development of 4.3.X software.				
Title: Government Test Support		3.595	5.080	22.493
Articles:		-	-	-
Description: Government test support including support of developmental test, Electromagnetic Environmental Effects (E3) testing on the UGCS, Joint Interoperability Test Center efforts, Link 16 testing, and FOT&E test planning, site preparation, and complete FOT&E.				
FY 2013 Accomplishments: Government test support including support of developmental test, Electromagnetic Environmental Effects (E3) testing on the UGCS, Joint Interoperability Test Center efforts, Link 16 testing, and FOT&E test planning and site preparation.				
FY 2014 Plans: Continue Government test support including support of developmental test and FOT&E test planning and site preparation.				
FY 2015 Plans: Complete developmental test to include Captive Carry, Transport/Mobility. Conduct and complete FOT&E.				
Title: Gray Eagle Support including Engineering and Program Management		0.445	-	-
Articles:		-	-	-
Description: Gray Eagle Support including Engineering and Program Management				
FY 2013 Accomplishments: Implement reliability improvements and corrections for IOT&E as well as integration of office wide interoperability initiatives.				
Title: Ground Base Sense and Avoid (GBSAA)		7.693	5.815	5.649
Articles:		-	-	-
Description: Ground Base Sense and Avoid (GBSAA)				

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305219A / MQ-1 Gray Eagle UAV	Project (Number/Name) MQ1 / MQ-1 Gray Eagle - Army UAV (MIP)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<i>FY 2013 Accomplishments:</i> Ground Base Sense and Avoid (GBSAA); Development of the GBSAA software and perform testing			
<i>FY 2014 Plans:</i> Ground Base Sense and Avoid (GBSAA)			
<i>FY 2015 Plans:</i> Ground Base Sense and Avoid (GBSAA); Development of the GBSAA software, integration, and perform testing.			
Accomplishments/Planned Programs Subtotals	68.694	10.895	46.472

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• MQ-1 UAV / APA (A00005): MQ-1 UAV / APA (A00005) -Base	518.088	437.143	190.581	-	190.581	45.885	47.401	1.988	0.099	Continuing	Continuing

Remarks

D. Acquisition Strategy

An Extended Range Multi-Purpose (ERMP) Operational Requirement Document (ORD) was approved by the Joint Requirement Oversight Council (JROC) 6 Apr 2005, Milestone B occurred 20 Apr 2005, and the System Development and Demonstration contract was awarded 8 Aug 2005, as a result of a competitive solicitation which included a vendor system capabilities demonstration. A Capabilities Production Document (CPD) was approved 14 Mar 09. To meet the required capability, evolutionary acquisition has been employed to implement the incremental approach outlined in the CPD. Gray Eagle completed IOT&E and the program now has to complete software development, integration and testing of the universal products (UGCS, UGDT and other universal ground equipment). PM JAMS is developing the R model of the HELLFIRE missile and participating in the integration and test activities for the entire Gray Eagle system. PEO Missile and Space is budgeting for the procurement of missiles for the fielded systems. PEO Intelligence and Electronic Warfare Systems (IEWES) develops, manages, and is responsible for meeting all Gray Eagle costs associated for payloads, payload integration, and payload sustainment.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305219A / MQ-1 Gray Eagle UAV	Project (Number/Name) MQ1 / MQ-1 Gray Eagle - Army UAV (MIP)
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management	MIPR	PM UAS : Redstone Arsenal, AL	9.066	-		-		-		-		-	-	9.066	-
Subtotal			9.066	-		-		-		-		-	-	9.066	-

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Development Engineering	C/CPIF	General Atomics / ASI : San Diego, CA	149.848	12.487	Sep 2013	-		-		-		-	-	162.335	-
Prototype Manufacturing	Various	General Atomics / ASI : San Diego, CA	213.776	-		-		-		-		-	-	213.776	-
Ground Support Equipment	C/CPIF	Various : Various	9.075	-		-		-		-		-	-	9.075	-
Ground Base Sense & Avoid (GBSAA)	SS/CPFF	Various : Various	0.000	7.693	Apr 2013	5.815	Mar 2014	5.649	Jan 2015	-		5.649	0.013	19.170	-
Software / Hardware Development	SS/CPIF	General Atomics : San Diego, CA	31.740	44.474	Sep 2013	-		18.330	Nov 2014	-		18.330	-	94.544	-
Subtotal			404.439	64.654		5.815		23.979		-		23.979	0.013	498.900	-

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Contractor Engineering Support	MIPR	Ft. Huachuca : Ft. Huachuca	24.402	0.099		-		-		-		-	-	24.501	-
Training and Training Equipment	MIPR	Ft. Huachuca : Ft. Huachuca	43.892	-		-		-		-		-	-	43.892	-
Government Engineering Support	C/FFP	Various : Various	18.513	0.346		-		-		-		-	-	18.859	-
Subtotal			86.807	0.445		-		-		-		-	-	87.252	-

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305219A / MQ-1 Gray Eagle UAV	Project (Number/Name) MQ1 / MQ-1 Gray Eagle - Army UAV (MIP)

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Engineering and Manufacturing Development	3	2005	4	2013
Full Rate Production Contract Award	3	2013	3	2013
Initial Operating Capability	1	2013	1	2013
Follow-on Operational Test and Evaluation	3	2015	3	2015
Developmental Testing and Software Testing	1	2014	1	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	3.716	2.320	-	-	-	-	-	-	-	-	6.036
RA7: <i>RQ-11 Raven (MIP)</i>	-	3.716	2.320	-	-	-	-	-	-	-	-	6.036

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Small Unmanned Aircraft System (SUAS) provides the battalion and below ground maneuver elements critical situational awareness and enhance force protection. The system provides the small unit commander an organic and responsive tactical Reconnaissance, Surveillance, and Target Acquisition capability through the ability to view real-time Full Motion Video and sensor data via the system ground control stations. Other compatible receivers, such as the One System Remote Video Terminal and appropriately equipped manned platforms may also receive the SUAS products.

A SUAS includes three hand-launched aircraft that do not require an improved launch/recovery location. In addition to the aircraft, the system contains ground control equipment, which includes an interoperable hand controller. The equipment is fully transportable in or on rucksack type packs that are organic to the unit.

The SUAS RDT&E budget line includes funding for studies and incremental development/upgrade of current SUAS capabilities that will capitalize on new technology insertions based on identified user requirements. Past improvements include a Digital Data Link capability, introduced in 2010, which provides data link relay capability, and integrated gimbaled payloads. Future enhancements will follow the natural progression of technology and exploitation of improved payloads to meet Warfighter needs. Improved system enhancements will support Army modernization initiatives and the service emphasis on Squad-Foundation of the Decisive Force. Development of a government purpose rights control device compatible with current and future SUAS platforms and integrated into tactical networks is required. Compatibility for SUAS with Net Warrior elements will support seamless transmission of data between squad members and adjacent and higher commands. A communications relay capability for SUAS will extend the operational connectivity of the squad when ground based communications cannot support the ranges due to terrain or atmospheric. The relay capability supports the Aerial Layer Network Transport Initial Capabilities Document for low altitude requirements. Development of a sensor to shooter capability will link forward edge combatants to organic and supporting fires networks with rapid dissemination of target information and imagery. Efforts to reduce the workload required to operate the SUAS will free the soldiers to perform their primary mission while retaining the advantages afforded by the SUAS. Improved autonomy, to include GPS and comms denied environments will be sought through leverage of software, processor, and communications enhancements.

