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Supporting Data FY 2011 Budget Estimate - February 2010

DESCRIPTIVE SUMMARIES OF THE



RESEARCH, DEVELOPMENT, TEST AND EVALUATION Army Appropriation, Budget Activity 5

Department of the Army
Office of the Secretary of the Army (Financial Management and Comptroller)

Persuasive in Peace, Invincible in War

VOLUME V - B

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**DESCRIPTIVE SUMMARIES FOR PROGRAM ELEMENTS
OF THE
RESEARCH, DEVELOPMENT, TEST AND
EVALUATION, ARMY
FY 2011
BUDGET ESTIMATE SUBMISSION
FEBRUARY 2010**

**VOLUME V
Budget Activity 5**

**Department of the Army
Office of the Assistant Secretary of the Army (Financial Management and Comptroller)**

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**FY 2011 RDT&E, ARMY
PROGRAM ELEMENT DESCRIPTIVE SUMMARIES**

INTRODUCTION AND EXPLANATION OF CONTENTS

1. General. The purpose of this document is to provide summary information concerning the Research, Development, Test and Evaluation, Army program. The Descriptive Summaries are comprised of R-2 (Army RDT&E Budget Item Justification – program element level), R-2A (Army RDT&E Budget Item Justification – project level), R-3 (Army RDT&E Cost Analysis), R-4 (Schedule Profile), R-4A (Schedule Profile Detail) and R-5 (Termination Liability Funding for MDAPs) Exhibits, which provide narrative information on all RDT&E program elements and projects for FY 2009 through FY 2011.

2. Relationship of the FY 2011 Budget Submitted to Congress to the FY 2010 Budget Submitted to Congress. This paragraph provides a list of program elements restructured, transitioned, or established to provide specific program identification.

A. Program Element Restructures. Explanations for these changes can be found in the narrative sections of the Program Element R-2A Exhibits.

OLD		NEW
<u>PE/PROJECT</u>	<u>NEW PROJECT TITLE</u>	<u>PE/PROJECT</u>
0603308A/978	Long Endurance Multi-Intelligence Vehicle	0305205A/LE4
0604270A/L16	TROJAN – RH12-MIP	0303032A/RH5
0604802A/S23	SLAMRAAM	0605455A/S35
0604805A/589	Joint Battle Command – Platform (JBC-P)	0604805A/593
0604869A/M06	PAC-3/MSE Missile	0605456A/PA3
0303140/5PM	Biometrics Enabled Intelligence – MIP	0307665A/BI7
0303140/5PM	Intelligence Support to Cyber (ISC) – MIP	0203347A/CY7
0305204A/114	RQ-7 Shadow UAV	0305233A/RQ7
0305204A/D10	RQ-11 Raven (MIP)	0305232A/RA7
0307207A/024	Aerial Common Sensor – SDD	0605626A/AC5

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B. Developmental Transitions. Explanations for these changes can be found in the narrative sections of the Program Element R-2/R-3 Exhibits.

OLD	NEW PROJECT TITLE	NEW
<u>PE/PROJECT</u>		<u>PE/PROJECT</u>
0305204A/D09	ER/MP Unmanned Aircraft System (MIP)	0604276A/TU1
0307207A/024	Aerial Common Sensor (ACS)	0605626A/AC5

C. Establishment of New FY 2011 Program Elements/Projects. There are no major system new starts.

<u>TITLE</u>	<u>PE/PROJECT</u>
Aerial Common Sensor – SDD	0605626A/AC5
Armed Scout Helicopter	0604220A/53Z
Army Integrated Air and Missile Defense (AIAMD)	0605457A/S40
Army Integrated Military Human Resources System (A-IRMS)	0605018A/HR5
Biometrics Enabled Intelligence – MIP	0307665A/BI7
ER/MP Unmanned Aircraft System (MIP)	0604276A/TU1
Intelligence Support to Cyber (ISC) – MIP	0203347A/CY7
Joint Battle Command - Platform (JBC-P)	0604805A/593
Long Endurance Multi-Intelligence Vehicle	0305205A/LE4
MQ-1 Sky Warrior – Army UAV (MIP)	0305219A/MQ1
PAC-3/MSE Missile	0605456A/PA3
RQ-7 Shadow UAV	0305233A/RQ7
RQ-11 Raven (MIP)	0305232A/RA7
SLAMRAAM	0605455A/S35
Suicide Prevention/Mitigation	0602787A/VJ4
TROJAN – RH12-MIP	0303032A/RH5
Advanced Geospatial Intelligence (AGI)	0304348A/NI7

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D. FY 2011 programs for which funding existed in the FY 2010 President's Budget Submit (May 2009), but which are no longer funded in the FY 2011 President's Budget Submit.

<u>PE/PROJECT</u>	<u>TITLE</u>	<u>BRIEF EXPLANATION</u>
0603004A/L94	Electric Gun System Demo	Program restructured
0604270A/L12	Signals Warfare Development (MIP)	Program moved to a separate MIP PE
0604270A/L16	TROJAN Development (MIP)	Program moved to a separate MIP PE
0604666A/FC7	FCS – Spin Out Technology/Capability Integration	Terminated
0604802A/S23	Surface Launched Advanced Medium Range Air-to-Air Missile (SLAMRAAM)	Program moved to a separate missile defense PE
0604818A/C15	Mounted Battle Command On-The-Move (MBCOTM)	Terminated
0604818A/C39	Tactical Operations Center (TOCs)	Terminated
0303142A/562	Multi-band Integrated Satellite Terminal (MIST)	Terminated
0307207A/024	Aerial Common Sensor (MIP)	Program transitioned to BA 5 for proper execution

3. Classification. This document contains no classified data. Classified/Special Access Programs that are submitted offline are listed below.

0203801A/DF8/DF9	0603005A/C66	0604328A
0203808A	0603006A/DF7	
0301359A	0603009A	
0304348A	0603020A	
0602122A	0603322A	

4. Performance Metrics. Performance metrics used in the preparation of this justification book may be found in the FY 2010 Army Performance Budget Justification Book, dated March 2009.

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01-Feb-2010

Summary

<u>Summary Recap of Budget Activities</u>	Thousands of Dollars				
	FY2009	FY2010	FY2011	FY2011 OCO	FY2011 Total
Basic research	422,136	431,777	406,873	0	406,873
Applied Research	1,224,889	1,337,114	841,364	0	841,364
Advanced technology development	1,438,797	1,373,609	696,592	0	696,592
Advanced Component Development and Prototypes	1,010,485	932,004	746,248	57,900	804,148
System Development and Demonstration	5,025,850	4,454,743	5,021,546	13,500	5,035,046
Management support	1,470,157	1,196,744	1,142,383	0	1,142,383
Operational system development	1,482,756	1,823,380	1,473,939	79,506	1,553,445
Total RDT&E, Army	12,075,070	11,549,371	10,328,945	150,906	10,479,851

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Program				Thousands of Dollars				
Line No	Element Number	Act	Item	FY2009	FY2010	FY2011	FY2011 OCO	FY2011 Total
Basic research								
1	0601101A	01	IN-HOUSE LABORATORY INDEPENDENT RESEARCH	19,357	19,568	21,780		21,780
2	0601102A	01	DEFENSE RESEARCH SCIENCES	193,968	197,471	195,845		195,845
3	0601103A	01	UNIVERSITY RESEARCH INITIATIVES	87,485	99,400	91,161		91,161
4	0601104A	01	UNIVERSITY AND INDUSTRY RESEARCH CENTERS	121,326	115,338	98,087		98,087
Tota Basic research				422,136	431,777	406,873	0	406,873
Applied Research								
5	0602105A	02	MATERIALS TECHNOLOGY	80,686	99,447	29,882		29,882
6	0602120A	02	SENSORS AND ELECTRONIC SURVIVABILITY	76,213	70,272	48,929		48,929
7	0602122A	02	TRACTOR HIP	17,659	14,250	14,624		14,624
8	0602211A	02	AVIATION TECHNOLOGY	46,232	49,273	43,476		43,476
9	0602270A	02	ELECTRONIC WARFARE TECHNOLOGY	20,058	22,303	17,330		17,330
10	0602303A	02	MISSILE TECHNOLOGY	57,502	70,924	49,525		49,525
11	0602307A	02	ADVANCED WEAPONS TECHNOLOGY	22,638	21,964	18,190		18,190
12	0602308A	02	ADVANCED CONCEPTS AND SIMULATION	18,205	27,330	20,582		20,582
13	0602601A	02	COMBAT VEHICLE AND AUTOMOTIVE TECHNOLOGY	84,436	78,923	64,740		64,740
14	0602618A	02	BALLISTICS TECHNOLOGY	84,827	78,034	60,342		60,342
15	0602622A	02	CHEMICAL, SMOKE AND EQUIPMENT DEFEATING TECHNOLOGY	8,873	13,622	5,324		5,324
16	0602623A	02	JOINT SERVICE SMALL ARMS PROGRAM	9,165	7,634	7,893		7,893
17	0602624A	02	WEAPONS AND MUNITIONS TECHNOLOGY	106,253	144,864	42,645		42,645
18	0602705A	02	ELECTRONICS AND ELECTRONIC DEVICES	99,118	134,532	60,859		60,859
19	0602709A	02	NIGHT VISION TECHNOLOGY	45,329	50,877	40,228		40,228
20	0602712A	02	COUNTERMINE SYSTEMS	27,827	23,621	19,118		19,118
21	0602716A	02	HUMAN FACTORS ENGINEERING TECHNOLOGY	42,208	30,446	21,042		21,042
22	0602720A	02	ENVIRONMENTAL QUALITY TECHNOLOGY	15,786	25,469	18,364		18,364
23	0602782A	02	COMMAND, CONTROL, COMMUNICATIONS TECHNOLOGY	45,350	30,036	25,573		25,573
24	0602783A	02	COMPUTER AND SOFTWARE TECHNOLOGY	7,786	5,609	6,768		6,768
25	0602784A	02	MILITARY ENGINEERING TECHNOLOGY	58,671	60,779	79,189		79,189
26	0602785A	02	MANPOWER/PERSONNEL/TRAINING TECHNOLOGY	16,096	16,614	22,198		22,198
27	0602786A	02	WARFIGHTER TECHNOLOGY	35,866	38,347	27,746		27,746

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Program				Thousands of Dollars				
Line	Element	Act	Item	FY2009	FY2010	FY2011	FY2011 OCO	FY2011 Total
Basic research								
28	0602787A	02	MEDICAL TECHNOLOGY	198,105	221,944	96,797		96,797
Tota Applied Research				1,224,889	1,337,114	841,364	0	841,364
Advanced technology development								
29	0603001A	03	WARFIGHTER ADVANCED TECHNOLOGY	72,271	54,290	37,364		37,364
30	0603002A	03	MEDICAL ADVANCED TECHNOLOGY	329,258	339,752	71,510		71,510
31	0603003A	03	AVIATION ADVANCED TECHNOLOGY	102,207	112,388	57,454		57,454
32	0603004A	03	WEAPONS AND MUNITIONS ADVANCED TECHNOLOGY	112,544	89,861	64,438		64,438
33	0603005A	03	COMBAT VEHICLE AND AUTOMOTIVE ADVANCED TECHNOLOGY	270,195	240,190	89,499		89,499
34	0603006A	03	COMMAND, CONTROL, COMMUNICATIONS ADVANCED TECHNOLOGY	11,307	12,352	8,102		8,102
35	0603007A	03	MANPOWER, PERSONNEL AND TRAINING ADVANCED TECHNOLOGY	6,725	7,371	7,921		7,921
36	0603008A	03	ELECTRONIC WARFARE ADVANCED TECHNOLOGY	61,192	57,199	50,359		50,359
37	0603009A	03	TRACTOR HIKE	14,157	11,270	8,015		8,015
38	0603015A	03	NEXT GENERATION TRAINING & SIMULATION SYSTEMS	24,769	25,362	15,334		15,334
39	0603020A	03	TRACTOR ROSE	11,216	14,493	12,309		12,309
40	0603103A	03	EXPLOSIVES DEMILITARIZATION TECHNOLOGY	17,213	12,495			
41	0603105A	03	MILITARY HIV RESEARCH	14,867	29,502	6,688		6,688
42	0603125A	03	COMBATING TERRORISM - TECHNOLOGY DEVELOPMENT	12,656	11,927	10,550		10,550
43	0603270A	03	ELECTRONIC WARFARE TECHNOLOGY	32,544	21,877	18,350		18,350
44	0603313A	03	MISSILE AND ROCKET ADVANCED TECHNOLOGY	74,967	86,559	84,553		84,553
45	0603322A	03	TRACTOR CAGE	12,037	12,090	9,986		9,986
46	0603606A	03	LANDMINE WARFARE AND BARRIER ADVANCED TECHNOLOGY	36,883	34,855	26,953		26,953
47	0603607A	03	JOINT SERVICE SMALL ARMS PROGRAM	8,568	8,949	9,151		9,151
48	0603710A	03	NIGHT VISION ADVANCED TECHNOLOGY	69,778	72,250	39,912		39,912
49	0603728A	03	ENVIRONMENTAL QUALITY TECHNOLOGY DEMONSTRATIONS	16,782	16,121	15,878		15,878
50	0603734A	03	MILITARY ENGINEERING ADVANCED TECHNOLOGY	34,935	45,394	27,393		27,393
51	0603772A	03	ADVANCED TACTICAL COMPUTER SCIENCE AND SENSOR TECHNOLOGY	91,726	57,062	24,873		24,873
Tota Advanced technology development				1,438,797	1,373,609	696,592	0	696,592

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Basic research								
Advanced Component Development and Prototypes								
52	0603024A	04	UNIQUE ITEM IDENTIFICATION (UID)	628	1,990			
53	0603305A	04	ARMY MISSILE DEFENSE SYSTEMS INTEGRATION	90,552	71,788	11,455		11,455
54	0603308A	04	ARMY SPACE SYSTEMS INTEGRATION	53,416	118,610	27,551		27,551
55	0603327A	04	AIR AND MISSILE DEFENSE SYSTEMS ENGINEERING	115,567	166,061			
56	0603619A	04	LANDMINE WARFARE AND BARRIER - ADV DEV	13,789	17,445	15,596		15,596
57	0603627A	04	SMOKE, OBSCURANT AND TARGET DEFEATING SYS-ADV DEV	3,721	4,894	2,425		2,425
58	0603639A	04	TANK AND MEDIUM CALIBER AMMUNITION	39,590	33,757	42,183		42,183
59	0603653A	04	ADVANCED TANK ARMAMENT SYSTEM (ATAS)	76,072	89,828	136,302		136,302
60	0603747A	04	SOLDIER SUPPORT AND SURVIVABILITY	18,058	33,178	18,556	57,900	76,456
61	0603766A	04	TACTICAL ELECTRONIC SURVEILLANCE SYSTEM - ADV DEV	12,235	12,164	17,962		17,962
62	0603774A	04	NIGHT VISION SYSTEMS ADVANCED DEVELOPMENT	2,508				
63	0603779A	04	ENVIRONMENTAL QUALITY TECHNOLOGY - DEM/VAL	20,443	18,374	4,695		4,695
64	0603782A	04	WARFIGHTER INFORMATION NETWORK-TACTICAL - DEM/VAL	392,138	169,783	190,903		190,903
65	0603790A	04	NATO RESEARCH AND DEVELOPMENT	4,883	5,022	5,060		5,060
66	0603801A	04	AVIATION - ADV DEV	26,507	8,492	8,355		8,355
67	0603804A	04	LOGISTICS AND ENGINEER EQUIPMENT - ADV DEV	42,939	59,662	80,490		80,490
68	0603805A	04	COMBAT SERVICE SUPPORT CONTROL SYSTEM EVALUATION AN	17,267	9,817	14,290		14,290
69	0603807A	04	MEDICAL SYSTEMS - ADV DEV	29,572	35,886	28,132		28,132
70	0603827A	04	SOLDIER SYSTEMS - ADVANCED DEVELOPMENT	41,599	73,785	48,323		48,323
71	0603850A	04	INTEGRATED BROADCAST SERVICE	9,001	1,468	970		970
72	0305205A	04	ENDURANCE UAVS			93,000		93,000
Tota Advanced Component Development and Prototypes				1,010,485	932,004	746,248	57,900	804,148
System Development and Demonstration								
73	0604201A	05	AIRCRAFT AVIONICS	60,781	89,508	89,210		89,210
74	0604220A	05	ARMED, DEPLOYABLE HELOS	63,017	66,169	72,550		72,550
75	0604270A	05	ELECTRONIC WARFARE DEVELOPMENT	38,256	281,570	172,269	5,400	177,669
76	0604280A	05	JOINT TACTICAL RADIO			784		784
77	0604321A	05	ALL SOURCE ANALYSIS SYSTEM	13,211	13,039	22,574	8,100	30,674