Justification: No Funding is requested in FY2015.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV
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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	4.039	2.321	3.335	-	3.335
Current President's Budget	3.716	2.320	-	-	-
Total Adjustments	-0.323	-0.001	-3.335	-	-3.335
• Congressional General Reductions	-0.323	-0.001			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-3.335	-	-3.335

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV				Project (Number/Name) RA7 / RQ-11 Raven (MIP)			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
RA7: RQ-11 Raven (MIP)	-	3.716	2.320	-	-	-	-	-	-	-	-	6.036
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Small Unmanned Aircraft System (SUAS) provides the battalion and below ground maneuver elements critical situational awareness and enhance force protection. The system provides the small unit commander an organic and responsive tactical Reconnaissance, Surveillance, and Target Acquisition capability through the ability to view real-time Full Motion Video and sensor data via the system ground control stations. Other compatible receivers, such as the One System Remote Video Terminal and appropriately equipped manned platforms may also receive the SUAS products.

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The SUAS RDT&E budget line includes funding for studies and incremental development/upgrade of current SUAS capabilities that will capitalize on new technology insertions based on identified user requirements. Past improvements include a Digital Data Link capability, introduced in 2010, which provides data link relay capability, and integrated gimbaled payloads. Future enhancements will follow the natural progression of technology and exploitation of improved payloads to meet Warfighter needs. Improved system enhancements will support Army modernization initiatives and the service emphasis on Squad-Foundation of the Decisive Force. Development of a government purpose rights control device compatible with current and future SUAS platforms and integrated into tactical networks is required. Compatibility for SUAS with Net Warrior elements will support seamless transmission of data between squad members and adjacent and higher commands. A communications relay capability for SUAS will extend the operational connectivity of the squad when ground based communications cannot support the ranges due to terrain or atmospheric. The relay capability supports the Aerial Layer Network Transport Initial Capabilities Document for low altitude requirements. Development of a sensor to shooter capability will link forward edge combatants to organic and supporting fires networks with rapid dissemination of target information and imagery. Efforts to reduce the workload required to operate the SUAS will free the soldiers to perform their primary mission while retaining the advantages afforded by the SUAS. Improved autonomy, to include GPS and comms denied environments will be sought through leverage of software, processor, and communications enhancements.

Justification: No Funding is requested in FY2015.

The FY2015 funding reduction was the result of a reprioritization of Army requirements within the constraints of the Bipartisan Budget Act of FY2013.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

Title:	FY 2013	FY 2014	FY 2015
Base: Program Management Support	0.731	0.751	-
Articles:	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV	Project (Number/Name) RA7 / RQ-11 Raven (MIP)

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Description: Program Management Support FY 2013 Accomplishments: Base: Program Management Support FY 2014 Plans: Base: Program Management Support			
Title: Base: Product Improvement Studies and Development Description: Base: Product Improvement Studies and Development FY 2013 Accomplishments: Base: Product Improvement Studies and Development FY 2014 Plans: Base: Product Improvement Studies and Development	Articles: 2.910 -	1.469 -	- -
Title: System Test and Evaluation Description: System Test and Evaluation FY 2013 Accomplishments: System Test and Evaluation FY 2014 Plans: System Test and Evaluation	Articles: 0.075 -	0.100 -	- -
Accomplishments/Planned Programs Subtotals	3.716	2.320	-

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• RQ-11 (RAVEN) - A00010: RQ-11 (RAVEN) - A00010	25.798	10.372	3.964	-	3.964	-	-	-	0.015	0.015	40.164

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army Date: March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV	Project (Number/Name) RA7 / RQ-11 Raven (MIP)
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D. Acquisition Strategy

SUAS Product Office executed a single award best value IDIQ contract utilizing full and open competition. This contract provides affordable access for a fully staffed Technical, Management, Training, and Logistics organization, over a five-year period of performance (three year base period and two, single year options). The Government will make contract award based upon competitive source selection criteria.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305232A / RQ-11 UAV	Project (Number/Name) RA7 / RQ-11 Raven (MIP)
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Personnel	RO	PM UAS : PM UAS	0.259	0.731		0.751		-		-		-	-	1.741	-
Subtotal			0.259	0.731		0.751		-		-		-	-	1.741	-

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Product Improvements Studies and Development	C/IDIQ	AMRDEC, Redstone Arsenal, AL : AMRDEC, Redstone Arsenal, AL	2.823	2.910	Apr 2014	-		-		-		-	-	5.733	-
Product Improvement Studies and Development	C/IDIQ	TBD : TBD	0.000	-		1.469	Jun 2014	-		-		-	-	1.469	-
Subtotal			2.823	2.910		1.469		-		-		-	-	7.202	-

Remarks
FY2014 funds will support the Competitive IDIQ Engineering Services Contract. Contractor, to be determined.

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Other Government Agencies	MIPR	Various : Various	0.000	-		-		-		-		-	-	-	-
Subtotal			0.000	-		-		-		-		-	-	-	-

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test and Evaluation	MIPR	Various : Various	0.400	0.075		0.100		-		-		-	-	0.575	-

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305233A / RQ-7 UAV
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	28.554	12.025	16.389	-	16.389	7.454	7.987	10.459	10.100	-	92.968
RQ7: <i>RQ-7 Shadow UAV</i>	-	28.554	12.025	16.389	-	16.389	7.454	7.987	10.459	10.100	-	92.968

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Tactical Unmanned Aerial Vehicle (TUAV) RQ-7 Shadow provides the Army Brigade Commander with dedicated Reconnaissance, Surveillance and Target Acquisition (RSTA), Intelligence, Battle Damage Assessment (BDA), Force Protection and Manned-Unmanned Teaming capability. It also provides the Brigade Commander with critical battlefield intelligence and targeting information in the rapid cycle time required for success at the tactical level. The TUAV Shadow system air vehicle meets the required operating range of 50 kilometers and remains on station for up to nine hours. The TUAV Shadow system consists of 4 air vehicles (each configured with an Electro Optical/Infrared (EO/IR) sensor payload), launcher, ground control and support equipment including: power generation, communications equipment, automated recovery equipment, one system remote video terminals, vehicle mounted shelters, and High Mobility Multipurpose Wheeled Vehicles with trailer(s). Each system is equipped with one Maintenance Section Multifunctional (MSM) and is supported at the division level by a Mobile Maintenance Facility (MMF).

All 102 Shadow UAS systems have been procured and fielded. Shadow has amassed over 880,190 total flight hours, most of which were flown in support of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). Incremental upgrades are required for continued improvement and interoperability. Common Systems Integration is required to ensure interoperability with other manned and unmanned weapon systems, to include One System Remote Video Terminal (OSRVT). Continued developmental improvements are required to provide greater interoperability, increase operational capability and flexibility to the Brigade Combat Team. Modifications to the airframe, avionics, payloads, ground control equipment, and support equipment are based on documented requirements and lessons learned from units operating in OEF and OIF.

Justification: FY2015 RQ-7 UAV Base funding of \$16.389 million will be used for capability and reliability improvements, specifically: Air Vehicle modifications (Block III Engine), reduced noise signature for engine and Ground Equipment (interoperability) improvements. Additionally, funds will be for System Engineering, Program Management, and System Test and Evaluation support. Funds will also be used to incorporate the Increment II OSRVT Bi-Directional capability, ensure interoperability, and OSRVT test events.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305233A / RQ-7 UAV
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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	31.158	12.031	29.735	-	29.735
Current President's Budget	28.554	12.025	16.389	-	16.389
Total Adjustments	-2.604	-0.006	-13.346	-	-13.346
• Congressional General Reductions	-2.604	-0.006			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-13.346	-	-13.346

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0305233A / RQ-7 UAV				Project (Number/Name) RQ7 / RQ-7 Shadow UAV			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
RQ7: RQ-7 Shadow UAV	-	28.554	12.025	16.389	-	16.389	7.454	7.987	10.459	10.100	-	92.968
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Tactical Unmanned Aerial Vehicle (TUAV) RQ-7 Shadow provides the Army Brigade Commander with dedicated Reconnaissance, Surveillance and Target Acquisition (RSTA), Intelligence, Battle Damage Assessment (BDA), Force Protection and Manned-Unmanned Teaming capability. It also provides the Brigade Commander with critical battlefield intelligence and targeting information in the rapid cycle time required for success at the tactical level. The TUAV Shadow system air vehicle meets the required operating range of 50 kilometers and remains on station for up to nine hours. The TUAV Shadow system consists of 4 air vehicles (each configured with an Electro Optical/Infrared (EO/IR) sensor payload), launcher, ground control and support equipment including: power generation, communications equipment, automated recovery equipment, one system remote video terminals, vehicle mounted shelters, and High Mobility Multipurpose Wheeled Vehicles with trailer(s). Each system is equipped with one Maintenance Section Multifunctional (MSM) and is supported at the division level by a Mobile Maintenance Facility (MMF).

All 102 Shadow UAS systems have been procured and fielded. Shadow has amassed over 880,190 total flight hours, most of which were flown in support of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). Incremental upgrades are required for continued improvement and interoperability. Common Systems Integration is required to ensure interoperability with other manned and unmanned weapon systems, to include One System Remote Video Terminal (OSRVT). Continued developmental improvements are required to provide greater interoperability, increase operational capability and flexibility to the Brigade Combat Team. Modifications to the airframe, avionics, payloads, ground control equipment, and support equipment are based on documented requirements and lessons learned from units operating in OEF and OIF.

Justification: FY2015 RQ-7 UAV Base funding of \$16.389 million will be used for capability and reliability improvements, specifically: Air Vehicle modifications (Block III Engine), reduced noise signature for engine and Ground Equipment (interoperability) improvements. Additionally, funds will be for System Engineering, Program Management, and System Test and Evaluation support. Funds will also be used to incorporate the Increment II OSRVT Bi-Directional capability, ensure interoperability, and OSRVT test events.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Air Vehicle Improvements	15.773	6.534	6.297
Articles:	-	-	-
Description: Funding is provided for the following effort			
FY 2013 Accomplishments:			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305233A / RQ-7 UAV	Project (Number/Name) RQ7 / RQ-7 Shadow UAV		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Completed development of improved weatherization and a Small Mission Computer. Continued development of triple redundant avionics suite, reliability improvements, and development of a larger, more reliable engine. FY 2014 Plans: Continued development of manned unmanned teaming (MUM-T), software blocking, and continuation of engine development to include reduced noise signature for engine. FY 2015 Plans: Continued development of manned unmanned teaming (MUM-T), software blocking, and planned completion of engine development.				
Title: Ground Equipment Improvements		4.954	1.281	3.682
Articles:		-	-	-
Description: Funding is provided for the following effort FY 2013 Accomplishments: Continues development of interoperability capabilities through use of Universal Ground Data Terminals and Universal Ground Control Stations FY 2014 Plans: Continues to fund Ground Equipment Improvements. Continues development of interoperability capabilities through use of Universal Ground Data Terminals and Universal Ground Control Stations, and System Vulnerability FY 2015 Plans: Continues to fund Ground Equipment Improvements. Continues development of interoperability capabilities through use of Universal Ground Data Terminals and Universal Ground Control Stations, Network Security and System Vulnerability				
Title: Test and Evaluation		1.282	0.792	1.711
Articles:		-	-	-
Description: Funding is provided for the following effort FY 2013 Accomplishments: Continues to fund Test and Evaluation FY 2014 Plans: Continues to fund Test and Evaluation FY 2015 Plans:				

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7		R-1 Program Element (Number/Name) PE 0305233A / RQ-7 UAV		Project (Number/Name) RQ7 / RQ-7 Shadow UAV
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
Continues to fund Test and Evaluation.				
Title: System Engineering/Program Management		1.462	1.286	2.566
		Articles:	-	-
Description: System Engineering/Program Management				
FY 2013 Accomplishments: Continues to fund System Engineering/Program Management				
FY 2014 Plans: Continues to fund System Engineering/Program Management				
FY 2015 Plans: Continues to fund System Engineering/Program Management				
Title: One System Remote Video Terminal (OSRVT)		5.083	2.132	-
		Articles:	-	-
Description: Funding is provided for the following effort				
FY 2013 Accomplishments: Continues to fund One System Remote Video Terminal (OSRVT). Integrate Incremental II bi-directional functionality into the OSRVT. Develop Software Blocking and Interoperability improvements				
FY 2014 Plans: Continues to fund One System Remote Video Terminal (OSRVT). Integrate Incremental II bi-directional functionality into the OSRVT. Develop Software Blocking and Interoperability improvements				
Title: One System Remote Video Terminal Test and Evaluation		-	-	2.133
Description: One System Remote Video Terminal Test and Evaluation				
FY 2015 Plans: Complete developmental testing of Increment II capabilities and conduct Initial Operational Test and Evaluation (IOT&E)				
Accomplishments/Planned Programs Subtotals		28.554	12.025	16.389

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305233A / RQ-7 UAV	Project (Number/Name) RQ7 / RQ-7 Shadow UAV
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u> <u>Base</u>	<u>FY 2015</u> <u>OCO</u>	<u>FY 2015</u> <u>Total</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RQ-7 UAV MODS (A00018): RQ-7 UAV MODS (A00018)	26.215	121.902	125.380	-	125.380	51.699	87.249	58.021	82.034	Continuing	Continuing

Remarks

D. Acquisition Strategy

A System Capability Demonstration (SCD) was conducted with four contractors. The results from the SCD in conjunction with proposal evaluations resulted in the competitive down select of a Best Value TUAS. A successful Milestone II ASARC was conducted 21 Dec 99 and a Milestone III Decision 25 Sep 02. The full rate production contract was awarded 27 Dec 02 and all 102 systems were procured by FY2009. Continued development of the selected TUAV system will be accomplished through a series of modifications and retrofits such as Shadow v2, Communications Relay, Laser Designator, Block III engine, and reliability upgrades. Development/integration of these improved capabilities will be through individual efforts on a (mostly) sole source cost-plus fixed fee engineering services contract with the Shadow prime contractor. Development of the Block III engine is being accomplished through a competitive process.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305233A / RQ-7 UAV	Project (Number/Name) RQ7 / RQ-7 Shadow UAV
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Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Base: Program Management	RO	PM UAS : Redstone Arsenal, AL	1.649	1.069	Dec 2012	0.396	Mar 2014	0.570	Dec 2014	-		0.570	-	3.684	-
Subtotal			1.649	1.069		0.396		0.570		-		0.570	-	3.684	-

Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
OIF Improvements / Block Upgrades / Capability Improvements	SS/CPFF	AAI Corporation : Hunt Valley, MD	3.105	-		-		-		-		-	-	3.105	-
System Engineering / Reliability Solutions	SS/CPFF	AAI Corporation : Hunt Valley, MD	2.025	-		-		-		-		-	-	2.025	-
Ground Equipment Improvements	SS/CPFF	AAI Corporation, MD : AAI Corporation, MD	4.498	4.954	Jan 2013	1.281	Apr 2014	3.682	Jan 2015	-		3.682	-	14.415	-
Block III Engine Development	C/CPFF	LSF : Redstone Arsenal, AL	9.122	11.255	Sep 2013	6.347	May 2014	5.901	May 2015	-		5.901	-	32.625	-
Other Air Vehicle Improvements	SS/CPFF	AAI Corporation, MD : AAI Corporation, MD	10.438	4.518	Jan 2013	0.187	Apr 2014	0.396	May 2015	-		0.396	-	15.539	-
One System Remote Video Terminal (OSRVT)	SS/CPFF	AAI Corporation, MD : AAI Corporation, MD	3.914	5.083	Nov 2013	2.132	May 2014	-		-		-	Continuing	Continuing	-
Payload Improvements	SS/CPFF	Various : Various	2.750	-		-		-		-		-	-	2.750	-
Subtotal			35.852	25.810		9.947		9.979		-		9.979	-	-	-

Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Contractor Engineering Support	Various	Various : Various	0.300	0.262	Dec 2012	0.593	Mar 2014	1.331	Dec 2014	-		1.331	-	2.486	-