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Program				Thousands of Dollars				
Line	Element	Act	Item	FY2009	FY2010	FY2011	FY2011 OCO	FY2011 Total
Basic research								
78	0604328A	05	TRACTOR CAGE	16,300	16,201	23,194		23,194
79	0604601A	05	INFANTRY SUPPORT WEAPONS	57,677	83,178	80,337		80,337
80	0604604A	05	MEDIUM TACTICAL VEHICLES	2,169	5,653	3,710		3,710
81	0604609A	05	SMOKE, OBSCURANT AND TARGET DEFEATING SYS - ENG DEV	5,428	973	5,335		5,335
82	0604611A	05	JAVELIN			9,999		9,999
83	0604622A	05	FAMILY OF HEAVY TACTICAL VEHICLES	4,550	9,826	3,519		3,519
84	0604633A	05	AIR TRAFFIC CONTROL	16,092	7,538	9,892		9,892
85	0604642A	05	LIGHT TACTICAL WHEELED VEHICLES			1,990		1,990
86	0604646A	05	NON-LINE OF SIGHT LAUNCH SYSTEM	253,684	91,223	81,247		81,247
87	0604647A	05	NON-LINE OF SIGHT CANNON	87,038	47,964			
88	0604660A	05	FCS MANNED GRD VEHICLES & COMMON GRD VEHICLE	760,744	275,116			
89	0604661A	05	FCS SYSTEMS OF SYSTEMS ENGR & PROGRAM MGMT	1,022,165	912,399	568,711		568,711
90	0604662A	05	FCS RECONNAISSANCE (UAV) PLATFORMS	55,923	75,107	50,304		50,304
91	0604663A	05	FCS UNMANNED GROUND VEHICLES	104,571	124,962	249,948		249,948
92	0604664A	05	FCS UNATTENDED GROUND SENSORS	20,135	26,778	7,515		7,515
93	0604665A	05	FCS SUSTAINMENT & TRAINING R&D	819,721	655,745	610,389		610,389
94	0604666A	05	SPIN OUT TECHNOLOGY/CAPABILITY INSERTION	122,788				
95	0604710A	05	NIGHT VISION SYSTEMS - ENG DEV	96,678	57,111	52,549		52,549
96	0604713A	05	COMBAT FEEDING, CLOTHING, AND EQUIPMENT	2,422	2,081	2,118		2,118
97	0604715A	05	NON-SYSTEM TRAINING DEVICES - ENG DEV	36,826	30,052	27,756		27,756
98	0604741A	05	AIR DEFENSE COMMAND, CONTROL AND INTELLIGENCE - ENG D	21,737	28,785	34,209		34,209
99	0604742A	05	CONSTRUCTIVE SIMULATION SYSTEMS DEVELOPMENT	25,095	33,039	30,291		30,291
100	0604746A	05	AUTOMATIC TEST EQUIPMENT DEVELOPMENT	17,020	15,240	14,041		14,041
101	0604760A	05	DISTRIBUTIVE INTERACTIVE SIMULATIONS (DIS) - ENG DEV	18,999	15,645	15,547		15,547
102	0604778A	05	POSITIONING SYSTEMS DEVELOPMENT (SPACE)		9,396			
103	0604780A	05	COMBINED ARMS TACTICAL TRAINER (CATT) CORE	32,541	26,107	27,670		27,670
104	0604783A	05	JOINT NETWORK MANAGEMENT SYSTEM	659				
105	0604802A	05	WEAPONS AND MUNITIONS - ENG DEV	101,823	87,022	24,345		24,345
106	0604804A	05	LOGISTICS AND ENGINEER EQUIPMENT - ENG DEV	29,884	37,023	41,039		41,039
107	0604805A	05	COMMAND, CONTROL, COMMUNICATIONS SYSTEMS - ENG DEV	9,489	58,688	90,736		90,736
108	0604807A	05	MEDICAL MATERIEL/MEDICAL BIOLOGICAL DEFENSE EQUIPMENT	41,081	41,794	34,474		34,474
109	0604808A	05	LANDMINE WARFARE/BARRIER - ENG DEV	113,590	72,380	95,577		95,577
110	0604814A	05	ARTILLERY MUNITIONS - EMD	70,008	42,230	26,371		26,371
111	0604817A	05	COMBAT IDENTIFICATION	8,967	10,018	29,884		29,884

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Program				Thousands of Dollars				
Line	Element	Act	Item	FY2009	FY2010	FY2011	FY2011 OCO	FY2011 Total
Basic research								
112	0604818A	05	ARMY TACTICAL COMMAND & CONTROL HARDWARE & SOFTWARE	63,552	79,448	60,970		60,970
113	0604822A	05	GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBS)	50,308	23,777	13,576		13,576
114	0604823A	05	FIREFINDER	64,834	20,227	24,736		24,736
115	0604827A	05	SOLDIER SYSTEMS - WARRIOR DEM/VAL	20,086	19,683	20,886		20,886
116	0604854A	05	ARTILLERY SYSTEMS - EMD	32,261	115,811	53,624		53,624
117	0604869A	05	PATRIOT/MEADS COMBINED AGGREGATE PROGRAM (CAP)	454,665	566,215	467,139		467,139
118	0604870A	05	NUCLEAR ARMS CONTROL MONITORING SENSOR NETWORK	6,064	7,103	7,276		7,276
119	0605013A	05	INFORMATION TECHNOLOGY DEVELOPMENT	68,194	66,561	23,957		23,957
120	0605018A	05	ARMY INTEGRATED MILITARY HUMAN RESOURCES SYSTEM (A-IMHRS)			100,500		100,500
121	0605450A	05	JOINT AIR-TO-GROUND MISSILE (JAGM)	114,817	126,775	130,340		130,340
122	0605455A	05	SLAMRAAM			23,700		23,700
123	0605456A	05	PAC-3/MSE MISSILE			62,500		62,500
124	0605457A	05	ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)			251,124		251,124
125	0605625A	05	MANNED GROUND VEHICLE		79,583	934,366		934,366
126	0605626A	05	AERIAL COMMON SENSOR			211,500		211,500
127	0303032A	05	TROJAN - RH12			3,697		3,697
128	0304270A	05	ELECTRONIC WARFARE DEVELOPMENT			21,571		21,571
Tota System Development and Demonstration				5,025,850	4,454,743	5,021,546	13,500	5,035,046
Management support								
129	0604256A	06	THREAT SIMULATOR DEVELOPMENT	22,015	25,091	26,158		26,158
130	0604258A	06	TARGET SYSTEMS DEVELOPMENT	13,124	13,544	8,614		8,614
131	0604759A	06	MAJOR T&E INVESTMENT	62,699	51,576	42,102		42,102
132	0605103A	06	RAND ARROYO CENTER	19,817	17,812	20,492		20,492
133	0605301A	06	ARMY KWAJALEIN ATOLL	169,367	162,662	163,788		163,788
134	0605326A	06	CONCEPTS EXPERIMENTATION PROGRAM	33,178	26,407	17,704		17,704
135	0605502A	06	SMALL BUSINESS INNOVATIVE RESEARCH	297,531				
136	0605601A	06	ARMY TEST RANGES AND FACILITIES	356,720	352,845	393,937		393,937
137	0605602A	06	ARMY TECHNICAL TEST INSTRUMENTATION AND TARGETS	84,905	84,389	59,040		59,040
138	0605604A	06	SURVIVABILITY/LETHALITY ANALYSIS	40,037	44,782	41,812		41,812
139	0605605A	06	DOD HIGH ENERGY LASER TEST FACILITY	6,772	7,352	4,710		4,710

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 FY 2011 RDT&E Program
 President's Budget FY 2011

Exhibit R-1

Appropriation: 2040 A RDT&E, Army 01-Feb-2010

Program				Thousands of Dollars				
Line	Element	Act	Item	FY2009	FY2010	FY2011	FY2011 OCO	FY2011 Total
Basic research								
140	0605606A	06	AIRCRAFT CERTIFICATION	5,001	3,746	5,055		5,055
141	0605702A	06	METEOROLOGICAL SUPPORT TO RDT&E ACTIVITIES	8,120	8,347	7,185		7,185
142	0605706A	06	MATERIEL SYSTEMS ANALYSIS	17,472	19,864	18,078		18,078
143	0605709A	06	EXPLOITATION OF FOREIGN ITEMS	3,908	5,403	5,460		5,460
144	0605712A	06	SUPPORT OF OPERATIONAL TESTING	76,231	77,471	68,191		68,191
145	0605716A	06	ARMY EVALUATION CENTER	61,461	67,555	61,450		61,450
146	0605718A	06	ARMY MODELING & SIM X-CMD COLLABORATION & INTEG	5,159	5,328	3,926		3,926
147	0605801A	06	PROGRAMWIDE ACTIVITIES	72,659	77,419	73,685		73,685
148	0605803A	06	TECHNICAL INFORMATION ACTIVITIES	44,051	51,351	48,309		48,309
149	0605805A	06	MUNITIONS STANDARDIZATION, EFFECTIVENESS AND SAFETY	44,326	72,851	53,338		53,338
150	0605857A	06	ENVIRONMENTAL QUALITY TECHNOLOGY MGMT SUPPORT	9,966	5,165	3,195		3,195
151	0605898A	06	MANAGEMENT HQ - R&D	15,586	15,784	16,154		16,154
152	0909999A	06	FINANCING FOR CANCELLED ACCOUNT ADJUSTMENTS	52				
Tota Management support				1,470,157	1,196,744	1,142,383	0	1,142,383
Operational system development								
153	0603778A	07	MLRS PRODUCT IMPROVEMENT PROGRAM	53,954	27,549	51,619		51,619
154	0102419A	07	AEROSTAT JOINT PROJECT OFFICE	344,850	328,356	372,493		372,493
155	0203347A	07	INTELLIGENCE SUPPORT TO CYBER (ISC) MIP			2,360		2,360
156	0203726A	07	ADV FIELD ARTILLERY TACTICAL DATA SYSTEM	16,200	29,174	24,622		24,622
157	0203735A	07	COMBAT VEHICLE IMPROVEMENT PROGRAMS	139,100	196,393	204,481		204,481
158	0203740A	07	MANEUVER CONTROL SYSTEM	36,072	21,283	25,540		25,540
159	0203744A	07	AIRCRAFT MODIFICATIONS/PRODUCT IMPROVEMENT PROGRAM	298,640	231,792	134,999		134,999
160	0203752A	07	AIRCRAFT ENGINE COMPONENT IMPROVEMENT PROGRAM	326	788	710		710
161	0203758A	07	DIGITIZATION	7,835	10,636	6,329		6,329
162	0203759A	07	FORCE XXI BATTLE COMMAND, BRIGADE AND BELOW (FBCB2)	22,688		3,935		3,935
163	0203801A	07	MISSILE/AIR DEFENSE PRODUCT IMPROVEMENT PROGRAM	34,189	39,068	24,280		24,280
164	0203802A	07	OTHER MISSILE PRODUCT IMPROVEMENT PROGRAMS	5,167	3,979			
165	0203808A	07	TRACTOR CARD	15,818	19,930	14,870		14,870
166	0208010A	07	JOINT TACTICAL COMMUNICATIONS PROGRAM (TRI-TAC)	892				
167	0208053A	07	JOINT TACTICAL GROUND SYSTEM	1,949	36,005	12,403		12,403

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 President's Budget FY 2011

Exhibit R-1

Appropriation: 2040 A RDT&E, Army 01-Feb-2010

Program				Thousands of Dollars				
Line	Element	Act	Item	FY2009	FY2010	FY2011	FY2011 OCO	FY2011 Total
Basic research								
168	0208058A	07	JOINT HIGH SPEED VESSEL (JHSV)	2,986	3,066	3,153		3,153
169	0301359A	07	SPECIAL ARMY PROGRAM					
170	0303028A	07	SECURITY AND INTELLIGENCE ACTIVITIES	3,189	9,777			
171	0303140A	07	INFORMATION SYSTEMS SECURITY PROGRAM	39,679	60,866	54,784	63,306	118,090
172	0303141A	07	GLOBAL COMBAT SUPPORT SYSTEM	107,693	143,979	125,569		125,569
173	0303142A	07	SATCOM GROUND ENVIRONMENT (SPACE)	46,799	39,889	33,694		33,694
174	0303150A	07	WWMCCS/GLOBAL COMMAND AND CONTROL SYSTEM	12,599	11,972	13,024		13,024
175	0303158A	07	JOINT COMMAND AND CONTROL PROGRAM (JC2)	13,228				
176	0305204A	07	TACTICAL UNMANNED AERIAL VEHICLES	100,454	202,116	54,300		54,300
177	0305208A	07	DISTRIBUTED COMMON GROUND/SURFACE SYSTEMS	88,483	188,465	103,002	16,200	119,202
178	0305219A	07	MQ-1 SKY WARRIOR A UAV			123,156		123,156
179	0305232A	07	RQ-11 UAV			1,599		1,599
180	0305233A	07	RQ-7 UAV			7,805		7,805
181	0307207A	07	AERIAL COMMON SENSOR (ACS)		115,430			
182	0307665A	07	BIOMETRICS ENABLED INTELLIGENCE			14,114		14,114
183	0702239A	07	AVIONICS COMPONENT IMPROVEMENT PROGRAM	991				
184	0708045A	07	END ITEM INDUSTRIAL PREPAREDNESS ACTIVITIES	88,975	102,867	61,098		61,098
Tota Operational system development				1,482,756	1,823,380	1,473,939	79,506	1,553,445
Total: RDT&E, Army				12,075,070	11,549,371	10,328,945	150,906	10,479,851

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100	0604746A	Automatic Test Equipment Development	1208
101	0604760A	Distributive Interactive Simulations (DIS) - Eng Dev	1242
102	0604778A	Positioning Systems Development (SPACE)	1268
103	0604780A	Combined Arms Tactical Trainer (CATT) Core	1277
104	0604783A	JOINT NETWORK MANAGEMENT SYSTEM	1303
105	0604802A	Weapons and Munitions - Eng Dev	1307
106	0604804A	Logistics and Engineer Equipment - Eng Dev	1340
107	0604805A	Command, Control, Communications Systems - Eng Dev	1461
108	0604807A	Medical Materiel/Medical Biological Defense Equipment - Eng Dev	1497
109	0604808A	Landmine Warfare/Barrier - Eng Dev	1547
110	0604814A	Artillery Munitions - EMD	1583
111	0604817A	Combat Identification	1601
112	0604818A	Army Tactical Command & Control Hardware & Software	1618
113	0604822A	General Fund Enterprise Business System (GFEBs)	1667
114	0604823A	FIREFINDER	1675
115	0604827A	Soldier Systems - Warrior Dem/Val	1695
116	0604854A	Artillery Systems - EMD	1705
117	0604869A	Patriot/MEADS Combined Aggregate Program (CAP)	1722
118	0604870A	Nuclear Arms Control Monitoring Sensor Network	1736
119	0605013A	Information Technology Development	1745
120	0605018A	Army Integ Military Human Resources Sys (A-IMRS)	1804
121	0605450A	Joint Air-to-Ground Missile (JAGM)	1807
122	0605455A	SLAMRAAM	1827
123	0605456A	PAC-3/MSE MISSILE	1837
124	0605457A	ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)	1847
125	0605625A	Manned Ground Vehicle	1859
126	0605626A	Aerial Common Sensor - SDD	1878
127	0303032A	TROJAN - RH12 - MIP	1888
128	0304270A	Electronic Warfare Development	1896