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305233A / RQ-7 UAV	Project (Number/Name) RQ7 / RQ-7 Shadow UAV
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	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Block III Engine - Production Contract Award																												
Block III Fielding																												
Block III Engine Development																												
GPS Denied																												
Interoperability Upgrades																												
Software Block Upgrades																												
OSRVT Increment II																												
OSRVT IOT&E																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305233A / RQ-7 UAV	Project (Number/Name) RQ7 / RQ-7 Shadow UAV
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Block III Engine - Production Contract Award	4	2015	4	2015
Block III Fielding	1	2017	4	2018
Block III Engine Development	4	2013	4	2015
GPS Denied	1	2017	4	2018
Interoperability Upgrades	1	2015	4	2019
Software Block Upgrades	1	2015	4	2019
OSRVT Increment II	1	2013	3	2015
OSRVT IOT&E	3	2015	3	2015

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0307665A / <i>Biometrics Enabled Intelligence</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	15.225	12.443	1.974	-	1.974	-	-	-	-	Continuing	Continuing
BI7: <i>BIOMETRICS ENABLED INTELLIGENCE - MIP</i>	-	15.225	12.443	1.974	-	1.974	-	-	-	-	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

The FY15 reduction from \$17.2M to \$2M (\$15.2M decrease) is due to the Army's strategic choices analysis resulting from implementation of the Budget Control Act and due to the lack of a validated requirement with an affordable cost.

A. Mission Description and Budget Item Justification

Joint Personnel Identification (JPI) supports the Biometric Enterprise database system which will deliver innovative and emergent biometric solutions to protect the nation through global identity superiority. JPI will provide an Army tactical biometric collection capability to capture an adversary or neutral person's biometric data and enroll them into the DoD enterprise authoritative biometric database to positively identify and verify the identity of actual or potential adversaries. U.S. forces are currently operating unilaterally or in combination with joint, multinational, and interagency partners, to identify unknown individuals and verify the identity of person(s) across the full range of military operations. Capabilities proposed for JPI will be configurable for multiple operational mission environments enabling identity dominance on the battlefield and across the DoD spectrum. JPI will leverage lessons learned through the current Quick Reaction Capability (QRC) to further refine the biometric collection systems abilities to collect, match, store, and share biometric (fingerprint/face/iris) and contextual information from actual or potential adversaries, host nation personnel, and third country nationals.

FY2015 Core funding supports ten (10) Government Full Time Equivalent (FTE) Civilian Positions. Government FTEs are responsible for Program Management activities (engineering, cost estimating, resource and acquisition management) related development efforts. The FY15 funds will enable the PM to continue limited JPI Biometrics Tactical Collection Devices (BTCDDs) developmental actions. These actions will afford JPI to conduct a narrow spectrum of bridging strategies designed to extend the BTCDDs through limited operational assessments and technology insertion. Also, funds are intended to enable JPI to incorporate software patches until a future device reaches FOC. Lastly, funds minimally sustain infrastructure, facility costs and communication requirements (desktop support & network connectivity).

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0307665A / <i>Biometrics Enabled Intelligence</i>
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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	15.248	12.449	17.233	-	17.233
Current President's Budget	15.225	12.443	1.974	-	1.974
Total Adjustments	-0.023	-0.006	-15.259	-	-15.259
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-15.259	-	-15.259
• Other Adjustments 1	-0.023	-0.006	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0307665A / <i>Biometrics Enabled Intelligence</i>				Project (Number/Name) B17 / <i>BIOMETRICS ENABLED INTELLIGENCE - MIP</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
B17: <i>BIOMETRICS ENABLED INTELLIGENCE - MIP</i>	-	15.225	12.443	1.974	-	1.974	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Not applicable for this item

A. Mission Description and Budget Item Justification

Joint Personnel Identification (JPI) supports the Biometric Enterprise database system which will deliver innovative and emergent biometric solutions to protect the nation through global identity superiority. JPI will provide an Army tactical biometric collection capability to capture an adversary or neutral person's biometric data and enroll them into the DoD enterprise authoritative biometric database to positively identify and verify the identity of actual or potential adversaries. U.S. forces are currently operating unilaterally or in combination with joint, multinational, and interagency partners, to identify unknown individuals and verify the identity of person(s) across the full range of military operations. Capabilities proposed for JPI will be configurable for multiple operational mission environments enabling identity dominance on the battlefield and across the DoD spectrum. JPI will leverage lessons learned through the current Quick Reaction Capability (QRC) to further refine the biometric collection systems abilities to collect, match, store, and share biometric (fingerprint/face/iris) and contextual information from actual or potential adversaries, host nation personnel, and third country nationals.

FY2015 Core funding supports ten (10) Government Full Time Equivalent (FTE) Civilian Positions. Government FTEs are responsible for Program Management activities (engineering, cost estimating, resource and acquisition management) related development efforts. The FY15 funds will enable the PM to continue limited JPI Biometrics Tactical Collection Devices (BTCDDs) developmental actions. These actions will afford JPI to conduct a narrow spectrum of bridging strategies designed to extend the BTCDDs through limited operational assessments and technology insertion. Also, funds are intended to enable JPI to incorporate software patches until a future device reaches FOC. Lastly, funds minimally sustain infrastructure, facility costs and communication requirements (desktop support & network connectivity).

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Joint Personnel Identification (JPI)	15.225	12.443	1.974
Articles:	-	-	-
Description: JPI program development and management			
FY 2013 Accomplishments:			
Funding provided system engineering activities to include execution of Systems Requirements Review (SRR); development of the performance specification; continued market research and trade study analysis. Additionally, funding provided support for pre-NIE			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0307665A / <i>Biometrics Enabled Intelligence</i>	Project (Number/Name) B17 / <i>BIOMETRICS ENABLED INTELLIGENCE - MIP</i>
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
<p>planning and preparation activities. Support also provided for contracts planning and preparation in conjunction with a planned contract award. In accordance with ASA(ALT) direction, PM JPI modified the acquisition approach. The new direction changed acquisition approach from an EMD acquisition solution to a COTS/NDI acquisition approach. The balance of FY13 Funding enabled PM JPI to begin development of a new acquisition approach which included a revision to planning, developing and preparing Army and Office of the Secretary of Defense (OSD) level documentation consistent with DoD Instruction 5000.2, The Defense Acquisition System, and compliant with existing statutory and regulatory policy in preparation. Also, activities included the Biometric Information Exchange Day with industry, followed by RFI release and analysis of industry white paper responses.</p> <p>FY 2014 Plans: Funding supports refinement of a COTS/NDI Acquisition Strategy, based on transition from a developmental acquisition approach to a COTS acquisition approach which began in FY13. Funding provides system engineering activities; technology assessment and development of the performance specification; continued market research and trade study analysis. Additionally, funding will provide support for pre-MS C planning and acquisition activities. Activities include requirements to support RFI, draft and final RFP packages, NIE testing approach (Type I SUT). Also, contractor support will be provided for Program, Acquisition, Engineering, Budgeting and Contracts planning preparation, and development. In addition, Product Manager contractor support will continue preparing and developing Army and OSD level statutory and regulatory documentation consistent with DoD Instruction 5000.2, the Defense Acquisition System, and compliant with existing statutory and regulatory policy for a FY16 MS C decision. These requirements includes Systems Engineering Plan (SEP), Lifecycle Sustainment Plan (LCSP), Test and Evaluation Master Plan (TEMP), and cost analysis activities, including completion of the CARD, EA, and POE. Funding will support government civilian labor and operations to include travel, training, supplies, infrastructure, and facility costs. The CDD is being revised due to a change in the acquisition approach.</p> <p>FY 2015 Plans: FY2015 Core funding supports ten (10) Government FTE Civilian Positions which includes program management activities and basic supplies. Programmatic oversight, engineering, cost estimating, resource and acquisition management will continue. These FY15 funds will ensure current operational systems are compliant with Information Assurance protocols. Funding will provide system engineering activities to include execution of Systems Requirements Review (SRR) and System Functional Review (SFR). Also, funding will afford JPI the ability o conduct a narrow spectrum of bridging strategies designed to extend the BTCDs through limited operational assessments, technology insertion and prototyping to the ADM in accordance with AoA actions. Funds also provide limited infrastructure, facility costs and communication requirements (desktop support & network connectivity).</p>			
Accomplishments/Planned Programs Subtotals	15.225	12.443	1.974

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

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0307665A / <i>Biometrics Enabled Intelligence</i>	Project (Number/Name) B17 / <i>BIOMETRICS ENABLED INTELLIGENCE - MIP</i>

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

Remarks

D. Acquisition Strategy

Army refined the acquisition strategy for the JPI program in FY14. With the FY15 dollars identified, JPI procurement efforts will include limited market research and narrow bridging strategies designed to extend the collection devices until requirements are approved. Limited technology and operational assessments, minimum technology insertion and prototyping to the Acquisition Decision Memorandum in accordance with Analysis of Alternatives actions will continue within budgetary constraints.