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Line No.	Program Element	Program Element Title	Page
124	0605457A	ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)	1847
126	0605626A	Aerial Common Sensor - SDD	1878
120	0605018A	Army Integ Military Human Resources Sys (A-IMRS)	1804
112	0604818A	Army Tactical Command & Control Hardware & Software	1618
110	0604814A	Artillery Munitions - EMD	1583
116	0604854A	Artillery Systems - EMD	1705
100	0604746A	Automatic Test Equipment Development	1208
111	0604817A	Combat Identification	1601
103	0604780A	Combined Arms Tactical Trainer (CATT) Core	1277
107	0604805A	Command, Control, Communications Systems - Eng Dev	1461
101	0604760A	Distributive Interactive Simulations (DIS) - Eng Dev	1242
128	0304270A	Electronic Warfare Development	1896
114	0604823A	FIREFINDER	1675
113	0604822A	General Fund Enterprise Business System (GFEBs)	1667
119	0605013A	Information Technology Development	1745
104	0604783A	JOINT NETWORK MANAGEMENT SYSTEM	1303
121	0605450A	Joint Air-to-Ground Missile (JAGM)	1807
109	0604808A	Landmine Warfare/Barrier - Eng Dev	1547
106	0604804A	Logistics and Engineer Equipment - Eng Dev	1340
125	0605625A	Manned Ground Vehicle	1859
108	0604807A	Medical Materiel/Medical Biological Defense Equipment - Eng Dev	1497
118	0604870A	Nuclear Arms Control Monitoring Sensor Network	1736
123	0605456A	PAC-3/MSE MISSILE	1837
117	0604869A	Patriot/MEADS Combined Aggregate Program (CAP)	1722
102	0604778A	Positioning Systems Development (SPACE)	1268
122	0605455A	SLAMRAAM	1827
115	0604827A	Soldier Systems - Warrior Dem/Val	1695
127	0303032A	TROJAN - RH12 - MIP	1888
105	0604802A	Weapons and Munitions - Eng Dev	1307

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	17.020	15.240	14.041	0.000	14.041	14.425	13.737	15.035	15.257	Continuing	Continuing
L59: <i>DIAGNOST/EXPERT SYS DE</i>	13.552	11.698	10.609	0.000	10.609	10.917	11.179	11.378	11.557	Continuing	Continuing
L65: <i>Test Equipment Development</i>	3.468	3.542	3.432	0.000	3.432	3.508	2.558	3.657	3.700	Continuing	Continuing
A. Mission Description and Budget Item Justification											
<p>This program element (PE) provides for development and testing of general-purpose test equipment and of state-of-the-art diagnostics and prognostics technology, software and systems to support the increasingly complex electronic components of the Army's new and upgraded weapon systems. It focuses on implementation of commercial test and diagnostic technologies across multiple weapon platforms to minimize the cost of troubleshooting and maintenance of Army equipment in the field. Modular, reconfigurable automatic and semi-automatic systems are developed under this program to satisfy weapon system test and diagnostics requirements. The Next Generation Automatic Test System (NGATS) currently under development will provide state-of-the-art test and diagnostic capabilities to support current and future weapon systems. It is the platform for transitioning Agile Rapid Global Combat Support System (ARGCS) technologies into the Army weapon system support structure, and will replace several aging automatic test systems (ATS) which are becoming prohibitively expensive to operate and maintain. This PE also provides for continued development and improvement of general-purpose test equipment and calibration standards with emphasis on the incorporation of digital electronics and tailoring of configurations to improve deployability, mobility and survivability of the support equipment. Artificial intelligence and anticipatory maintenance applications are being developed to support the integration of self-diagnostic capabilities in Army weapons and support systems. The goal of these efforts is to reduce logistics burdens and improve readiness by minimizing the need for external testers and improving the troubleshooting abilities of soldiers in the field. FY11 Base funding for this program continues development in accordance with Department of Defense and Army policies of the Army standard Next Generation Automatic Test System which will improve deployability and mobility of test and diagnostic equipment and replace aging and obsolete automated equipment currently supporting a number of the Army's vital warfighting systems. It will also develop or significantly modify test equipment to satisfy modular force and homeland security support requirements that cannot be accommodated with test equipment currently available in the commercial marketplace.</p>											

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>
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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	18.521	15.320	14.099	0.000	14.099
Current President's Budget	17.020	15.240	14.041	0.000	14.041
Total Adjustments	-1.501	-0.080	-0.058	0.000	-0.058
• Congressional General Reductions		-0.080			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-1.000	0.000			
• SBIR/STTR Transfer	-0.501	0.000			
• Adjustments to Budget Years	0.000	0.000	-0.058	0.000	-0.058

Change Summary Explanation

FY11 funding of \$58 thousand realigned to higher priority requirements.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>				PROJECT L59: <i>DIAGNOST/EXPERT SYS DE</i>				
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost	
L59: <i>DIAGNOST/EXPERT SYS DE</i>	13.552	11.698	10.609	0.000	10.609	10.917	11.179	11.378	11.557	Continuing	Continuing	
Quantity of RDT&E Articles												
A. Mission Description and Budget Item Justification												
<p>This project funds development of and system enhancements for the Next Generation Automatic Test System (NGATS). The NGATS is a general-purpose automatic test system (ATS) that will provide test and diagnostic capabilities required to support current and future weapons and combat support systems and will facilitate retirement of aging and obsolete test equipment that is imposing increasing logistics and operations and support cost burdens. It is the platform for transitioning Agile Rapid Global Combat Support System (ARGCS) technologies into the Army weapon system support structure. The ARGCS initiative was sponsored by the Department of Defense, and all Services are expected to transition demonstrated technologies into their ATS programs. This project also provides for continuing efforts to upgrade and improve general-purpose automatic test equipment to satisfy test and diagnostic requirements of the Army's new and upgraded weapon systems; development and adaptation of automatic test equipment required to overcome existing deficiencies and voids in organic test and diagnostic capabilities; development and testing of common procedures utilizing existing test program sets and software applications; and market surveys of commercially available test equipment, methods and procedures to determine applicability to Army requirements. The test and diagnostic systems and procedures developed under this project are essential for ensuring the operational readiness, accuracy and effectiveness of the Army's warfighting systems.</p>												
B. Accomplishments/Planned Program (\$ in Millions)												
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
Program #1						5.952	0.000	0.000	0.000	0.000		
FY09: Continued NGATS Increment 1 design improvements and testing resulting from operational test <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010												

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>	PROJECT L59: <i>DIAGNOST/EXPERT SYS DE</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 FY09: Continued rehost, test, and evaluation of initial complement of Abrams/Bradley test program sets (TPS) for NGATS first unit equipped <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		4.000	0.000	0.000	0.000	0.000
Program #3 FY09: Continued development of NGATS initial logistics support products (including provisioning, technical manuals and calibration) <i>FY 2009 Accomplishments:</i> FY 2009		3.000	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>	PROJECT L59: <i>DIAGNOST/EXPERT SYS DE</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 FY09: Began development and testing of hardware and software for NGATS Increment 3 system (electro-optics (EO) subsystem to include the capability to support new ground and aerial sensors for unmanned air and ground vehicles) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.100	0.000	0.000	0.000	0.000
Program #5 FY09: Continued developmental and operational follow-on testing activities		0.500	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>	PROJECT L59: <i>DIAGNOST/EXPERT SYS DE</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #6 FY10: Complete NGATS Increment 1 design improvements and testing resulting from operational test		0.000	2.547	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #7		0.000	4.074	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>	PROJECT L59: <i>DIAGNOST/EXPERT SYS DE</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY10: Continue rehost, test, and evaluation of initial complement of Abrams/Bradley test program sets (TPS) for NGATS first unit equipped <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #8 FY10: Continue development of NGATS initial logistics support products (including provisioning, technical manuals and calibration) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base		0.000	3.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>	PROJECT L59: <i>DIAGNOST/EXPERT SYS DE</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #9 FY10: Continue development and testing of hardware and software for NGATS Increment 3 system (electro-optics (EO) subsystem to include the capability to support new ground and aerial sensors for unmanned air and ground vehicles) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.200	0.000	0.000	0.000
Program #10 FY10: Continue developmental and operational follow-on testing activities <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		0.000	0.800	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>	PROJECT L59: <i>DIAGNOST/EXPERT SYS DE</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #11 FY10: Develop and test hardware and software for NGATS Increment 2 system <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.750	0.000	0.000	0.000
Program #12 FY11: Rehost, test, and evaluate initial complement of Abrams/Bradley test program sets (TPS) for NGATS first unit equipped <i>FY 2009 Accomplishments:</i> FY 2009		0.000	0.000	4.309	0.000	4.309

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>	PROJECT L59: <i>DIAGNOST/EXPERT SYS DE</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #13 FY11: Complete development of NGATS initial logistics support products (including provisioning, technical manuals and calibration) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.750	0.000	0.750
Program #14 FY11: Develop and test hardware and software for NGATS Increment 3 system (electro-optics (EO) subsystem to include the capability to support new ground and aerial sensors for unmanned air and ground vehicles)		0.000	0.000	1.500	0.000	1.500

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>	PROJECT L59: <i>DIAGNOST/EXPERT SYS DE</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #15 FY11: Complete developmental and operational follow-on testing activities		0.000	0.000	1.500	0.000	1.500
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #16		0.000	0.000	0.750	0.000	0.750

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY11: Develop and test hardware and software for NGATS Increment 2 system <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #17 FY11: Develop expanded general-purpose shop replaceable unit diagnostic capability <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.500	0.000	0.500

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #18 FY11: Initiate redesign, test and evaluation of Abrams/Bradley test program sets <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	1.000	0.000	1.000
Program #19 FY11: Develop software capabilities to incorporate common logisitcs operating environment (CLOE)/netcentric and embedded diagnostics data collection and analysis for closed loop diagnostic maintenance in support of condition-based maintenance <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base		0.000	0.000	0.300	0.000	0.300

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010							
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B. Accomplishments/Planned Program (\$ in Millions)											
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total			
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Program #20 FY10: Small Business Innovative Research/Small Business Technology Transfer programs				0.000	0.327	0.000	0.000	0.000			
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals				13.552	11.698	10.609	0.000	10.609			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>OPA3, MB4000, Integrated Family of Test Equipment (IFTE)</i>	46.159	102.524	104.472	0.622	105.094	100.206	46.545	83.236	53.266	Continuing	Continuing
D. Acquisition Strategy											
This developmental project consists of cooperative in-house and competitive and sole-source contractual actions. When the necessary expertise and capability are available within the Department of Defense, services required for the individual development projects are ordered from the government source; otherwise, commercial contracts are used. Equipment											

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<p>required for developmental projects is obtained by contract from the commercial supplier. Developmental efforts for the Next Generation Automatic Test System (NGATS) are being completed under a sole-source contract awarded to the prime contractor for the Integrated Family of Test Equipment off-platform testers. NGATS will follow an evolutionary acquisition strategy using spiral development. The NGATS Increment 1 will replace the Direct Support Electrical Systems Test Set (DSESTS). Increments 2 and 3 will replace the Base Shop Test Facility (BSTF) (V)3 and BSTF (V)5 systems respectively.</p> <p>E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>	PROJECT L59: <i>DIAGNOST/EXPERT SYS DE</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Prototype Development	SS	Northrop Grumman Rolling Meadows, IL	13.472	0.000		0.000		0.000		0.000	Continuing	Continuing	13.472
Hardware/Support Items Development	SS	Northrop Grumman Rolling Meadows, IL	47.000	5.000		2.250		0.000		2.250	Continuing	Continuing	0
Software Development/ Verification/Validation	SS	Northrop Grumman Rolling Meadows, IL	4.239	3.879		6.110		0.000		6.110	Continuing	Continuing	0
Subtotal			64.711	8.879		8.360		0.000		8.360			13.472

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Project Management/ Technical Support	C	Various Location could not be determined.	43.590	1.542		0.600		0.000		0.600	Continuing	Continuing	0
Other Direct	C	Various Location could not be determined.	1.390	0.500		0.400		0.000		0.400	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			44.980	2.042		1.000		0.000		1.000			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Operational Testing	C/Variou	Various Location could not be determined.	2.814	0.000		1.000		0.000		1.000	Continuing	Continuing	0
Developmental Testing	C/Variou	Various Location could not be determined.	0.597	0.450		0.249		0.000		0.249	Continuing	Continuing	0
Subtotal			3.411	0.450		1.249		0.000		1.249			0.000

Remarks

Test Program Set (TPS) test and evaluation is included in the product development cost.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.327		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.000	0.327		0.000		0.000		0.000			0.000

Remarks

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	113.102	11.698	10.609	0.000	10.609			13.472

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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		#																										
Full Rate Production Decision Review												#																
Full Materiel Release															#													
First Unit Equipped															#													
NGATS Testing (Increment 1)								#	#	#	#																	
NGATS Production (Increment 1)			#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#
NGATS SDD (Increment 2)			#	#	#	#	#	#	#	#	#																	
NGATS Testing (Increment 2)						#	#	#	#	#	#	#	#	#	#	#	#	#	#									
NGATS SDD (Increment 3)						#	#	#	#	#	#	#	#	#	#													
NGATS Testing (Increment 3)														#	#	#	#	#	#	#	#	#	#					
NGATS P3I - Netcentric																	#	#	#	#	#	#	#	#	#	#	#	#
New Systems Test Capability																	#	#	#	#	#	#	#	#	#	#	#	#

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Milestone C	2	2009	2	2009
Full Rate Production Decision Review	4	2011	4	2011
Full Materiel Release	1	2012	1	2012
First Unit Equipped	2	2012	2	2012
NGATS Testing (Increment 1)	4	2010	2	2011
NGATS Production (Increment 1)	3	2009	3	2015
NGATS SDD (Increment 2)	3	2009	3	2011
NGATS Testing (Increment 2)	3	2010	3	2013
NGATS SDD (Increment 3)	3	2010	3	2012
NGATS Testing (Increment 3)	3	2012	3	2014
NGATS P3I - Netcentric	3	2013	3	2015
New Systems Test Capability	3	2013	3	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>				PROJECT L65: <i>Test Equipment Development</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>L65: Test Equipment Development</i>	3.468	3.542	3.432	0.000	3.432	3.508	2.558	3.657	3.700	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>This project supports development and demonstration of state-of-the-art calibration standards and techniques, and upgrades/improvements to existing Army calibration systems. It provides for feasibility studies, market research, inventory analyses, bid sample testing, and prototyping to support calibration systems and general-purpose test and diagnostic equipment acquisitions. Primary efforts under this project include testing of an up-armor ready AN/GSM-421(V2) tactical calibration capability, development of calibration capability for chemical and biological agent detection systems and night vision testers, improvement of test and measurement equipment performance envelopes via preplanned product improvements (P3I), and development/evaluation of advanced technology and higher reliability calibration systems and general-purpose test, measurement and diagnostic equipment (TMDE). Preplanned product improvements are underway to current test and measurement systems to overcome deficiencies and voids in existing organic capabilities and to ensure the operational readiness, accuracy, effectiveness, and safety of Army weapons and combat support systems. These improvements will employ reconfigurable open electronics architecture and computer-based instrumentation wherever feasible and will be focused on reducing test equipment footprints to improve deployability and mobility in areas of operation.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 FY09: Developed hardware via preplanned product improvements to enhance TMDE systems' performance capabilities <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010							0.600	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 FY09: Tested and integrated hardware developed for preplanned product improvements <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.827	0.000	0.000	0.000	0.000
Program #3 FY09: Developed, evaluated, and integrated test and measurement equipment <i>FY 2009 Accomplishments:</i> FY 2009		1.101	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 FY09: Continued development and evaluation of test and calibration procedures <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.210	0.000	0.000	0.000	0.000
Program #5 FY09: Performed market research and evaluation of commercial equipment, and developed performance specifications for acquisitions		0.730	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #6 FY10: Develop hardware via preplanned product improvements to enhance TMDE systems' performance capabilities <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.605	0.000	0.000	0.000
Program #7		0.000	0.850	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY10: Test and integrate hardware developed for preplanned product improvements <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #8 FY10: Develop, evaluate, and integrate test and measurement equipment <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.960	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #9 FY10: Continue development and evaluation of test and calibration procedures <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.230	0.000	0.000	0.000
Program #10 FY10: Perform market research and evaluation of commercial equipment, and develop performance specifications for acquisitions <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base		0.000	0.824	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #11 <i>FY11: Develop hardware via preplanned product improvements to enhance TMDE systems' performance capabilities</i> <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.595	0.000	0.595
Program #12 <i>FY11: Test and integrate hardware developed for preplanned product improvements</i> <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		0.000	0.000	0.810	0.000	0.810

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #13 FY11: Develop, evaluate, and integrate test and measurement equipment <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.990	0.000	0.990
Program #14 FY11: Continue development and evaluation of test and calibration procedures <i>FY 2009 Accomplishments:</i> FY 2009		0.000	0.000	0.242	0.000	0.242