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army												Date: March 2014			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0307665A / Biometrics Enabled Intelligence				B17 / BIOMETRICS ENABLED INTELLIGENCE - MIP							
Management Services (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PM Management Services	Various	Various : Various	4.795	4.569		3.557		-		-		-	Continuing	Continuing	Continuing
Subtotal			4.795	4.569		3.557		-		-		-	-	-	-
Product Development (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Base Products Development	C/IDIQ	Various : TBD	7.077	7.216		5.049		-		-		-	24.951	44.293	-
Subtotal			7.077	7.216		5.049		-		-		-	24.951	44.293	-
Support (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PM Civilian Personnel and Other Support Costs	Various	Various : Various	5.215	3.140		3.220		1.974		-		1.974	24.951	38.500	-
Subtotal			5.215	3.140		3.220		1.974		-		1.974	24.951	38.500	-
Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
IA, T&E, Threat Assessment, Interoperability Certifications	Various	Various : TBD	0.000	0.300		0.617		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.000	0.300		0.617		-		-		-	-	-	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army								Date: March 2014					
Appropriation/Budget Activity 2040 / 7				R-1 Program Element (Number/Name) PE 0307665A / <i>Biometrics Enabled Intelligence</i>				Project (Number/Name) B17 / <i>BIOMETRICS ENABLED INTELLIGENCE - MIP</i>					
	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	17.087	15.225		12.443		1.974		-		1.974	-	-	-

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0307665A / <i>Biometrics Enabled Intelligence</i>	Project (Number/Name) B17 / <i>BIOMETRICS ENABLED INTELLIGENCE - MIP</i>

	FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Systems Requirements Review - II																												
Systems Requirements Review - I																												
Technical Assessment																												
Capability Development Document (CDD)																												
System Functional Review																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0307665A / <i>Biometrics Enabled Intelligence</i>	Project (Number/Name) B17 / <i>BIOMETRICS ENABLED INTELLIGENCE - MIP</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Systems Requirements Review - II	1	2015	1	2015
Systems Requirements Review - I	2	2013	2	2013
Technical Assessment	3	2014	3	2014
Capability Development Document (CDD)	4	2014	4	2014
System Functional Review	4	2015	4	2015

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0300349A / <i>Win-T Increment 2 - Initial Networking</i>
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	-	-	3.249	-	3.249	18.209	-	-	-	-	21.458
EE7: <i>WIN-T Increment 2 - Initial Networking</i>	-	-	-	3.249	-	3.249	18.209	-	-	-	-	21.458

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

Warfighter Information Network (WIN-T) Increment (Inc) 2 provides the Army with On-The-Move (OTM) networking capability. The Inc 2 network retains capabilities delivered by WIN-T Inc 1 and by leveraging proven government and commercial technologies, adds greater network throughput and automated Network Management to optimize planning (to include spectrum use), initialization, monitoring and troubleshooting. WIN-T Inc 2 employs Satellite Communications (SATCOM) OTM to extend the network in maneuver Brigade Combat Teams (BCTs) to Company level for the first time. Using equipment mounted on combat platforms, WIN-T Increment 2 delivers a mobile capability that reduces reliance on fixed infrastructure and allows key leaders to move on the battlefield while retaining Situational Awareness and Mission Command capabilities. Using the Highband Networking Radio (HNR), with the Highband Networking Waveform (HNW) and high performance antennas, the WIN-T Inc 2 Line-of-Sight (LoS) network offers an adaptive 30 Megabit per second (Mbps) aggregate throughput to key leaders in their Command Post or in their vehicle. The WIN-T Inc 2 network is self-forming, which means that it automatically creates transmission paths based on terrain and environmental conditions; and self-healing, meaning that the paths will automatically re-route traffic to complete network transactions and calls even if one or more nodes break down or loses connectivity. This offers greater network reliability and better end-to-end connectivity than traditional point-to-point networks. WIN-T Inc 2 introduces the network management capability needed to keep the mobile and dispersed forces networked together through automated planning, initialization, monitoring, and troubleshooting. Finally, WIN-T adopts "Colorless Core" technology that encrypts both classified and unclassified user information in the network and minimizes the number of users on the "core" of the network. The Colorless Core allows commanders to utilize the tactical network without fear of the enemy intercepting information. Colorless Core is a technical insertion in the WIN-T Inc 1b network which enables efficient information sharing between Inc 1b and Inc 2.

WIN-T Inc 3 mature Network Operations (NetOps) technologies will be inserted into Increment 2 units.

FY 15 RDT&E funds Follow-On Operational Test and Evaluation at Network Integration Evaluation (NIE) 15.1 in the first quarter of FY 2015.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0300349A / <i>Win-T Increment 2 - Initial Networking</i>
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B. Program Change Summary (\$ in Millions)	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015 Base</u>	<u>FY 2015 OCO</u>	<u>FY 2015 Total</u>
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	3.249	-	3.249
Total Adjustments	-	-	3.249	-	3.249
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-	-	3.249	-	3.249

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0300349A / Win-T Increment 2 - Initial Networking				Project (Number/Name) EE7 / WIN-T Increment 2 - Initial Networking			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
EE7: WIN-T Increment 2 - Initial Networking	-	-	-	3.249	-	3.249	18.209	-	-	-	-	21.458
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

This is not a New Start. This program is a realignment of an effort previously funded under Program Element (PE) 0603782A Project 367 through FY 2014. Effective FY 2015, program is properly funded in BA 07, reflecting program's efforts in support of operational systems development.

*** NOTE: OSD PE shown above is incorrect. Correct OSD PE is as shown in the R-1, 0310349A. This will be corrected in the system as soon as possible.

A. Mission Description and Budget Item Justification

Warfighter Information Network (WIN-T) Increment (Inc) 2 provides the Army with On-The-Move (OTM) networking capability. The Inc 2 network retains capabilities delivered by WIN-T Inc 1 and by leveraging proven government and commercial technologies, adds greater network throughput and automated Network Management to optimize planning (to include spectrum use), initialization, monitoring and troubleshooting. WIN-T Inc 2 employs Satellite Communications (SATCOM) OTM to extend the network in maneuver Brigade Combat Teams (BCTs) to Company level for the first time. Using equipment mounted on combat platforms, WIN-T Increment 2 delivers a mobile capability that reduces reliance on fixed infrastructure and allows key leaders to move on the battlefield while retaining Situational Awareness and Mission Command capabilities. Using the Highband Networking Radio (HNR), with the Highband Networking Waveform (HNW) and high performance antennas, the WIN-T Inc 2 Line-of-Sight (LoS) network offers an adaptive 30 Megabit per second (Mbps) aggregate throughput to key leaders in their Command Post or in their vehicle. The WIN-T Inc 2 network is self-forming, which means that it automatically creates transmission paths based on terrain and environmental conditions; and self-healing, meaning that the paths will automatically re-route traffic to complete network transactions and calls even if one or more nodes break down or loses connectivity. This offers greater network reliability and better end-to-end connectivity than traditional point-to-point networks. WIN-T Inc 2 introduces the network management capability needed to keep the mobile and dispersed forces networked together through automated planning, initialization, monitoring, and troubleshooting. Finally, WIN-T adopts "Colorless Core" technology that encrypts both classified and unclassified user information in the network and minimizes the number of users on the "core" of the network. The Colorless Core allows commanders to utilize the tactical network without fear of the enemy intercepting information. Colorless Core is a technical insertion in the WIN-T Inc 1b network which enables efficient information sharing between Inc 1b and Inc 2.