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #15 FY11: Perform market research and evaluation of commercial equipment, and develop performance specifications for acquisitions <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.795	0.000	0.795
Program #16 FY10: Small Business Innovative Research/Small Business Technology Transfer Programs		0.000	0.073	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>			PROJECT L65: <i>Test Equipment Development</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						3.468	3.542	3.432	0.000	3.432	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>OPA3, N10000, Calibration Sets Equipment</i>	9.660	16.791	38.778	0.000	38.778	13.831	5.802	19.774	20.093	Continuing	Continuing
• Ord. #2: <i>OPA3, N11000, Test Equipment Modernization</i>	22.311	19.294	19.166	0.000	19.166	30.925	5.595	5.689	5.781	Continuing	Continuing
D. Acquisition Strategy											
Projects are focused on use of commercial and nondevelopmental item technologies. When programmatic and engineering expertise and capability are available within the Department of Defense, services required for the individual development projects are acquired from the government source; otherwise, commercial services contracts are used to provide these capabilities. Equipment required for development projects is obtained from the commercial supplier. Candidate commercial equipment and nondevelopmental items are identified and evaluated through market research and government testing and evaluation.											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>	PROJECT L65: <i>Test Equipment Development</i>

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>	PROJECT L65: <i>Test Equipment Development</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Systems Engineering	C/Variou	Various Location could not be determined.	6.882	1.417		1.454		0.000		1.454	Continuing	Continuing	0
Procedures Development and Evaluation	C/Variou	Various Location could not be determined.	2.108	0.230		0.242		0.000		0.242	Continuing	Continuing	0
Government Engineering	C	Various Location could not be determined.	1.670	0.520		0.496		0.000		0.496	Continuing	Continuing	0
Subtotal			10.660	2.167		2.192		0.000		2.192			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Technical Support Services	C/Variou	Various Location could not be determined.	0.967	0.310		0.310		0.000		0.310	Continuing	Continuing	0
Subtotal			0.967	0.310		0.310		0.000		0.310			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>				PROJECT L65: <i>Test Equipment Development</i>					

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Testing	C/Various	Various Location could not be determined.	1.631	0.620		0.600		0.000		0.600	Continuing	Continuing	0
Subtotal			1.631	0.620		0.600		0.000		0.600			0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Personnel	C	Various Location could not be determined.	0.882	0.372		0.330		0.000		0.330	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.073		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.882	0.445		0.330		0.000		0.330			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604746A: <i>Automatic Test Equipment Development</i>	PROJECT L65: <i>Test Equipment Development</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	14.140	3.542	3.432	0.000	3.432			0.000

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	18.999	15.645	15.547	0.000	15.547	15.858	16.006	16.073	16.991	Continuing	Continuing
C74: <i>DEVEL SIMULATION TECH</i>	3.613	3.728	3.548	0.000	3.548	3.643	3.620	3.072	4.022	Continuing	Continuing
C77: <i>Army Geospatial Data Master Plan</i>	2.324	0.341	0.477	0.000	0.477	0.485	0.493	0.507	0.509	Continuing	Continuing
C78: <i>One Semi-Automated Forces (OneSAF)</i>	11.383	11.576	11.522	0.000	11.522	11.730	11.893	12.494	12.460	Continuing	Continuing
C81: <i>Joint Training Integration & Evaluation Center</i>	1.679	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The program element "Distributive Interactive Simulations - Engineering Development" applies to the Army's Advanced Simulation Program, which enables operational readiness and the development of concepts and systems for the Future Force through the application of new simulation technology and techniques. The development and application of simulation technology will provide the means to link electronically a range of various simulation tools in a manner that is transparent to the user. The amalgam of simulations and tools is linked together to enable execution of an event; to verify the scenarios, tactics/techniques and procedures; to train testers on new hardware/software; and to conduct trial test runs before costly live field tests. The tools developed are available for reuse by developers and users of simulations throughout the Army. Project C74 provides the resources necessary to perform the formally chartered mission of the Army's Simulation-to-C4I* Interoperability Overarching Integrated Product Team (SIMCI OIPT). (*C4I = Command, Control, Communications, Computers and Intelligence.) Project C77, Army Geospatial Data Master Plan, focuses on activities that start with data acquisition from multiple sources and culminate in (1) accurate, robust and timely geospatial data and data management and (2) integration and conversion tools that support multiple battle command, training and mission-rehearsal applications. Project C78 develops the One Semi-Automated Forces (OneSAF) program, which will combine and improve the functionality and behaviors of several current semi-automated forces to provide a single SAF for Army use in simulations. The FY11 line of Project C74 continues management of the SIMCI OIPT's Army-wide collaborative, interoperability enhancement activities, including architecture alignment, data model alignment, common standards, components, and products. The FY11 line of Project C77 develops geospatial data standards and integrates geospatial data into Army Battle Command (BC) systems. The FY11 line of Project C78 continues development of the software for OneSAF Pre-Planned Product Improvements (P3Is).

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>
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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	17.717	15.727	15.819	0.000	15.819
Current President's Budget	18.999	15.645	15.547	0.000	15.547
Total Adjustments	1.282	-0.082	-0.272	0.000	-0.272
• Congressional General Reductions		-0.082			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	1.720	0.000			
• SBIR/STTR Transfer	-0.438	0.000			
• Adjustments to Budget Years	0.000	0.000	-0.272	0.000	-0.272

Change Summary Explanation

Change Summary Explanation: None Required.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>C74: DEVEL SIMULATION TECH</i>	3.613	3.728	3.548	0.000	3.548	3.643	3.620	3.072	4.022	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Project C74 funds the HQDA-chartered mission of the Simulation-to-C4I* Interoperability (SIMCI) Overarching Integrated Product Team (OIPT). (*C4I = Command, Control, Computers and Intelligence.) The SIMCI OIPT mission is to provide recommendations to Army senior leadership regarding Army policy, organization and processes for improvement of interoperability of Battle Command (BC) and Modeling & Simulation (M&S) systems. BC system capabilities encompass not only command and control functions, but also "decision and planning support capabilities that cover all functions including deployment, mission rehearsal, sustainment, Intelligence, Surveillance, Reconnaissance, etc., en route as well as from fixed locations." [Training and Doctrine Command (TRADOC) Pamphlet 525-66] The SIMCI OIPT, led by PEO-STRI and PEO-C3T, uses collaborative processes among its approximately 30 Army organizations (including HQDA staff, combat developers and materiel developers) to identify key interoperability shortfalls and the required materiel solutions. The functions of the SIMCI OIPT are: (1) Technical Investment--sponsor/support initiatives that seek solutions to interoperability issues surrounding BC and M&S systems; e.g. targeted, technical investments for development projects; implementation of BC and M&S interoperability architectures, standards, and interface products; (2) Research--promote cooperative research and coordination among existing and emerging BC and M&S programs; (3) Advisor to Army Leadership--recommend and influence BC and M&S interoperability programs, policies, resourcing and procedures; (4) Facilitator--facilitate the integration of Army interoperability initiatives with Service and Joint, Interagency, International and Multinational (JIIM) programs;(5) Change Agent--serve as a catalyst for change to achieve interoperable system of systems; and (6) Outreach--conduct & participate in interoperability outreach activities such as conferences and publications.SIMCI investments consist primarily of cost sharing opportunities, leveraging partial solutions to acquisition programs to enhance the interoperability of multiple systems in the Joint operational environment. Key programs that will benefit from the cross-domain vision and practices of SIMCI include Army Battle Command Systems (ABCS), System of Systems Common Operating Environment (SOSCOE), Force XXI Battle Command Brigade and Below (FBCB2), Joint Capabilities Release (JCR), Joint Land Component Constructive Training Capability (JLCCTC), Live/Virtual/Constructive Integrating Architecture (LVC-IA), Software Blocking (SWB), Data Product Development Environment (DPDE), Joint Forces Command's Joint National Training Capability (JNTC), and Global Command and Control System- Family of Systems (GCCS-FOS). SIMCI investment will accelerate the implementation, within BC and M&S systems, of a common Joint Consultation, Command and Control Information Exchange Data Model (JC3IEDM) that is used by other Services and coalition nations, thus enhancing the inherent ability of Army systems to interoperate seamlessly in a JIM environment. The SIMCI-sponsored Army C4I and Simulation Initialization System (ACSIS) capability will be expanded to the DPDE to address key training and operational data initialization gaps. This will enable timely, flexible, and common data updates to BC and M&S systems, thus reducing data latency and inter-system ambiguity. SIMCI's direct involvement with PEO Integration will increase the visibility of that program's needs and capabilities, providing the various OIPTs with opportunities to leverage their systems' fundamental capabilities to meet the needs of PEO Integration, and vice versa. SIMCI investments will cement those relationships through co-development of common-use products.FY11 funding continues management of the SIMCI OIPT'S Army-wide collaborative, interoperability enhancement activities, including architecture alignment, data model alignment, common standards, components, and products. Objectives are: identify and articulate to HQDA senior leadership specific standards that require Army-wide implementation;

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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co-develop data standards, architecture standards, implementation specifications and joint initialization / scenario-generation products; co-develop common JC3IEDM integration/translation capability for BC/M&S applications; co-develop BC/M&S products to support PEO Integration; continue transition of SIMCI knowledge and proof-of-principle products to Army and Joint acquisition programs.						
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 FY09-FY11: Management of the SIMCI OIPT's Army-wide collaborative, interoperability enhancement activities, including architecture alignment, data model alignment, common standards, components, and products. Objectives are: identify and articulate to HQDA Senior Leadership specific standards that require Army-wide implementation; co-develop data standards, architecture standards, implementation specifications and joint initialization / scenario-generation products; co-develop common JC3IEDM integration/translation capability for BC/M&S applications; co-develop BC/M&S products to meet the Future Force; and continue transition of SIMCI knowledge and proof-of-principle products to Army and Joint acquisition programs. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		3.613	3.624	3.548	0.000	3.548
Program #2 FY10: Small Business Innovative Research/Small Business Technology Transfer Programs		0.000	0.104	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Accomplishments/Planned Programs Subtotals		3.613	3.728	3.548	0.000	3.548
C. Other Program Funding Summary (\$ in Millions) N/A						
D. Acquisition Strategy SIMCI OIPT resources are allocated to multiple organizations and contracts to execute approved functions and projects that advance the efforts of SIMCI and components-based architecture alignment.						
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.						

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C74: <i>DEVEL SIMULATION TECH</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
JC3IEDM Migration/ Implementation	C/CPFF	Alion Science & Technology Tysons Corner, VA	0.294	0.246		0.285		0.000		0.285	Continuing	Continuing	0
Implementation of Initialization Products	C/CPFF	Alion Science & technology Tysons Corner, Va	0.569	0.412		0.398		0.000		0.398	Continuing	Continuing	0
Transition of ACSIS simulation initialization capability	C	NAVSEA Pax River, MD	0.765	0.565		0.542		0.000		0.542	Continuing	Continuing	0
Expanding Modified Table of Equipment System Architecture (SA) data	C	General Dynamics Orlando, FL	0.563	0.361		0.297		0.000		0.297	Continuing	Continuing	0
Adding JC3IEDM to the Common C4I adapter/web service	C	PEO STRI Orlando, Fl	0.880	0.520		0.610		0.000		0.610	Continuing	Continuing	0
Adding JC3IEDM to C2 systems data mediation/ web service	C	Viecore FSD Ft. Monmouth, NJ	0.335	0.492		0.610		0.000		0.610	Continuing	Continuing	0
JC3IEDM sample application and reference implementation	C	CSC Ft. Monmouth, NJ	0.867	0.560		0.417		0.000		0.417	Continuing	Continuing	0
Initialization Study Implementation	C	IDA Alexandria, VA	0.210	0.000		0.000		0.000		0.000	Continuing	Continuing	1.394
Subtotal			4.483	3.156		3.159		0.000		3.159			1.394

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SIMCI Program Support	C/CPFF	Alion Science & Technology Location could not be determined.	0.200	0.112		0.121		0.000		0.121	Continuing	Continuing	0
Army Initialization Program	C/CPFF	Alion Science & Tecnology Location could not be determined.	0.183	0.094		0.057		0.000		0.057	Continuing	Continuing	0
Subtotal			0.383	0.206		0.178		0.000		0.178			0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management	C	Various Location could not be determined.	8.659	0.262		0.211		0.000		0.211	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.104		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			8.659	0.366		0.211		0.000		0.211			0.000

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
		Cost	Award Date	Cost	Award Date	Cost	Award Date				
	13.525	3.728		3.548		0.000		3.548			1.394

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C74: <i>DEVEL SIMULATION TECH</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Coalition Battle Management Language tools and Standards				#	#	#	#	#	#	#	#	#	#	#														
Geospatial tool integration in C2 and Simulation				#	#	#	#	#	#	#	#																	
SDMS SOA Battle Command Demonstration				#	#	#	#																					
JC3IEDM Deep Database Monitoring Tool				#	#	#	#																					
Network Architecture Integration Service (NAIS)				#	#	#	#	#	#	#	#																	
Army Organizational Server Data Exchange with Army Battle Command Systems (ABCS)				#	#	#	#	#	#	#	#	#	#	#														

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C74: <i>DEVEL SIMULATION TECH</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Coalition Battle Management Language tools and Standards	4	2009	3	2012
Geospatial tool integration in C2 and Simulation	4	2009	3	2011
SDMS SOA Battle Command Demonstration	4	2009	3	2010
JC3IEDM Deep Database Monitoring Tool	4	2009	3	2010
Network Architecture Integration Service (NAIS)	4	2009	3	2011
Army Organizational Server Data Exchange with Army Battle Command Systems (ABCS)	4	2009	3	2012

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>				PROJECT C77: <i>Army Geospatial Data Master Plan</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>C77: Army Geospatial Data Master Plan</i>	2.324	0.341	0.477	0.000	0.477	0.485	0.493	0.507	0.509	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u>											
<p>Project C77 addresses the development and maintenance of the Army Geospatial Data Integrated Master Plan (AGDIMP), approved by the Chief of Staff, Army in April 2005. The AGDIMP provides the framework for generating, analyzing and distributing geospatial data for battle management operations, training, and mission rehearsal. The AGDIMP also provides the procedures for identifying and refining Army geospatial resource requirements. Geospatial data provide Soldiers with the framework and background for displaying the location of friendly and enemy forces and the location of other critical features on the battlefield. Geospatial data -- used in Army command and control systems, course of action analysis, mission rehearsal tools, simulators and simulations -- provide insights on how the physical environment will impact combat operations. This minimizes exposure of Soldiers to hostile environments. The AGDIMP describes the operations for a complete, integrated network-centric enterprise for managing and updating geospatial data required for the Army's Future Force. Although this plan encompasses most of the issues of an enterprise solution for geospatial needs and concerns, it does not contain the full level of detail or complexity required to be considered complete. The AGDIMP includes all activities starting with data acquisition from multiple sources (including raw sensor feeds from national sensors to soldier/platform level) and concluding with accurate, robust, and timely geospatial (terrain-related) data management, integration, and conversion tools that support multiple battle command, training, and mission-rehearsal applications. The AGDIMP does not include the algorithms and functions used by the applications themselves to produce finished battle command or intelligence products. The AGDIMP will become part of a much larger effort to integrate geospatial activities across all Services while documenting the complex framework for a "net ready" geospatial information and services architecture, an environment in which the Army's current and future forces must operate to achieve information dominance within the total battle space. This larger effort is currently being developed in conjunction with the Joint Forces Command and the other Services, including Special Operations Command.</p>											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							0.400	0.200	0.250	0.000	0.250
FY09-11: Funds contribute to development of the Army geospatial data model.											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C77: <i>Army Geospatial Data Master Plan</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 FY09-11: Funds develop geospatial data standards and integrate geospatial data into the Army Battle Command (BC) systems.		0.273	0.141	0.227	0.000	0.227
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3		1.651	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C77: <i>Army Geospatial Data Master Plan</i>				
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>FY09: Standup of Army Geospatial Center. Center provides oversight of Army geospatial activities. This is a one-time expense. Project C77 used as a place to park the funds. Center is not part of normal Project C77 activities.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
Accomplishments/Planned Programs Subtotals		2.324	0.341	0.477	0.000	0.477
<u>C. Other Program Funding Summary (\$ in Millions)</u>						
N/A						
<u>D. Acquisition Strategy</u>						
Resources are allocated to multiple organizations and contracts for approval and execution of projects in support of the AGDIMP.						
<u>E. Performance Metrics</u>						
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>				PROJECT C78: <i>One Semi-Automated Forces (OneSAF)</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
C78: <i>One Semi-Automated Forces (OneSAF)</i>	11.383	11.576	11.522	0.000	11.522	11.730	11.893	12.494	12.460	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>Project C78 develops and delivers a software system that represents activities of units and forces in simulation. This representation is used to support the concept evaluation, experimentation, materiel acquisition and training communities. The focus of this project is systems engineering and design for development and evolution of the architecture and software tools for a universal system of Army computer-generated forces -- One Semi-Automated Forces (OneSAF). OneSAF is a next-generation higher fidelity brigade-and-below SAF that represents a full range of operations, systems and control processes in support of stand-alone and embedded training and Research, Development and Acquisition (RDA) simulation applications. OneSAF will be fully interoperable with the Army's emerging virtual, live, and division-and-above constructive simulations and will provide next-generation simulation products. OneSAF will replace a variety of simulations currently used within the Army to support analytic and training simulation activities. FY11 will continue the development of the software required to provide OneSAF Pre-Planned Product Improvements (P3Is) as prioritized and approved by the Training and Doctrine Command (TRADOC) Project Office.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 FY09-FY11: Development of functionality to provide architectural services, components, synthetic environment and infrastructure capable of supporting initial model development. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010							4.367	4.043	4.885	0.000	4.885

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C78: <i>One Semi-Automated Forces (OneSAF)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 FY09-FY11: Development of functionality to represent behaviors, physical models and communication models for OneSAF. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		5.025	5.191	4.967	0.000	4.967
Program #3 FY09-FY11: Verification and validation of newly developed and integrated software. <i>FY 2009 Accomplishments:</i> FY 2009		1.991	2.018	1.670	0.000	1.670

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>		PROJECT C78: <i>One Semi-Automated Forces (OneSAF)</i>				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO								
Program #4 FY10: Small Business Innovative Research/Small Business Technology Transfer <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO				0.000	0.324	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals				11.383	11.576	11.522	0.000	11.522

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C78: <i>One Semi-Automated Forces (OneSAF)</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Ord. #1: <i>OMA, 121014000</i>	4.911	4.009	4.205	0.000	4.205	4.532	4.769	5.672	5.642	Continuing	Continuing

D. Acquisition Strategy

Development of Pre-Planned Product Improvement (P3I) requirements as prioritized and approved by the TRADOC Project Office via multiple task orders on competitively selected contracts.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>				PROJECT C78: <i>One Semi-Automated Forces (OneSAF)</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Architecture Dev & System Integration	C/CPFF	Science Applications International Corp Orlando, FL	45.960	2.510		0.000		0.000		0.000	Continuing	Continuing	51.628
Architecture Dev & System Integration - 2	C/CPFF	TBS Location could not be determined.	0.000	0.000		2.102		0.000		2.102	Continuing	Continuing	0
Integrated Environment Dev	C/CPFF	Advanced Systems Technology Inc., Orlando FL	9.102	1.000		1.100		0.000		1.100	Continuing	Continuing	0
Environmental Runtime Component	C/CPFF	Science Applications International Corp Orlando, FL	6.990	0.591		0.000		0.000		0.000	Continuing	Continuing	7.981
Environmental Runtime Component - 2	C/CPFF	TBS Location could not be determined.	0.000	0.000		0.800		0.000		0.800	Continuing	Continuing	0
OneSAF System Development	C/CPFF	Various Location could not be determined.	9.248	0.200		0.610		0.000		0.610	Continuing	Continuing	0
Model and Tools Development	C/CPFF	Science Applications International Corp Orlando, FL	21.863	2.800		0.000		0.000		0.000	Continuing	Continuing	27.463
Model and Tools Development - 2	C/CPFF	TBS Location could not be determined.	0.000	0.000		3.600		0.000		3.600	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>				PROJECT C78: <i>One Semi-Automated Forces (OneSAF)</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			93.163	7.101		8.212		0.000		8.212			87.072

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Analysis	C/Various	Multiple Location could not be determined.	4.777	0.500		0.160		0.000		0.160	Continuing	Continuing	0
Domain Analysis	C/Various	Multiple Location could not be determined.	4.387	0.294		0.200		0.000		0.200	Continuing	Continuing	0
Architecture Engr & Tech Spt	C/CPFF	MITRE FFRDC Location could not be determined.	2.696	0.290		0.300		0.000		0.300	Continuing	Continuing	0
Subtotal			11.860	1.084		0.660		0.000		0.660			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C78: <i>One Semi-Automated Forces (OneSAF)</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
OneSAF integration, evaluation and test	C/CPAF	Multiple Location could not be determined.	4.954	0.980		0.800		0.000		0.800	Continuing	Continuing	0
OneSAF Verification, Validation & Accreditation	C/Various	Multiple Location could not be determined.	4.975	0.487		0.200		0.000		0.200	Continuing	Continuing	0
Subtotal			9.929	1.467		1.000		0.000		1.000			0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program management	C/Various	PEO STRI Orlando, FL	10.360	1.600		1.650		0.000		1.650	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.324		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			10.360	1.924		1.650		0.000		1.650			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C78: <i>One Semi-Automated Forces (OneSAF)</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	125.312	11.576	11.522	0.000	11.522			87.072

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C78: <i>One Semi-Automated Forces (OneSAF)</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
OneSAF Version Release 3.0	#																											
OneSAF Version Release 4.0					#																							
OneSAF Version Release 5.0									#																			

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C78: <i>One Semi-Automated Forces (OneSAF)</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
OneSAF Version Release 3.0	1	2009	1	2009
OneSAF Version Release 4.0	1	2010	1	2010
OneSAF Version Release 5.0	1	2011	1	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>				PROJECT C81: <i>Joint Training Integration & Evaluation Center</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
C81: <i>Joint Training Integration & Evaluation Center</i>	1.679	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>The Joint Training Integration and Evaluation Center (JTIEC) supports and actively participates with the Joint Forces Command (JFCOM), Joint Warfighting Center (JWFC), Joint National Training Capability (JNTC), and Joint Management Office (JMO) in combined effort to advance Joint Training. The mission of the JTIEC is aligned with the Joint Advanced Training Technology Lab (JATTL) and the Joint Development Integration Facility (JDIF) missions. The JTIEC was established to promote collaboration in the research, development, integration, interoperability, demonstration, evaluation, and verification & validation training technologies and products. The JTIEC serves as an integration and evaluation environment for training system and tools. It will serve as a common resource for evaluation of training technologies and products to address military and civilian training, education and performance requirements. Working with the JFCOM, JWFC, JNTC, JMO, the Center collaborates on the research, development, demonstration, evaluation and interoperability of training tools, live-virtual-constructive simulations, federations, architectures, databases and performance-measurement systems on projects of relevance to participating organizations, individual services and in support of Joint research & development, training exercises, mission rehearsal and experimentation. The JTIEC provides verification, validation, accreditation and certification capabilities and will be an integrated virtual battle space environment that provides connection to the JNTC as a persistent host site for Joint training exercises and experimentation. In this capacity, the Center will include capabilities such as joint training performance & effectiveness evaluations, site planning and setup, configuration control, and communications planning and setup. The JTIEC will connect to the JATTL and provide a technology integration environment and infrastructure for service research and development efforts while providing a connection to a Joint environment and exercises. Infrastructure upgrades will enable each service to conduct research and development efforts and provide a connection to the joint environment and exercises as part of the Joint Training and Experimentation Network (JTEN).</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							1.679	0.000	0.000	0.000	0.000
FY09: Congressional Add - Joint Training Intregation and Evaluation Center; supports DoD Joint training and provided for system development to meet urgent US Joint Forces Command live virtual and constructive training requirements.											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C81: <i>Joint Training Integration & Evaluation Center</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Accomplishments/Planned Programs Subtotals		1.679	0.000	0.000	0.000	0.000
C. Other Program Funding Summary (\$ in Millions) N/A						
D. Acquisition Strategy N/A						
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.						

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604760A: <i>Distributive Interactive Simulations (DIS) - Eng Dev</i>	PROJECT C81: <i>Joint Training Integration & Evaluation Center</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Joint Training Intregation and Evaluation Center	C/Various	PEO STRI Orlando	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	1.679
Subtotal			0.000	0.000		0.000		0.000		0.000			1.679

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
	0.000	0.000		0.000		0.000		0.000			1.679
	0.000	0.000		0.000		0.000		0.000			

Remarks

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604778A: <i>Positioning Systems Development (SPACE)</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	9.396	0.000	0.000	0.000	0.000	0.000	0.000	0.000	40.100	49.496
168: <i>NAVSTAR GPS EQUIP</i>	0.000	9.396	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Navstar Global Positioning System (Navstar GPS) is a passive, space-based, radio positioning and navigation system providing precise, three dimensional position, navigation, velocity and timing information to warfighters. The Navstar GPS program is designated as a DoD Space Program and the United States Air Force (USAF) is the executive agent. The Joint Program Office develops GPS User Equipment (PE 35164F) with direct Army management and participation. NAVSTAR GPS is composed of three segments: Space, Control, and User Equipment. Project 168 provides for initial and sustained participation in the research and development of Army unique requirements that enhance the Position Navigation capabilities of Army weapons systems and platforms. These funds are used to identify/support the means to increase the functionality and performance of GPS receivers in response to the latest enemy threats to GPS. The Defense Advanced GPS Receiver has been designated a Horizontal Technology Integration (HTI) program and provides essential capabilities to numerous weapon systems and platforms.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	9.446	0.000	0.000	0.000
Current President's Budget	0.000	9.396	0.000	0.000	0.000
Total Adjustments	0.000	-0.050	0.000	0.000	0.000
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments 1	0.000	-0.050	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604778A: <i>Positioning Systems Development (SPACE)</i>				PROJECT 168: <i>NAVSTAR GPS EQUIP</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
168: <i>NAVSTAR GPS EQUIP</i>	0.000	9.396	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>The Navstar Global Positioning System (Navstar GPS) is a passive, space-based, radio positioning and navigation system providing precise, three dimensional position, navigation, velocity and timing information to warfighters. The Navstar GPS program is designated as a DoD Space Program and the United States Air Force (USAF) is the executive agent. The Joint Program Office develops GPS User Equipment (PE 35164F) with direct Army management and participation. NAVSTAR GPS is composed of three segments: Space, Control, and User Equipment. Project 168 provides for initial and sustained participation in the research and development of Army unique requirements that enhance the Position Navigation capabilities of Army weapons systems and platforms. These funds are used to identify/support the means to increase the functionality and performance of GPS receivers in response to the latest enemy threats to GPS. The Defense Advanced GPS Receiver has been designated a Horizontal Technology Integration (HTI) program and provides essential capabilities to numerous weapon systems and platforms.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Transition of a classified capability of the Tactical Assured - GPS Regional (TAGR) system to augment GPS receivers ability to overcome enemy threats. Complete all required tasks for transition to Milestone A approval <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base							0.000	9.152	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010							
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604778A: <i>Positioning Systems Development (SPACE)</i>		PROJECT 168: <i>NAVSTAR GPS EQUIP</i>							
B. Accomplishments/Planned Program (\$ in Millions)											
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total			
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Program #2 SBIR/STTR <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO				0.000	0.244	0.000	0.000	0.000			
Accomplishments/Planned Programs Subtotals				0.000	9.396	0.000	0.000	0.000			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>K47800, Other Procurement, Army, NAVSTAR GPS</i>	94.231	125.991	32.193	13.500	45.693	15.122	29.959	27.929	9.924	Continuing	Continuing
D. Acquisition Strategy											
Transition commercial technology investments and Communication and Electronics Research, Development, and Engineering Center (CERDEC) classified program initiatives to improve and enhance functionality of GPS receivers to include unique Army requirements for GPS receivers in overcoming current enemy threats to GPS. Complete all required tasks											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604778A: <i>Positioning Systems Development (SPACE)</i>	PROJECT 168: <i>NAVSTAR GPS EQUIP</i>
<p>for transition to technology development phase. Solicit for competitive contract through technology development phase for down select for engineering & manufacturing development phase.</p> <p>E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604778A: <i>Positioning Systems Development</i> (SPACE)				PROJECT 168: <i>NAVSTAR GPS EQUIP</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
C2 CONOPS Development	C	TBD Location could not be determined.	0.000	1.046		0.000		0.000		0.000	Continuing	Continuing	0
Performance Specification Development/Draft CDD KPP/RFP	C	Penn State ARL State College, PA	0.000	0.850		0.000		0.000		0.000	Continuing	Continuing	0
Interface ICD Development	C	CERDEC Aberdeen Proving Ground, MD	0.000	0.850		0.000		0.000		0.000	Continuing	Continuing	0
Integration Analysis/ ICD Capture	C	Rockwell Collins Cedar Rapids, IA	0.000	1.200		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.000	3.946		0.000		0.000		0.000			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Analysis of Alternatives Support	C	Battle Command Battle Lab Ft. Gordon, GA	0.000	0.600		0.000		0.000		0.000	Continuing	Continuing	0
	C	ARINC	0.000	0.400		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604778A: <i>Positioning Systems Development (SPACE)</i>				PROJECT 168: <i>NAVSTAR GPS EQUIP</i>					

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Acquisition Plan Development		Annapolis, MD											
Acquisition Document Development	C	ARINC Annapolis, MD	0.000	1.500		0.000		0.000		0.000	Continuing	Continuing	0
Supportability Strategy	C	CECOM/LRC Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.000	2.500		0.000		0.000		0.000			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Regression / Delta / CONOPS Testing	C	EPG Ft. Huachuca, AZ	0.000	1.400		0.000		0.000		0.000	Continuing	Continuing	0
Technology Readiness Assessment	C	CERDEC Aberdeen Proving Ground, MD	0.000	0.800		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.000	2.200		0.000		0.000		0.000			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604778A: <i>Positioning Systems Development (SPACE)</i>	PROJECT 168: <i>NAVSTAR GPS EQUIP</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PMO Support	C	PM GPS Aberdeen Proving Ground, MD	0.000	0.800		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.000	0.800		0.000		0.000		0.000			0.000

Remarks

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	9.446		0.000	0.000			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604778A: <i>Positioning Systems Development (SPACE)</i>	PROJECT 168: <i>NAVSTAR GPS EQUIP</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Materiel Development Decision (MDD)						#																						
Materiel Solution Analysis (MSA) Phase						#	#	#	#	#																		
TAGR System Milestone (MS) A											#																	

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604778A: <i>Positioning Systems Development (SPACE)</i>	PROJECT 168: <i>NAVSTAR GPS EQUIP</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Materiel Development Decision (MDD)	2	2010	2	2010
Materiel Solution Analysis (MSA) Phase	2	2010	2	2011
TAGR System Milestone (MS) A	2	2011	2	2011

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604780A: <i>Combined Arms Tactical Trainer (CATT) Core</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	32.541	26.107	27.670	5.400	33.070	19.262	12.688	11.447	10.693	Continuing	Continuing
571: <i>CLOSE CBT TACT TRAINER</i>	1.164	4.833	4.668	5.400	10.068	4.636	4.625	4.612	4.601	Continuing	Continuing
577: <i>Gaming Technology in Support of Army Training</i>	0.000	0.945	0.937	0.000	0.937	0.934	0.938	0.938	0.895	Continuing	Continuing
582: <i>SYNTHETIC ENVIR CORE</i>	28.858	17.851	20.073	0.000	20.073	13.692	7.125	5.897	5.197	Continuing	Continuing
585: <i>AVIATION COMBINED ARMS TACTICAL TRAINER</i>	2.519	2.478	1.992	0.000	1.992	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Combined Arms Tactical Trainers (CATT) represents a family of combined arms simulation systems designed to support the Army's simulation-based Combined Arms Training Strategy. CATT enables units, from crew to the battalion task force level, to conduct a wide variety of combat tasks on a realistic, interactive, synthetic battlefield. CATT's combination of manned simulators and staff officer workstations enables units to train as a combined arms team in a cost effective manner. The initial CATT system is the Close Combat Tactical Trainer (CCTT) which provides the underlying baseline architecture and After Action Review (AAR) for CATT expansions, Pre-Planned Product Improvements (P3I) and system enhancements. The Reconfigurable Vehicle Simulator (RVS) variants supports CCTT fixed sites to train combat convoy operations. Synthetic Environment (SE) Core provides for the expansion of the Synthetic Environment baseline to include enhanced interoperability and the products and infrastructure to support current and future combat operations and Mission Rehearsal required by the Contemporary Operating Environment (COE). The first synthetic environments to be expanded are the Aviation Combined Arms Tactical Trainer (AVCATT) and the CCTT for both the Active and Reserve components. Gaming Technology provides an application to train and rehearse convoy-operations, platoon level mounted infantry tactics, dismounted operations, Rules-of-Engagement training, cross-cultural communications training, IED defeat training, route clearance, ground-air coordination, UAV integration, and other small unit and individual training and mission rehearsal requirements. Platoon members can train in a common environment on geotypical or geospecific terrain. It is also possible to link Gaming technology to actual C4I systems and other CATT simulation systems to increase the utility and realism of the training. By practicing skills in CATT, units are able to make more effective use of scarce resources and costly live fire and maneuver exercises as well as train tasks deemed too hazardous to conduct in a live training environment. Fielded in both fixed site and mobile versions, CATT enables both Active and Reserve component units to prepare for real world contingency missions. By being able to use a wide array of training terrain databases and modify the behavior of the computer generated opposing forces, CATT offers an unlimited array of training options to support the Army's many regional contingency missions. The combination of tough field and live fire training, and realistic simulation training in CATT, is the catalyst to prepare Soldiers and their Leaders for the uncertainties they face in current combat operations in Iraq and Afghanistan, and larger Overseas Contingency Operations (OCO).FY11 Project 571 core funding for CCTT enables the development of additional vehicle variants for the Reconfigurable Vehicle Simulator (RVS) in support of Infantry Brigade Combat Teams and Stryker Brigade Combat Teams, the development of Dismounted Soldier Systems in support of Infantry Brigade Combat Teams, Stryker Brigade Combat Teams, Airborne,