WIN-T Inc 3 mature Network Operations (NetOps) technologies will be inserted into Increment 2 units.

FY 15 RDT&E funds Follow-On Operational Test and Evaluation at Network Integration Evaluation (NIE) 15.1 in 1st Quarter Fiscal Year 2015 (1QFY15).

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0300349A / Win-T Increment 2 - Initial Networking	Project (Number/Name) EE7 / WIN-T Increment 2 - Initial Networking

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2013	FY 2014	FY 2015
Title: Test and Evaluation	-	-	3.249
Description: Test and Evaluation			
FY 2015 Plans: NIE 15.1 (FOT&E 2)			
Accomplishments/Planned Programs Subtotals	-	-	3.249

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

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• WIN-T Inc 2: WIN-T Inc 2 Procurement	-	-	460.709	-	460.709	632.615	616.100	645.400	265.009	-	2,619.833
• Inc 2 Spares: WIN-T Inc 2 Procurement Spares	54.792	2.365	40.100	-	40.100	39.865	41.372	50.750	96.919	-	326.163
• PE 0603782A/367 RDTE: Research, Development, Test and Evaluation (RDTE) PE 643782/367	2.706	1.100	-	-	-	-	-	-	-	-	3.806

Remarks

D. Acquisition Strategy

The Defense Acquisition Executive (DAE), through the Nunn-McCurdy certification process, certified a restructured WIN-T program on June 5, 2007. The certification Acquisition Decision Memorandum (ADM) stated that the Army will restructure the WIN-T Major Defense Acquisition Program (MDAP) to absorb the former Joint Network Node (JNN) Network program. It further stated that the restructured program will consist of four Increments: Incs 1, 2, 3, and 4.

The Acquisition Decision Memorandum of September 27, 2013 authorized the procurement of 98 additional communications nodes for Low Rate Initial Production (LRIP), bringing the total LRIP quantity to 1030 communications nodes. The Program Manager (PM) procured the authorized quantities on the current initial production contract (W15P7T-10-D-C007). This contract was awarded in 2010 as a three year contract with three option years. Lots 1, 2, 3 and 4 of the LRIP contract have been procured, and Lot 5 is anticipated to be awarded in March 2014.

Inc 2 provides the Army with On-The-Move (OTM) networking capability. Inc 3 NetOps will be technically inserted into Inc 2 and these inserts will be tested in subsequent Network Integration Evaluation (NIE) events.

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0300349A / <i>Win-T Increment 2 - Initial Networking</i>	Project (Number/Name) EE7 / <i>WIN-T Increment 2 - Initial Networking</i>

E. Performance Metrics

N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2015 Army											Date: March 2014				
Appropriation/Budget Activity 2040 / 7						R-1 Program Element (Number/Name) PE 0300349A / Win-T Increment 2 - Initial Networking					Project (Number/Name) EE7 / WIN-T Increment 2 - Initial Networking				

Test and Evaluation (\$ in Millions)				FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test	C/TBD	Various : Various	0.000	-		-		3.249		-		3.249	-	3.249	-
Subtotal			0.000	-		-		3.249		-		3.249	-	3.249	-

Remarks
 This is not a New Start. This program is a realignment of an effort previously funded under Program Element (PE) 0603782A Project 367 through FY 2014. Effective FY 2015, program is properly funded in BA 07, reflecting program's efforts in support of operational systems development.

	Prior Years	FY 2013		FY 2014		FY 2015 Base		FY 2015 OCO		FY 2015 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-		-		3.249		-		3.249	-	3.249	-

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0300349A / Win-T Increment 2 - Initial Networking	Project (Number/Name) EE7 / WIN-T Increment 2 - Initial Networking

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
LRIP Production	2	2010	4	2014
First Unit Equipped	1	2013	1	2013
Follow One Test and Evaluation 1	3	2013	3	2013
Initial Operating Capacity	4	2013	4	2013
Defense Acquisition Board	4	2013	4	2013
Delivery Order 4 Award	4	2013	4	2013
Network Integrated Evaluation 14.1	1	2014	1	2014
Developmental Test 1	2	2014	2	2014
Delivery Order 5 Award	2	2014	2	2014
Network Integrated Evaluation 14.2	3	2014	3	2014
Developmental Test 2	3	2014	3	2014
Army Material Release	3	2014	3	2014
Network Integrated Evaluation 15.1 (FOTE 2)	1	2015	1	2015
Follow-On Production Contract Delivery Order 1 Award	3	2015	3	2015
Full Rate Production Decision Review	3	2015	3	2015
Follow-On Delivery Order 2 Award	3	2015	3	2015
Full Rate Production/Fielding	3	2015	4	2020
Follow-On Delivery Order 3 Award	1	2016	1	2016
Follow-On Delivery Order 4 Award	1	2017	1	2017
Second Follow-On Contract Award	1	2018	1	2018
Second Follow-On Delivery Order 1 Award	1	2018	1	2018
Second Follow-On Delivery Order 2 Award	1	2019	1	2019

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army **Date:** March 2014

Appropriation/Budget Activity 2040: Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 0708045A / End Item Industrial Preparedness Activities
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COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
Total Program Element	-	53.461	56.106	76.225	-	76.225	56.824	59.215	55.437	55.873	Continuing	Continuing
E25: Mfg Science & Tech	-	53.461	56.106	76.225	-	76.225	56.824	59.215	55.437	55.873	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

Note

FY 13 decreases attributed to Congressional General Reductions (-86 thousand); SBIR/STTR transfers (-1542 million); and Sequestration reductions (-4819 million)
 FY15 funding increase for efforts in armor and sensor manufacturing technology.

A. Mission Description and Budget Item Justification

This program element (PE) develops and demonstrates manufacturing processes that enable improvements in producibility and affordability of emerging and enabling components and subsystems of Army air, ground, Soldier, and command/control/communications systems. Initiatives within the PE result in cost savings and reduced risk of transitioning military-unique manufacturing processes into production. Project E25 fosters the transfer of new/improved manufacturing technologies to the industrial base, including manufacturing efforts that have potential for high payoff across the spectrum of Army systems.

Work in this PE is related to, and fully coordinated with, PE 0603710A (Night Vision Advanced Technology), PE 0602303A (Missile Technology), PE 0602105A (Materials Technology), PE 0602618A (Ballistics Technology), PE 0602601A (Combat Vehicle and Automotive Technology), and PE 0603005A (Combat Vehicle and Automotive Advanced Technology) and PE 0602705A (Electronics and Electronic Devices).

The cited work is consistent with the Assistant Secretary of Defense, Research and Engineering Science and Technology focus areas and the Army Modernization Strategy.

Work in this PE is performed by the Army Research, Development, and Engineering Command (RDECOM) and efforts are executed by the Army Research Laboratory (ARL) and appropriate Army Research, Development, and Engineering Centers (RDECs).