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604780A: <i>Combined Arms Tactical Trainer (CATT) Core</i>
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Ranger and Special Forces Units and Heavy Brigade Combat Teams. It will also address the obsolescence of components. FY11 Project 571 OCO funding for CCTT will enable development activities to increase the capability of the Dismounted Soldier (DS) system (an Individual Virtual Training system). This increased capability will provide Soldiers in the theater of operation with the ability to conduct combat mission rehearsal prior to conducting a mission. The requested funding will ensure the DS system will be able to handle the extreme environmental realities and provide the necessary day/night operation capabilities required for combat missions. Specific improvements will be the ability to use all of the day and night optics the Soldier would employ during their missions; increased Soldier ability to identify changes which occur in the combat environment, enabling faster reaction time; and provide more up-to-date, combat situations/scenarios. FY11 Project 577 core funding for Games for Training will integrate SE Core products and new commercial and government technology into the current gaming system. FY11 Project 582 core funding for SE Core will provide for common terrain databases to be generated by the Central Terrain Database Center (CTDC). The CTDC will continue development and refinement of the Standard Terrain Database Generation Capability (STDGC). FY11 funds will continue to enhance OneSAF in the SE Core Architecture, CCTT, AVCATT and other virtual simulators baselines. Maintaining OneSAF for virtual simulations enables interoperability with the Live, Virtual, Constructive Training Environment (LVC TE) and reduces cost as individual virtual simulators will no longer develop and maintain separate SAFs. The SE Core Product Line of Common Virtual Components will continue with upgrades, integration and refinement, and the continued development of common visual models. FY11 Project 585 core funding for AVCATT will develop refinements to the AVCATT system to include SE Core and Non-Rated Crew Member Manned Module (NCM3) integration and interoperability with other combined arms simulators.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	30.566	26.243	28.299	0.000	28.299
Current President's Budget	32.541	26.107	27.670	5.400	33.070
Total Adjustments	1.975	-0.136	-0.629	5.400	4.771
• Congressional General Reductions		-0.136			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	2.812	0.000			
• SBIR/STTR Transfer	-0.837	0.000			
• Adjustments to Budget Years	0.000	0.000	-0.629	5.400	4.771

Change Summary Explanation

None required.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604780A: <i>Combined Arms Tactical Trainer (CATT) Core</i>	PROJECT 571: <i>CLOSE CBT TACT TRAINER</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
571: <i>CLOSE CBT TACT TRAINER</i>	1.164	4.833	4.668	5.400	10.068	4.636	4.625	4.612	4.601	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This program provides for Engineering and Manufacturing Development (EMD), Pre-Planned Product Improvements (P3I), and Reconfigurable Vehicle Simulator (RVS) variants for the Close Combat Tactical Trainer (CCTT), which will enhance readiness for both Active and Reserve component forces to support the execution of current and future combat operations including Overseas Contingency Operations (OCO). The program develops a networked system of interactive computer driven simulators, emulators, and semi-automated forces that replicate combat vehicles and weapon systems, combat support systems, combat service support systems, and command and control systems to create a fully integrated, real-time collective task training environment. This trainer will allow Soldiers to practice Tactics, Techniques and Procedures (TTP) that, if performed on real equipment, would be too hazardous, time-consuming and expensive. These trainers enhance realism and allow Soldiers and Units to learn tactical combat lessons on maneuver, command and control, convoy operations, and improved teamwork for increased survivability. The P3I enhances CCTT's capabilities as a tactical trainer and maintains concurrency with fielded tactical equipment and force structure. These improvements will provide interoperability with the Aviation Combined Arms Tactical Trainer (AVCATT), Army Battle Command System (ABCS), including Force XXI Battle Command Brigade and Below (FBCB2), and other simulation systems needed to execute training for current and future combat operations. FY11 core funding of \$4.668 million for CCTT enables the development of additional vehicle variants for the Reconfigurable Vehicle Simulator (RVS) in support of Infantry Brigade Combat Teams and Stryker Brigade Combat Teams, the development of Dismounted Soldier Systems in support of Infantry Brigade Combat Teams, Stryker Brigade Combat Teams, Airborne, Ranger and Special Forces Units and Heavy Brigade Combat Teams. It will also address the obsolescence of components. FY11 OCO funding of \$5.400 million will enable development activities to increase the capability of the Dismounted Soldier (DS) system (an Individual Virtual Training system). This increased capability will provide Soldiers in the theater of operation with the ability to conduct combat mission rehearsal prior to conducting a mission. The requested funding will ensure the DS system will be able to handle the extreme environmental realities and provide the necessary day/night operation capabilities required for combat missions. Specific improvements will be the ability to use all of the day and night optics the Soldier would employ during their missions; increased Soldier ability to identify changes which occur in the combat environment, enabling faster reaction time; and provide more up-to-date, combat situations/scenarios.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	0.149	0.228	0.236	0.000	0.236

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604780A: <i>Combined Arms Tactical Trainer (CATT) Core</i>	PROJECT 571: <i>CLOSE CBT TACT TRAINER</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY09-FY11: Supports government program management, engineering, technical, and contracting support, and continues operational evaluation support. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 FY09-FY11: Development of the Up-Armored HMMWV variant of the Reconfigurable Vehicle Simulator. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.015	1.600	2.888	0.000	2.888

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604780A: <i>Combined Arms Tactical Trainer (CATT) Core</i>	PROJECT 571: <i>CLOSE CBT TACT TRAINER</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #3 FY10-FY11: Development of the CCTT Dismounted Soldier System. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	2.870	1.544	0.000	1.544
Program #4 FY11 OCO: Development of the CCTT Dismounted Soldier System <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.000	5.400	5.400

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010								
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604780A: <i>Combined Arms Tactical Trainer</i> (CATT) Core		PROJECT 571: <i>CLOSE CBT TACT TRAINER</i>							
B. Accomplishments/Planned Program (\$ in Millions)											
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total					
Program #5		0.000	0.135	0.000	0.000	0.000					
FY10: Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals		1.164	4.833	4.668	5.400	10.068					
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: OPA3, Appropriation NA0170 SIMNET/CCTT	56.890	64.949	64.912	8.200	73.112	74.925	75.082	75.157	74.782	Continuing	Continuing
D. Acquisition Strategy											
FY2011 will continue development of RVS vehicle variants, Dismounted Soldier System and address obsolescence issues through Small Business 8A Set Asides and competitive awards.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604780A: <i>Combined Arms Tactical Trainer (CATT) Core</i>	PROJECT 571: <i>CLOSE CBT TACT TRAINER</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Development of Dismounted Soldier System Component	C/CPFF	TBS Location could not be determined.	1.424	2.870		1.544		5.400		6.944	Continuing	Continuing	2.950
Development of the Up-Armored HMMWV Vehicle Variant for RVS	C/CPFF	Lockheed Martin Corporation Orlando, FL	0.000	1.600		2.888		0.000		2.888	Continuing	Continuing	1.458
Subtotal			1.424	4.470		4.432		5.400		9.832			4.408

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Project Office Support	C/Various	PEO STRI Orlando, FL	16.286	0.228		0.236		0.000		0.236	Continuing	Continuing	17.583
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.135		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			16.286	0.363		0.236		0.000		0.236			17.583

Remarks

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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	17.710	4.833	4.668	5.400	10.068			21.991

Remarks

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604780A: <i>Combined Arms Tactical Trainer (CATT) Core</i>				PROJECT 577: <i>Gaming Technology in Support of Army Training</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>577: Gaming Technology in Support of Army Training</i>	0.000	0.945	0.937	0.000	0.937	0.934	0.938	0.938	0.895	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u>											
<p>The Games for Training Program will provide a commercial-off-the-shelf (COTS) product line of personal computer based gaming applications to train Soldiers in decision-making, team and individual tasks at different skill levels, using multiple mission scenarios. The program will leverage the commercial game industry to provide state of the art training solutions. The program will provide Army-wide licenses from the commercial market or from Research and Development agencies and the hardware required to operate the systems. The individual products will permit Soldiers and units to conduct training in a real-time, semi-immersive environment that will leverage Synthetic Environment Core capabilities. FY11 core funding of .937 million will integrate SE Core products and new commercial and government technology into the current gaming systems.</p>											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 FY10-FY11: Funding will provide modifications to the system to integrate and provide interoperability with battle command systems and other simulators and simulations in support of home station training and Overseas Contingency Operations (OCO). <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base							0.000	0.790	0.788	0.000	0.788

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604780A: <i>Combined Arms Tactical Trainer (CATT) Core</i>	PROJECT 577: <i>Gaming Technology in Support of Army Training</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 FY10-FY11: Funding will provide Government program management, engineering, technical contract and test support for Gaming. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.133	0.149	0.000	0.149
Program #3 FY10: Small Business Innovative Reserach (SBIR)/Small Business Technology Transfer Programs (STTR) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		0.000	0.022	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010							
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B. Accomplishments/Planned Program (\$ in Millions)											
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total			
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals				0.000	0.945	0.937	0.000	0.937			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>OPA 3, Appropriation NA0176 Gaming Technology in Support of Training</i>	0.000	7.845	4.964	0.000	4.964	2.906	4.629	5.096	2.394	Continuing	Continuing
D. Acquisition Strategy											
Competitive contract against approved Capabilities Production Document (CPD), 29 Oct 08.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604780A: <i>Combined Arms Tactical Trainer (CATT) Core</i>	PROJECT 582: <i>SYNTHETIC ENVIR CORE</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
582: <i>SYNTHETIC ENVIR CORE</i>	28.858	17.851	20.073	0.000	20.073	13.692	7.125	5.897	5.197	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project supports the Synthetic Environment Core (SE Core) Program. SE Core is a key U.S. Army initiative specifically designed to enhance the training capability we provide our Warfighters. SE Core's mission is to ensure the Army's virtual training systems and simulators are fully integrated and interoperable. The result will be a "Fair Fight" capability; no simulator will have an inherent advantage over another, allowing for air and ground coordination and integrated training missions that accurately replicate combat operations being experienced in the Contemporary Operational Environment (COE). SE Core provides the capability that is sufficient for current and future combat operations, Mission Rehearsal, and COE training. SE Core will reduce redundancy and increase realism. SE Core is building the Army's Common Virtual Environment (CVE) that provides the linkage between simulators and the common environment for interoperability. Additionally, SE Core will link to the Integrated Training Environment (ITE) for an integrated capability to support ARFORGEN and the Combined Arms Training Strategy. SE Core is a key element in the Army's Training Transformation Plan linking the embedded systems, multi-mode Live, Virtual, Constructive (LVC) training capability with current systems. SE Core will enable the Army to execute combined arms and joint training, mission planning and rehearsals at home station and deployed locations critical to training for COE operations. SE Core consists of a series of interoperable software components that will be integrated into the Army's CVE and will facilitate interoperability in a LVC Training Environment (TE). The components are One Semi-Automated Forces (OneSAF) integration; a Standard Terrain Database Generation Capability (STDGC); a Master Terrain Database; an extensive Library of Common Visual Models in open format; Dynamic Terrain; Atmospheric Effects; Chemical, Biological, Radiological, Nuclear and High Explosive (CBRNE) effects; common After Action Review (AAR); a Long Haul Networking capability; Command, Control, Communications, Computers, Intelligence Surveillance and Reconnaissance (C4ISR) interfaces; Training Support Packages and Exercise Management Tools. The STDGC uses automated tools, processes and standard source data to create a Master Database (MDB). The MDB provides open format data that can be translated into correlated runtime terrain databases to support the LVC TE and for mission planning/rehearsal/execution in support of Overseas Contingency Operations (OCO). SE Core's Common Virtual Components (CVCs) reduce redundancy, increase realism and facilitate an integrated LVC TE. FY11 core funding of \$20.073 million for SE Core will provide for common terrain databases to be generated by the Central Terrain Database Center (CTDC). The CTDC will continue development and refinement of the STDGC. FY2011 funds will continue to enhance OneSAF in the SE Core Architecture, CCTT, AVCATT and other virtual simulators baselines. Maintaining OneSAF for virtual simulations enables interoperability with the LVC TE and reduces cost as individual virtual simulators will no longer develop and maintain separate SAFs. The SE Core Product Line of Common Virtual Components will continue with upgrades, integration and refinement, and the continued development of common visual models.

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

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 FY09-FY11: Provides program management, engineering, technical, contract, and test support for development of SE Core. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		3.080	2.660	3.204	0.000	3.204
Program #2 FY09-FY11: SE Core will provide common terrain databases from the Central Terrain Database Center and expand production capabilities. Continued refinement of the STDGC will be made with the incorporation of advanced automated processing tools. Planned enhancements to OneSAF will continue to be integrated into the SE Core Architecture. SE Core will continue work to meet the six Key Performance Parameters defined in the Increment 1 Operational Requirements Document: OneSAF Integration, Standard Terrain Process Capability, Dynamic Terrain, Atmospheric Effects, Net Ready, and C4ISR. Common Moving Model development will also continue. <i>FY 2009 Accomplishments:</i> FY 2009		25.778	14.691	16.869	0.000	16.869

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B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO								
Program #3 FY10: Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO				0.000	0.500	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals				28.858	17.851	20.073	0.000	20.073

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604780A: <i>Combined Arms Tactical Trainer (CATT) Core</i>	PROJECT 582: <i>SYNTHETIC ENVIR CORE</i>
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C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>OPA3, Appropriation NA0173 Aviation Combined Arms Tactical Trainer</i>	23.038	12.754	26.120	0.000	26.120	9.952	7.735	7.865	7.992	Continuing	Continuing
• Ord. #2: <i>OPA3, Appropriation NA0170 Close Combat Tactical Trainer (CCTT)</i>	56.890	64.949	64.912	8.200	73.112	74.925	75.082	75.157	74.782	Continuing	Continuing
• Ord. #3: <i>RDTE, Appropriation 654760 One Semi-Automated Forces (OneSAF)</i>	11.383	11.576	11.522	0.000	11.522	11.730	11.893	12.494	12.460	Continuing	Continuing

D. Acquisition Strategy

An extension to the Architecture & Integration (A&I) contract was awarded to Science Applications International Corp (SAIC) in 2Q09. A competitive, CPFF type contract for the development of SE Core Database Virtual Environment Development (DVED) project was awarded in FY06 to CAE with yearly options until FY11. The PM is planning an Acquisition Strategy which will combine the future A&I and DVED contracts, potentially reducing the number of Prime Vendors to one.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Architecture and Integration	C/CPFF	Science Applications International Corporation Orlando, FL	33.356	4.942		0.000		0.000		0.000	Continuing	Continuing	0
Architecture and Integration - 2	C/CPFF	TBS Location could not be determined.	0.000	0.000		6.946		0.000		6.946	Continuing	Continuing	0
Database Virtual Environment Development	C/CPFF	CAE USA, Tampa, FL	24.134	9.249		9.923		0.000		9.923	Continuing	Continuing	0
Subtotal			57.490	14.191		16.869		0.000		16.869			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support	C	Test Community Location could not be determined.	0.125	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.125	0.000		0.000		0.000		0.000			0.000

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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks
Not Applicable

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Project Office Support	C/Various	PEO STRI Orlando,FL	7.631	2.610		2.640		0.000		2.640	Continuing	Continuing	0
Management Services	C	Various Location could not be determined.	2.042	0.550		0.564		0.000		0.564	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.500		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			9.673	3.660		3.204		0.000		3.204			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army							DATE: February 2010		
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	67.288	17.851	20.073	0.000	20.073			0.000	
Remarks									

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost	
585: <i>AVIATION COMBINED ARMS TACTICAL TRAINER</i>	2.519	2.478	1.992	0.000	1.992	0.000	0.000	0.000	0.000	Continuing	Continuing	
Quantity of RDT&E Articles												
<u>A. Mission Description and Budget Item Justification</u>												
<p>This project supports the Aviation Combined Arms Tactical Trainer (AVCATT) which is the Army's Aviation Collective training system for Active, Reserve and Army National Guard components to provide home station training and mission rehearsal and training in support of Overseas Contingency Operations (OCO). AVCATT completed Initial Operational Test & Evaluation (IOT&E) on 1 August 2003 and received a Full Rate Production Decision on 19 December 2003. A single suite of equipment consists of two (2) mobile trailers housing six (6) reconfigurable networked simulators that support the AH-64A/D, UH-60A/L, CH-47D, and OH-58D aircraft. Supporting roleplayer, Semi-Automated Forces (SAF), and after action review (AAR) workstations are also provided as part of each suite. AVCATT is a fully mobile system capable of using shore and generator power and is transportable worldwide. The AVCATT system permits aviation units to conduct collective task training on a real-time, virtual battlefield in a combined arms scenario by leveraging Synthetic Environment Core (SE Core) capabilities. Other required elements that are present on the modern, high intensity battlefield, such as the Combat Support (CS) and Combat Service Support (CSS) elements, are an integral part of the simulation database. AVCATT is designed to provide realistic, high intensity collective and combined arms training to aviation units as well as the full spectrum of operations in support of current and future contingency operations. AVCATT supports the Aviation Combined Arms Training Strategy, the Army Campaign Plan and OCO. AVCATT also supports the Aviation Functional Area Assessment (FAA), providing collective, combined arms training for aviation units. FY11 core funding of \$1.992 million will develop refinements to the AVCATT system to include SE Core and Non-Rated Crew Member Manned Module (NCM3) integration and interoperability with other combined arms simulators.</p>												
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>												
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
Program #1						0.937	2.242	1.822	0.000	1.822		
FY09-11: Continue refinements to the system to include: interoperability enhancements through implementation of SE Core common products such as OneSAF, Environmental Runtime Control (ERC), Common Virtual Components (CVC), and common terrain databases. In addition, provide improved interoperability and												

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
interaction between live and virtual systems by adopting real world, digital messaging formats. Integration of NCM3 First Article into the AVCATT program baseline. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 FY09-11: Provides Government program management, engineering, technical, contract, and test support for AVCATT refinements. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base		0.385	0.167	0.170	0.000	0.170

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3 FY10: Small Business Innovative Research (SBIR)/Small Business Technology Transfer Programs (STTR) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.069	0.000	0.000	0.000
Program #4 FY09: Congressional Add for initial Light Utility Helicopter (LUH) Simulator development <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		1.197	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)											
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total			
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals				2.519	2.478	1.992	0.000	1.992			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>OPA3, Appropriation</i>	23.038	12.754	26.120	0.000	26.120	9.952	7.735	7.865	7.992	Continuing	Continuing
<i>NA0173 Aviation Combined Arms Tactical Trainer</i>											
D. Acquisition Strategy											
Engineering and Manufacturing Development (EMD) competitive contract against a performance specification.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604780A: <i>Combined Arms Tactical Trainer (CATT) Core</i>				PROJECT 585: <i>AVIATION COMBINED ARMS TACTICAL TRAINER</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
AVCATT	C/CPAF	L3 Communications Corporation Arlington, Texas	38.986	2.242		1.822		0.000		1.822	Continuing	Continuing	0
Subtotal			38.986	2.242		1.822		0.000		1.822			0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Project Office Support	C	PEO STRI Orlando, Florida	0.891	0.167		0.170		0.000		0.170	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.069		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.891	0.236		0.170		0.000		0.170			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604780A: <i>Combined Arms Tactical Trainer (CATT) Core</i>	PROJECT 585: <i>AVIATION COMBINED ARMS TACTICAL TRAINER</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	39.877	2.478	1.992	0.000	1.992			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604780A: <i>Combined Arms Tactical Trainer (CATT) Core</i>	PROJECT 585: <i>AVIATION COMBINED ARMS TACTICAL TRAINER</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015							
	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				
Light Utility Helicopter Simulator Development		#	#	#	#	#	#	#	#	#	#	#																				
NCM3 Integration									#	#	#	#																				

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604780A: <i>Combined Arms Tactical Trainer (CATT) Core</i>	PROJECT 585: <i>AVIATION COMBINED ARMS TACTICAL TRAINER</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Light Utility Helicopter Simulator Development	2	2009	3	2011
NCM3 Integration	4	2010	3	2011

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604783A: <i>JOINT NETWORK MANAGEMENT SYSTEM</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.673	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	.673
363: <i>JOINT NETWORK MANAGEMENT SYSTEM</i>	0.673	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element supports the Joint Network Management System (JNMS) RDTE development effort. The JNMS is a Combatant Commander and Commander, Joint Task Forces (CJTF), joint communications planning and management tool. JNMS is an automated software system. It will provide communication planners with a common set of tools to conduct high level planning (war planning), detailed planning and engineering, monitoring, control and reconfiguration, spectrum planning and management, and security of communications and data systems used to support a Joint Task Force (JTF). These systems include circuit switches, data switches, message switches, single channel networks, transmission systems and satellite systems. It will promote force level situational awareness; provide enhanced flexibility to support the commander's intent; improve management of scarce spectrum resources; and provide increased security of these critical systems and networks. This development effort entails development of the JNMS architecture, software development and integration of Government-Off-the-Shelf and Commercial-Off-the Shelf software, functional and operational testing, and development of Integrated Logistics Support data and documentation. Initial software baseline was developed to provide base capability to the user with subsequent baselines developed providing additional functionality and capability.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.673	0.000	0.000	0.000	0.000
Current President's Budget	0.673	0.000	0.000	0.000	0.000
Total Adjustments	0.000	0.000	0.000	0.000	0.000
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604783A: <i>JOINT NETWORK MANAGEMENT SYSTEM</i>				PROJECT 363: <i>JOINT NETWORK MANAGEMENT SYSTEM</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
363: <i>JOINT NETWORK MANAGEMENT SYSTEM</i>	0.673	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>This program element supports the Joint Network Management System (JNMS) RDTE development effort. The JNMS is a Combatant Commander and Commander, Joint Task Forces (CJTF), joint communications planning and management tool. JNMS is an automated software system. It will provide communication planners with a common set of tools to conduct high level planning (war planning), detailed planning and engineering, monitoring, control and reconfiguration, spectrum planning and management, and security of communications and data systems used to support a Joint Task Force (JTF). These systems include circuit switches, data switches, message switches, single channel networks, transmission systems and satellite systems. It will promote force level situational awareness; provide enhanced flexibility to support the commander's intent; improve management of scarce spectrum resources; and provide increased security of these critical systems and networks. This development effort entails development of the JNMS architecture, software development and integration of Government-Off-the-Shelf and Commercial-Off-the Shelf software, functional and operational testing, and development of Integrated Logistics Support data and documentation. Initial software baseline was developed to provide base capability to the user with subsequent baselines developed providing additional functionality and capability.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							0.673	0.000	0.000	0.000	0.000
Software Development (System Design, Software Integration, and Functional Qualification Testing) for Baseline 1.5 <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604783A: <i>JOINT NETWORK MANAGEMENT SYSTEM</i>	PROJECT 363: <i>JOINT NETWORK MANAGEMENT SYSTEM</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Small Business Innovative Research/Small business Technology Transfer Programs		0.000	0.000	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Accomplishments/Planned Programs Subtotals		0.673	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604783A: <i>JOINT NETWORK MANAGEMENT SYSTEM</i>	PROJECT 363: <i>JOINT NETWORK MANAGEMENT SYSTEM</i>

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Ord. #1: <i>B95700 JOINT NETWORK MGT SYSTEM</i>	11.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

TRADOC approved Revision 2 to the JNMS Operational Requirements Document (ORD) on 16 May 00. Milestone A/B approval led to two contract awards to SAIC on 14 May 2001. The first contract, a cost-plus-fixed-fee (CPFF) and firm fixed price (FFP) contract, is for software integration/development, non-recurring engineering efforts, and optional hardware and software procurement for limited and full rate production quantities. This development contract provides the vehicle for the phased development of the JNMS operational baselines, combined build Key Performance Parameter (KPP) Threshold Baselines and subsequent Baselines. The second contract, a time-and-materials contract, covers tasks such as fielding, training, technical assistance, and an option for Post Deployment/Post Production Software Support (PD/PPSS). The SAIC contracts were awarded based on a competitive, best value source selection process. The Initial Operational Test and Evaluation (IOT&E) was conducted in 2QFY04. The Milestone C decision review with the Milestone Decision Authority (MDA), the Program Executive Officer, Command, Control, and Communications - Tactical (PEO C3T) was held in 3QFY04 resulting in Low Rate Initial Production (LRIP) approval. After successful development testing and a satisfactory Government Assessment, a subsequent Milestone decision review was held 2QFY05 with the MDA approving an increase in the LRIP to 35%. In 4QFY05, a Limited User Test (LUT) was successfully conducted which supported the approval of the Full Rate Production Decision (FRPD) on 8 Dec 05 signaling entry into full production and fielding. Fieldings began 2QFY06 and will be completed in FY09. FY09, the final funded year will provide PDSS support to the JNMS Program to include Software maintenance, Information Assurance Vulnerability Management (IAVM), and Enhancements Requests/Problem Reports. JNMS will transition to SEC for PPSS starting in FY10.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	101.823	87.022	24.345	0.000	24.345	24.108	14.467	19.263	14.415	Continuing	Continuing
613: <i>MORTAR SYSTEMS</i>	41.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
AS5: <i>Artillery Munitions Engineering Development</i>	3.986	1.591	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S23: <i>SURF LNCH ADV MED RNG AIR-TO-AIR MSL (SLAMRAAM)</i>	31.306	56.441	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
S36: <i>PRECISION GUIDANCE KIT</i>	24.731	28.990	24.345	0.000	24.345	24.108	14.467	19.263	14.415	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element funds multiple efforts for engineering development of weapons and munitions systems. Project 613, FY09 funds Accelerated Precision Munitions Initiative (APMI) XM395, a GPS guided 120mm mortar cartridge that is compatible with all Army 120mm mortar systems. APMI is in response to an urgent operation need for highly transportable, all weather, rapidly responsive, precise, indirect fires to support widely dispersed Combat Outposts and operations at the lowest tactical echelons to meet Operational Needs Statement (ONS) in Afghanistan. APMI will provide a precision 120mm mortar capability, within 10 meter Circular Error Probable (CEP) at all ranges. Project AS5, FY10 funds Lightweight Multi-Functional Material Technology (LMFMT), a materials development program for Ammunition containers. It includes the use of advanced composite and non-composite materials in developing the design of mortar containers and barrier applications. FY09 funds LMFMT and the Hybrid Propellant program. Hybrid Propellant is a unique propellant under development for future application in small, medium, and large caliber munitions. Hybrid Propellant releases energy more efficiently than conventional propellants and provides munitions with the highest possible muzzle velocity for extended ranges/lethality, the prospect of lighter barrels with less recoil, extended wear characteristics and the ability to use heavier projectiles at standard muzzle velocities for greater lethality. Project S23, the Surface Launched Advanced Medium Range Air-To-Air Missile (SLAMRAAM), is the initial kinetic energy component of Integrated Air & Missile Defense (IAMD), an Air and Missile Defense (AMD) Future Force system. SLAMRAAM's force protection mission is to engage the low-altitude aerial threats out to 18km. Project S36 funds engineering development of precision guidance systems applicable to Indirect Fire weapon systems (artillery and mortars). This includes the Precision Guidance Kit (PGK) which is a Global Positioning guidance kit with fuzing functions. PGK will improve the accuracy of existing artillery ammunition by correcting the trajectory of projectiles to their designated target location. Precision guidance systems will effectively reduce target delivery error reducing the number of rounds required to conduct a fire mission. This capability will benefit existing indirect fire systems. The increase in effectiveness gives commanders the operational capability to defeat more targets with the same basic load.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>
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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	57.948	34.878	60.143	0.000	60.143
Current President's Budget	101.823	87.022	24.345	0.000	24.345
Total Adjustments	43.875	52.144	-35.798	0.000	-35.798
• Congressional General Reductions		-0.456			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		52.600			
• Congressional Directed Transfers		0.000			
• Reprogrammings	45.498	0.000			
• SBIR/STTR Transfer	-1.623	0.000			
• Adjustments to Budget Years	0.000	0.000	-35.798	0.000	-35.798