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Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Army	Date: March 2014
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Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0708045A / <i>End Item Industrial Preparedness Activities</i>
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B. Program Change Summary (\$ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	59.908	56.136	60.866	-	60.866
Current President's Budget	53.461	56.106	76.225	-	76.225
Total Adjustments	-6.447	-0.030	15.359	-	15.359
• Congressional General Reductions	-0.086	-0.030			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.542	-			
• Adjustments to Budget Years	-	-	15.359	-	15.359
• Other Adjustments 1	-4.819	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army										Date: March 2014		
Appropriation/Budget Activity 2040 / 7					R-1 Program Element (Number/Name) PE 0708045A / <i>End Item Industrial Preparedness Activities</i>				Project (Number/Name) E25 / <i>Mfg Science & Tech</i>			
COST (\$ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
E25: <i>Mfg Science & Tech</i>	-	53.461	56.106	76.225	-	76.225	56.824	59.215	55.437	55.873	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This project develops and demonstrates manufacturing processes that enable improvements in producibility and affordability of emerging and enabling components and subsystems of Army air, ground, Soldier and command/control/communications/intelligence systems. Focus is on components and subsystems such as advanced armor, power and energy devices, rotors, sensors, displays, propellants and gun tubes. In addition, work is conducted to advance the state of the art in processing and fabrication techniques for coatings, multifunctional materials and structural elements for Army specific applications.

Work supports all Army S&T portfolios. Work in this PE is related to and fully coordinated with PE 0602105A (Materials Technology), PE 0602211A (Aviation Technology), PE 0602303A (Missile Technology), PE 0602601A (Combat Vehicle and Automotive Technology), PE 0602618A (Ballistics Technology), PE 0602705A (Electronics and Electronic Devices), PE 0603003 (Aviation Advanced Technology), PE 0603005A (Combat Vehicle and Automotive Advanced Technology) and PE 0603710A (Night Vision Advanced Technology).

The cited work is consistent with the Assistant Secretary of Defense for Research and Engineering S&T focus areas and the Army Modernization Strategy.

Work in this project is performed by the Army Research, Development and Engineering Command (RDECOM) and efforts are executed by the Army Research Laboratory (ARL) and appropriate Army Research, Development and Engineering Centers (RDECs).

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
Title: Air Systems	6.400	3.100	2.000
Articles:	-	-	-
Description: This effort funds manufacturing technology advances needed for more affordable manned and unmanned aircraft components and subsystems. Work focuses on addressing challenges in areas such as engine performance and life, rotor and blade durability, reliable component integration/attachment, structural durability at low weight, and reduced corrosion.			
FY 2013 Accomplishments: Demonstrated an advanced ceramic manufacturing process for the fabrication of Ceramic Matrix Composite (CMC) and Stage High Pressure Turbine (HPT) Shrouds for helicopter engines to reduce overall system weight and improve fuel consumption and reliability; developed manufacturing processes for the use of direct metal laser sintering to reduce cost and increase performance of complex components such as UAV turbine engine recuperators; demonstrated machining of rotary engine side seal grooves			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0708045A / <i>End Item Industrial Preparedness Activities</i>	Project (Number/Name) E25 / <i>Mfg Science & Tech</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<p>which will increase the reliability and performance of rotary engines for UAV applications; demonstrated a chemical etching technique for high performance flexible airborne antenna substrates by using lay-up processes to reduce touch labor and riveting issues resulting in significantly increased yield and reduced cost per missile; developed and demonstrated automated Plasma Assisted Chemical Vapor Deposition equipment and manufacturing procedures for the application of nanocrystalline diamond and amorphous carbon coatings for improved optical transmission for infrared devices, improved corrosion resistance, increased surface hardness, reduced friction, and increased wear performance on critical AH-64 and UH-60 helicopter components.</p> <p>FY 2014 Plans: Develop machining, finishing and assembly processes for drive train and propulsion system components; demonstrate and transition an automated production system for applying nanocrystalline diamond and amorphous carbon coatings to Army aviation systems; develop advanced manufacturing and repair processes for composite structures; develop and demonstrate cost-effective repair of high-value drive shafts and power-train components using additive manufacturing techniques. Develop manufacturing techniques and tooling for ballistically tolerant fuel bladders, taking advantage of advanced modeling and simulation techniques, light-weight/high performance materials and flexible tooling concepts.</p> <p>FY 2015 Plans: Will continue development of manufacturing techniques and tooling for ballistically tolerant fuel bladders; will investigate novel processing and machining techniques for reducing the cost and improving the performance of low-horse power heavy-fuel engines for UAV applications; will develop processes for rapidly manufacturing composite components that meet air-worthiness requirements for aviation systems.</p>				
<p>Title: Ground Systems</p> <p>Description: This effort funds manufacturing technology advances needed for more affordable components and subsystems for tactical and combat vehicles and weapons systems. Work focuses on addressing challenges in areas such as advanced armor, gun barrel life, insensitive propellants, precision munitions and vehicle power devices.</p> <p>FY 2013 Accomplishments: Scaled-up manufacturing of high optical clarity Spinel armor plates up to 14 x 14 in size by using a sintered process to address both size and cost; developed low cost production and assembly processes of complex passive kinetic energy armors for combat vehicle systems; exploited forming/forging/joining technologies to enable fabrication of a single under-body design of high performance/strength alloys for a blast resistant lower hull and underbody kits for combat vehicle systems; developed explosive loading processes, requiring no post-machining, inside warhead molding of insensitive munitions and fragment generating sleeves for the Extended Area Protection and Survivability (EAPS) system and next generation cluster munitions; developed a manufacturing process to reduce the cost and time associated with applying Ta-10W liners for medium and large caliber</p>		12.829	26.910	39.772
		Articles:	-	-
			-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0708045A / <i>End Item Industrial Preparedness Activities</i>	Project (Number/Name) E25 / <i>Mfg Science & Tech</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2013	FY 2014	FY 2015
<p>Chromium free cannon barrels; developed initial manufacturing processes for automated production of low cost, high power battery and fuel cell systems for manned and unmanned ground systems.</p> <p>FY 2014 Plans: Demonstrate successful application of Ta-10W liners for medium and small-caliber barrels through live-fire demonstrations and evaluation of liner wear, transition the Ta-10W liner application process to Watervliet Arsenal for implementation; demonstrate increased yield and reduced missile antenna manufacturing cost through limited production runs and deliver process and technical data to the Cruise Missile Defense Systems Program Office for implementation on future missile systems; demonstrate safer and more cost effective processes for loading explosives in the 120mm Advanced Multi-Purpose munition through limited production runs and transition robust processes for the use of nano-particle field assisted sintering technologies (FAST) to reduce variability and improve fragmentation and performance of warhead liners for the EAPS system program; demonstrate a domestic production capability for producing Spinel powder materials and initiate pilot line production runs of sintered Spinel plates followed by integration of the Spinel plates into laminated transparent armor solutions for performance evaluation and production cost validation; scale up manufacturing of low-cost alumina-based ceramic tiles, improve 3D weaving technologies to integrate ceramic tiles of varying thicknesses and demonstrate production of large, single-piece underbody armor solutions to meet objective threat level ballistic requirements, demonstrating manufacturing process maturity for each technology through limited production runs; develop mature manufacturing processes for utilizing metal and polymer-based additive manufacturing processes to reduce prototyping and production times through rapid manufacturing, multi-material structures and rapid tooling development for ground vehicles; demonstrate selected high volume, cost effective, manufacturing processes for micro-electro-mechanical systems (MEMS) scale components to allow automated inspection and assembly for safety-and-arm systems; demonstrate gear machining and finishing processes and optimized assembly processes to increase throughput and yield while decreasing the cost for power-take-off systems; conduct batch manufacturing of granular IMX-104 to demonstrate scaled-up manufacturing process that reduces production costs and increases throughput and yield of IMX-104; continues development of manufacturing processes for automated production of low cost, high power battery and fuel cell systems.</p> <p>FY 2015 Plans: Will transition tooling and processes for applying Ta-10W liners to gun barrels for implementation on medium and small-caliber systems; will continue the demonstration of selected high volume, cost effective, manufacturing processes for micro-electro-mechanical systems (MEMS) scale components; will continue demonstration of gear machining and finishing processes and optimized assembly processes to increase throughput and yield while decreasing the cost for power-take-off systems; will develop equipment for automated assembly of ceramic tile-based armors, will mature automated material consolidation techniques for vehicle armor solutions; will demonstrate automated assembly process resulting in improved quality control, reduced assembly times and re-work issues, increased throughput and reduced cost of fuel cells for ground vehicle and soldier-born applications; will demonstrate low-cost, mature manufacturing processes by conducting limited production runs and prototype builds of advanced armor systems using low-cost ceramics, cast and forged steel and aluminum alloys and hybridized 3D woven composites; will</p>			

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0708045A / <i>End Item Industrial Preparedness Activities</i>	Project (Number/Name) E25 / <i>Mfg Science & Tech</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
demonstrate machining and post-processing techniques to drastically improve the yield and decrease the cost of tungsten-based penetrators; will continue demonstration of scaled-up manufacturing process of granular IMX-104 that reduces production costs and increases throughput and yield; will develop the ability to rapidly and cost-effectively repair high-cost machined items; will develop novel methods of producing and inspecting advanced armor system components for next generation ground vehicle applications; will develop novel packaging and processing techniques to enable weight and cost reductions in ground-based systems.				
<p>Title: Lethality (Formerly Precision Munitions and Armament Systems)</p> <p align="right">Articles:</p> <p>Description: The Precision Munitions and Armament Systems focus area consists of Advanced Weapon Systems, Fire Control, Logistics, Emerging Technologies and Advanced Energetics and Warheads. Future efforts in this area are moved to the Ground Systems portfolio.</p> <p>FY 2013 Accomplishments: Develop the manufacturing process to reduce the cost and time associated with applying Ta-10W liners for medium and large caliber Chromium free cannon barrels. Develop explosive loading processes, requiring no post-machining, inside warhead molding of insensitive munitions and fragment generating sleeves for the EAPS and Next Generation Cluster Munitions.</p> <p>FY 2015 Plans: Validates the manufacturing process to reduce the cost and time associated with applying Ta-10W liners for medium and small caliber Chromium free cannon barrels. (This effort contained in the Ground Systems portfolio in FY14)</p>		2.800 -	- -	5.387 -
<p>Title: Command, Control, Communications and Intelligence Systems</p> <p align="right">Articles:</p> <p>Description: This effort funds manufacturing technology advances needed for more affordable components and subsystems for intelligence, surveillance, reconnaissance and targeting systems, mission command systems, electronic warfare and improved Explosive Device detect/defeat systems. Work focuses on addressing challenges in areas such as large format multi-color focal plane arrays, flexible displays, night vision sensors, target detectors, advanced antennas and sensors.</p> <p>FY 2013 Accomplishments: Optimized the production of the Automated Exhaust Station (AES) to increase yield and demonstrate increased median photocathode response for improved low-light-level sensor performance; demonstrated lot-sized production of 200 and 325 sqcm focal plane array (FPA) wafers, improving yield and small pixel processing/hybridization; manufactured and evaluated sample batches of 640x480, 1920x1280 and 1280x720 pixel FPAs to validate improved yield for affordable high definition, multi-band, multi-color FPAs grown on low-cost substrate for target acquisition and vision systems; demonstrated lot-sized production of 49</p>		22.400 -	14.405 -	15.009 -

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0708045A / <i>End Item Industrial Preparedness Activities</i>	Project (Number/Name) E25 / <i>Mfg Science & Tech</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
<p>sqcm wafers for high-operating temperature FPAs, reducing surface defects and improving contrast ratio for wide area coverage of persistent surveillance systems; integrated Organic Light Emitting Diodes (OLED) into the Gen II production line for 6.4-12 inch diagonal flexible displays to achieve a resolution of 600x800 super video graphics array (SVGA).</p> <p>FY 2014 Plans: Demonstrate improved yield and reliability for low light level sensor over multiple production runs; demonstrate manufacturing of large sized high-operating temperature FPAs, increase growth, processing and hybridization yields and deliver 640x480 FPAs for system integration; develop manufacturing processes for reducing the cost and improving performance and reliability of short wave infrared sensors; develop manufacturing processes for reducing the cost and improving performance and reliability of flexible electronics for large area sensors.</p> <p>FY 2015 Plans: Will develop processes, tooling and automation techniques to increase yield, decrease fabrication and assembly times and reduce cost of miniaturized short-wave infrared cameras; Will develop manufacturing processes to fabricate low-defect flexible digital radiography panels, will demonstrate techniques for integrating flexible sensors and electronics into circuits for system demonstration; will transition growth process, with demonstrated improved yield, for high operating temperature focal plane arrays to ground and airborne platforms; will develop and demonstrate processes to reduce the size, weight, power and cost of sensors and electronics for networked communications and information gathering systems.</p>				
<p>Title: Soldier Systems</p> <p>Description: This effort funds manufacturing technology advances needed for more affordable components and subsystems for combat feeding, aerial delivery of supplies, expeditionary basing, Soldier-borne sensors, clothing and protective equipment. Work focuses on addressing challenges in areas such as multifunctional fabrics for shelters, uniforms and portage equipment; affordable, non-contaminating packaging for rations; and lightweight materials for body armor.</p> <p>FY 2013 Accomplishments: Completed the manufacturing of T6 laminate at 14oz/yd² for Low Rate Initial Production of shelter fabric; completed and demonstrate the low rate initial production (LRIP) process for lightweight x-Small Arms Protective Insert (SAPI) plates for a flexible hybridized body armor solution; demonstrated low-cost rapid prototyping and injection molding techniques for protective mask systems.</p> <p>FY 2014 Plans: Demonstrate mature manufacturing processes supporting the production of light-weight x-SAPI plates for flexible hybridized body armor and transition process data to PM SPIE for procurement; develop manufacturing processes to reduce the cost of</p>		7.597	3.730	6.000
		Articles: -	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014		
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0708045A / <i>End Item Industrial Preparedness Activities</i>	Project (Number/Name) E25 / <i>Mfg Science & Tech</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2013	FY 2014	FY 2015
developing and producing advanced field medical systems; develop novel processing techniques for utilizing advanced materials to reduce the weight and increase the performance of Soldier-born systems. FY 2015 Plans: Will develop manufacturing processes to facilitate low cost, light weight systems for the dismounted Soldier and for basing operations.				
Title: Innovation Enablers (Formerly Advanced Manufacturing Initiatives)		1.435	7.961	8.057
Description: This effort funds manufacturing technology advances needed for affordable model based manufacturing, network centric manufacturing data environments, collaborative manufacturing modeling and simulation, and advanced manufacturing technologies. Work focuses on addressing challenges in areas such as 3D technical data packages for armor systems; providing digital manufacturing capabilities to depots and laboratories, processes and models for data transfer and prototype production; and advanced laser manufacturing techniques for repairing components. FY 2013 Accomplishments: Integrated depot planning and rebuild operations within a 3Dimensional TDP; establish interactive S1000D publications (International specification for technical publications utilizing a Common Source Database), manuals and work instructions; identify Type 1 NSNs to link with the 3D TDPs; developed processes and models for demonstrating data transfer and prototype production within a collaborative environment. FY 2014 Plans: Transition process for developing and using Digital Work Instruction to select depots to support production operations, demonstrate the use of MIL-STD-31000 for weapon system production data management; demonstrate integration of manufacturing planning and machining technologies at select Army organic manufacturing sites. FY 2015 Plans: Will demonstrate digital data driven manufacturing of prototype systems; will deploy the use of standard machine language and protocols to monitor machine performance to predict quality issues and optimize production rates for high-volume items; will establish and demonstrate the use of a common machine tool library for cross-Army utilization.		Articles: -	-	-
Accomplishments/Planned Programs Subtotals		53.461	56.106	76.225
C. Other Program Funding Summary (\$ in Millions) N/A				

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Exhibit R-2A, RDT&E Project Justification: PB 2015 Army		Date: March 2014
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0708045A / End Item Industrial Preparedness Activities	Project (Number/Name) E25 / Mfg Science & Tech

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

Remarks

Not applicable for this item.

D. Acquisition Strategy

Not applicable for this item.

E. Performance Metrics

N/A

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