Change Summary Explanation

Change Summary Explanation: FY 2009: Increase (Reprogramming) of \$41.2 million for initiation of the XM395 120mm Accelerated Precision Mortar Initiative (APMI) and \$5.0 million for Precision Guidance Kit (PGK). FY 2010: Congressional adds of \$52.6 million for the following efforts: +\$45.0 million for SLAMRAAM (Project S23); +\$6.0 million for PGK (Project S36); \$1.6 million for Lightweight Packaging System for Enhancing Combat Munitions Logistics (Project AS5). FY 2011: Funding transferred (\$23.7 million) to new PE for SLAMRAAM. Funding realigned (\$11.9 million) to higher priority Army requirements.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT 613: <i>MORTAR SYSTEMS</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
613: <i>MORTAR SYSTEMS</i>	41.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Accelerated Precision Mortar Initiative (APMI, XM395) is a GPS guided 120mm mortar cartridge that is compatible with all Army 120mm mortar systems. APMI is in response to an urgent operational need for highly transportable, all weather, rapidly responsive, precise, indirect fires to support widely dispersed Combat Outposts and operations at the lowest tactical echelons to meet Operational Needs Statement (ONS) in Afghanistan. APMI will provide a precision 120mm mortar capability, within 10 meter Circular Error Probable (CEP) at all ranges.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	2.000	0.000	0.000	0.000	0.000
Demo Guide to Hit Phase					
<i>FY 2009 Accomplishments:</i>					
FY 2009					
<i>FY 2010 Plans:</i>					
FY 2010					
<i>FY 2011 Base Plans:</i>					
FY 2011 Base					
<i>FY 2011 OCO Plans:</i>					
FY 2011 OCO					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT 613: <i>MORTAR SYSTEMS</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #2 APMI: Phase I, Design Maturation and Demonstration <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		16.120	0.000	0.000	0.000	0.000
Program #3 APMI: Phase II, Prototype Evaluation and Complete Qualification to Urgent Material Release (UMR) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		11.900	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT 613: <i>MORTAR SYSTEMS</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #4 APMI: Phase I (Down select) and II (Government Safety Qualification testing) testing <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		4.925	0.000	0.000	0.000	0.000
Program #5 APMI: Fire Control software modification support <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		4.705	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>			PROJECT 613: <i>MORTAR SYSTEMS</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #6						2.150	0.000	0.000	0.000	0.000	
APMI: Continue Engineering support											
<i>FY 2009 Accomplishments:</i>											
FY 2009											
<i>FY 2010 Plans:</i>											
FY 2010											
<i>FY 2011 Base Plans:</i>											
FY 2011 Base											
<i>FY 2011 OCO Plans:</i>											
FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						41.800	0.000	0.000	0.000	0.000	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>SSN: E25511 CTG, MORTAR, 120MM, HE GUIDED, XM395</i>	15.000	0.000	28.623	70.000	98.623	85.774	99.927	99.770	85.349	0	484.443
D. Acquisition Strategy											
The acquisition strategy for Accelerated Precision Mortar Initiative (APMI) includes meeting the Operational Needs Statement (ONS) for a 120mm precision guided mortar round. APMI Cartridges will be developed and produced by an industry partner. A DoD Ordnance Technology Consortium (DOTC) competitive phase is being conducted in order to down select to a single producer. A follow-on DOTC phase will be conducted to qualify the XM 395 Cartridge. Contracts selected for DOTC Phase I (competitive down select) are Firm											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT 613: <i>MORTAR SYSTEMS</i>
Fixed Price (FFP) and Phase II (Government safety qualification) will be Cost Plus Incentive Fee (CPIF). The APMI Cartridge (XM395) production contract will be a Sole Source (SS)/ Fixed Price Incentive (FPI) contract. The first delivery to theatre will be in 1QFY11 to respond to Operational Needs Statement (ONS) in Afghanistan.		
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>				PROJECT AS5: <i>Artillery Munitions Engineering Development</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>AS5: Artillery Munitions Engineering Development</i>	3.986	1.591	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u>											
<p>FY10 funds Lightweight Multi-Functional Material Technology (LMFMT), a materials development program for Ammunition containers. It includes the use of advanced composite and non-composite materials in developing the design of mortar containers and barrier applications. FY09 funds LMFMT and the Hybrid Propellant program. Hybrid Propellant is a unique propellant under development for future application in small, medium, and large caliber munitions. Hybrid Propellant releases energy more efficiently than conventional propellants and provides munitions with the highest possible muzzle velocity for extended ranges/lethality, the prospect of lighter barrels with less recoil, extended wear characteristics and the ability to use heavier projectiles at standard muzzle velocities for greater lethality.</p>											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							0.055	0.160	0.000	0.000	0.000
Lightweight Multi-Functional Material Technology (LMFMT) Engineering Support <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT AS5: <i>Artillery Munitions Engineering Development</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 LMFMT Development Materials, Industrial Equipment and Supplies <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.025	0.000	0.000	0.000	0.000
Program #3 LMFMT Material Development, Design and Testing <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		0.695	1.431	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT AS5: <i>Artillery Munitions Engineering Development</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Hybrid Propellant Engineering Support, Testing and Fabrication <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.806	0.000	0.000	0.000	0.000
Program #5 Hybrid Propellant Primer <i>FY 2009 Accomplishments:</i> FY 2009		1.405	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT AS5: <i>Artillery Munitions Engineering Development</i>				
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Accomplishments/Planned Programs Subtotals		3.986	1.591	0.000	0.000	0.000
<u>C. Other Program Funding Summary (\$ in Millions)</u> N/A						
<u>D. Acquisition Strategy</u> The Lightweight Multi-Functional Material Technology (LMFMT) Engineering and Manufacturing Demonstration (EMD) contract was awarded as a sole source to Frontier Performance Polymers in FY09. The Hybrid Propellant was added to the existing Defense Ordnance & Warheads Technology Consortium (DOTC) contract through a contract modification.						
<u>E. Performance Metrics</u> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>				PROJECT S23: <i>SURF LNCH ADV MED RNG AIR-TO-AIR MSL (SLAMRAAM)</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S23: <i>SURF LNCH ADV MED RNG AIR-TO-AIR MSL (SLAMRAAM)</i>	31.306	56.441	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>The Surface Launched Advanced Medium Range Air-To-Air Missile (SLAMRAAM) is a critical component of the Army's future Integrated Air & Missile Defense (IAMD) system. SLAMRAAM consists of launcher platforms employing the proven AIM-120-C7 Advanced Medium Range Air-to-Air Missile; Integrated Fire Control Station (IFCS) command, control, and communications platforms; and Improved Sentinel Radars. SLAMRAAM is a day or night, adverse weather, non-line-of-sight system that counters cruise missiles (CM), unmanned aerial vehicle (UAV), fixed wing, and rotary wing threats. SLAMRAAM is mobile and able to operate in a variety of combat situations to protect maneuver forces and strategic-level critical assets. SLAMRAAM represents a substantial increase in performance over current short range air defense systems. SLAMRAAM was directed by the Department of the Army in August 2009 to restructure and move to a more survivable platform for crew protection. The Department of the Army is considering moving the SLAMRAAM to either the High Mobility Artillery Rocket System (HIMARS) Carrier or the Family of Medium Tactical Vehicles (FMTV) platform. A HIMARS platform decision will require the schedule and funding profile to be revisited in the POM.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #1						12.532	40.421	0.000	0.000	0.000	
Product Development											
<i>FY 2009 Accomplishments:</i>											
FY 2009											
<i>FY 2010 Plans:</i>											
FY 2010											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT S23: <i>SURF LNCH ADV MED RNG AIR-TO-AIR</i> <i>MSL (SLAMRAAM)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2		7.712	0.000	0.000	0.000	0.000
Test and Evaluation						
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3		11.062	15.700	0.000	0.000	0.000
System Engineering/ Program Management (SE/PM)						
<i>FY 2009 Accomplishments:</i> FY 2009						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT S23: <i>SURF LNCH ADV MED RNG AIR-TO-AIR</i> <i>MSL (SLAMRAAM)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Small Business Innovative Research/Small Business Technology Transfer Program <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.320	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals		31.306	56.441	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE			PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)			PE 0604802A: Weapons and Munitions - Eng Dev			S23: SURF LNCH ADV MED RNG AIR-TO-AIR MSL (SLAMRAAM)					
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: PE 0604869A, Proj M06, Patriot/MEADS Combined Aggregate Program (CAP)	454.565	566.215	467.139	0.000	467.139	408.012	325.184	240.018	75.585	Continuing	Continuing
• Ord. #2: SSN C53101, MSE Missile	0.000	0.000	0.000	0.000	0.000	607.796	534.022	516.479	503.786	Continuing	Continuing
• Ord. #3: SSN C53201, PATRIOT/ MEADS GSE	0.000	0.000	0.000	0.000	0.000	0.000	126.589	217.639	528.435	Continuing	Continuing
• Ord. #4: PE 0102419A, Proj E55, JLENS	344.850	328.356	372.493	0.000	372.493	176.198	118.448	0.000	0.000	Continuing	Continuing
• Ord. #5: SSN BZ0525, JLENS Production	0.000	0.000	0.000	0.000	0.000	470.661	419.801	427.731	394.325	Continuing	Continuing
• Ord. #6: SSN C81002, SLAMRAAM Launcher	40.349	0.000	116.792	0.000	116.792	83.302	233.762	241.691	248.895	Continuing	Continuing
• Ord. #7: SSN C81004, Surfaced- Launched AMRAAM Missile	0.000	0.000	0.000	0.000	0.000	0.000	39.542	39.426	15.416	Continuing	Continuing
• Ord. #8: SSN WK5053, FAAD GBS	0.000	0.000	91.467	169.260	260.727	7.948	7.935	0.000	0.000	Continuing	Continuing
• Ord. #9: PE 0303327A, Proj S34, AMD System of System Engineering and Integration	111.496	166.061	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• Ord. #10: SSN BZ5075000, ARMY IAMD BATTLE COMMAND SYSTEM (IBCS)	0.000	0.000	251.124	0.000	251.124	271.543	251.646	228.639	129.043	Continuing	Continuing
• Ord. #11: PE 0605456A, Project PA3, PAC-3/MSE Missile	0.000	0.000	62.500	0.000	62.500	62.100	3.500	62.000	64.500	Continuing	Continuing
• Ord. #12: PE 0603305A, Proj TR7, Protection Capability II-Intercept	0.000	0.000	4.296	0.000	4.296	21.303	74.197	93.679	94.006	Continuing	Continuing
• Ord. #13: PE 0605457A, Project S40, Army Integrated Air and Missile Defense (AIAMD)	0.000	0.000	251.124	0.000	251.124	271.543	251.646	228.639	129.043	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>				PROJECT S23: <i>SURF LNCH ADV MED RNG AIR-TO-AIR MSL (SLAMRAAM)</i>				
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #14: <i>PE 0208053, Proj 635 JOINT TACT GRD STATIONO-P3I (MIP)</i>	1.949	36.005	12.403	0.000	12.403	12.630	13.038	7.982	7.947	Continuing	Continuing
• Ord. #15: <i>SSN BZ8401, Joint Tactical Ground Station (JTAGS)</i>	0.000	6.682	9.279	0.000	9.279	0.000	0.000	9.415	4.658	Continuing	Continuing
D. Acquisition Strategy											
System Development and Demonstration (SDD) contract award in 2nd Quarter FY04 and completed in Oct 09. The program will be restructured pending decision on a platform. Milestone C is scheduled for FY11.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>				PROJECT S23: <i>SURF LNCH ADV MED RNG AIR-TO-AIR</i> MSL (<i>SLAMRAAM</i>)					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Contractor Hardware/ Software Development	SS	Raytheon Tewksbury, MA	165.680	40.716		0.000		0.000		0.000	Continuing	Continuing	107.053
Government Prototype Manufacturing (Government Furnished Equipment)	C	Multiple Location could not be determined.	3.625	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Training Aids Devices Simulators and Simulation	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			169.305	40.716		0.000		0.000		0.000			107.053

Remarks

*SS/CPIF/CPFF - Sole Source/Cost Plus Incentive Fee/Cost Plus Fixed Fee

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government System Test and Evaluation	C	Multiple Location could not be determined.	11.736	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			11.736	0.000		0.000		0.000		0.000			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks

*SS/CPIF/CPFF - Sole Source/Cost Plus Incentive Fee/Cost Plus Fixed Fee

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government SE/PM	C	Multiple Location could not be determined.	16.438	15.700		0.000		0.000		0.000	Continuing	Continuing	0
SBIR/STTR**	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.320		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			16.438	16.020		0.000		0.000		0.000			0.000

Remarks

*SS/CPIF/CPFF - Sole Source/Cost Plus Incentive Fee/Cost Plus Fixed Fee**Small Business Innovative Research/Small Business Technology Transfer Program

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT S23: <i>SURF LNCH ADV MED RNG AIR-TO-AIR MSL (SLAMRAAM)</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	197.479	56.736	0.000	0.000	0.000			107.053

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT S23: <i>SURF LNCH ADV MED RNG AIR-TO-AIR MSL (SLAMRAAM)</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Platform Redesign				#	#	#																						
PIF Prototype Demonstration							#	#																				

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT S23: <i>SURF LNCH ADV MED RNG AIR-TO-AIR MSL (SLAMRAAM)</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Platform Redesign	4	2009	2	2010
PIF Prototype Demonstration	3	2010	4	2010

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>				PROJECT S36: <i>PRECISION GUIDANCE KIT</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S36: <i>PRECISION GUIDANCE KIT</i>	24.731	28.990	24.345	0.000	24.345	24.108	14.467	19.263	14.415	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>This program funds engineering development of precision guidance systems applicable to Indirect Fire weapon systems (artillery and mortars). This includes the Precision Guidance Kit (PGK) which is a Global Positioning Guidance Kit with fuzing functions. PGK will improve the accuracy of existing artillery ammunition by correcting the trajectory of projectiles to their designated target location. Precision guidance systems will effectively reduce target delivery error reducing the number of rounds required to conduct a fire mission. This capability will benefit existing indirect fire systems. The increase in effectiveness gives commanders the operational capability to defeat more targets with the same basic load.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							17.322	8.920	0.000	0.000	0.000
Engineering and Manufacturing Development (EMD)- Increment 1											
<i>FY 2009 Accomplishments:</i>											
FY 2009											
<i>FY 2010 Plans:</i>											
FY 2010											
<i>FY 2011 Base Plans:</i>											
FY 2011 Base											
<i>FY 2011 OCO Plans:</i>											
FY 2011 OCO											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT S36: <i>PRECISION GUIDANCE KIT</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #2 Engineering and Manufacturing Development (EMD)/Technology Development (TD)- Increment 2 <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	11.405	15.954	0.000	15.954
Program #3 Continue Engineering Support and Platform Integration <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		4.432	5.362	3.941	0.000	3.941

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT S36: <i>PRECISION GUIDANCE KIT</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #4		2.977	2.675	4.450	0.000	4.450
Continue Developmental/Operational Testing						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						
Program #5		0.000	0.628	0.000	0.000	0.000
Small Business Innovative Research/Small Business Technology Transfer Programs						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army						DATE: February 2010					
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>			PROJECT S36: <i>PRECISION GUIDANCE KIT</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Accomplishments/Planned Programs Subtotals						24.731	28.990	24.345	0.000	24.345	
C. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2011</u>	<u>FY 2011</u>	<u>FY 2011</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Complete</u>	<u>Total Cost</u>
• Ord. #1: <i>E99250 Precision Guidance Kit (PGK)</i>	18.426	27.609	25.047	0.000	25.047	36.107	37.512	51.000	53.304	0	249.005
D. Acquisition Strategy											
<p>The PGK program is using an incremental development approach to provide a combat capability to the Soldier as quickly as possible, and to deliver advanced capabilities at lower costs as technology matures. The Acquisition Strategy/Acquisition Plan for the PGK Increment 1 program was approved by the Milestone Decision Authority (MDA) on 20 October 2005. Alliant Techsystems (ATK) was awarded the Engineering and Manufacturing Development (EMD) program following a Technology Development Demonstration. Approval to initiate the procurement of First Article/Production Verification Test hardware occurred at an In-Process Review (IPR) 3QFY09, and Milestone C/Type Classification Limited Procurement is scheduled for 4QFY10. The Materiel Release of Increment 1 is scheduled for 4QFY11. An IPR for Increment 2 was conducted with the MDA for Increment 2 on 22 December 2009. The Milestone A for Increment 2 is scheduled for 3QFY10 and the Milestone B for Increment 2 is scheduled for 2QFY11.</p>											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>				PROJECT S36: <i>PRECISION GUIDANCE KIT</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PGK TD Contract	C/CPIF	ATK Plymouth, MN	7.956	0.000		0.000		0.000		0.000	Continuing	Continuing	0
PGK TD Contract - 2	C/CPIF	BAE Minneapolis, MN	5.956	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Soft Recovery Modules	C	SubSystems Technology Rosslyn, VA	0.116	0.000		0.000		0.000		0.000	Continuing	Continuing	0
PGK EMD Contract - Increment 1	C/CPAF	ATK Plymouth, MN	7.544	8.700		0.000		0.000		0.000	Continuing	Continuing	0
PGK EMD Contract Award Fee Increment 1	C/CPAF	ATK Plymouth, MN	0.000	0.220		0.000		0.000		0.000	Continuing	Continuing	0
PGK Contracts - Increment 2	C/Various	TBS Location could not be determined.	0.000	5.249		15.954		0.000		15.954	Continuing	Continuing	0
M107 Metal Parts	C	US ARMY Field Support Command RIA, IL	0.079	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			21.651	14.169		15.954		0.000		15.954			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>				PROJECT S36: <i>PRECISION GUIDANCE KIT</i>					

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Product Manager's Office	C	PM CAS Picatinny NJ	0.889	0.900		0.716		0.000		0.716	Continuing	Continuing	0
Government Engineering Support	C	ARDEC Picatinny NJ	11.430	3.485		2.400		0.000		2.400	Continuing	Continuing	0
Risk Mitigation - Increment 2	C	ARDEC Picatinny NJ	0.000	6.156		0.000		0.000		0.000	Continuing	Continuing	0
Platform Integration	C	Various Location could not be determined.	0.000	0.397		0.500		0.000		0.500	Continuing	Continuing	0
Miscellaneous Support	C/Various	Various Location could not be determined.	5.008	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			17.327	10.938		3.616		0.000		3.616			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Component Air Gun/ Railgun Testing	C	ARDEC Picatinny, NJ	0.317	0.000		0.000		0.000		0.000	Continuing	Continuing	0
	C		2.340	1.925		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT S36: <i>PRECISION GUIDANCE KIT</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Development Testing Increment 1		Yuma Proving Ground Yuma, AZ											
System Development Competitive Prototype Testing Increment 2	C	Yuma Proving Ground Yuma, AZ	0.000	0.750		0.500		0.000		0.500	Continuing	Continuing	0
Other Development Testing	C	Various Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Initial Operational Test & Evaluation - Increment 1	C	Yuma Proving Ground Yuma, AZ	0.000	0.000		3.500		0.000		3.500	Continuing	Continuing	0
Cold Region Testing - Increment 1	C	Cold Region Test Center Ft. Greely, Alaska	0.000	0.000		0.450		0.000		0.450	Continuing	Continuing	0
Subtotal			2.657			2.675				4.450			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT S36: <i>PRECISION GUIDANCE KIT</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Management Support	C/FFP	Camber Mt. Arlington, NJ	0.150	0.355		0.100		0.000		0.100	Continuing	Continuing	0
Analysis Support	C	Command and Control Directorate Ft. Monmouth, NJ	0.000	0.075		0.075		0.000		0.075	Continuing	Continuing	0
Miscellaneous Support Contract	C/FFP	MITRE Corporation Bedford, MA	0.000	0.150		0.150		0.000		0.150	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.628		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.150	1.208		0.325		0.000		0.325			0.000

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract										
		Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost													
Project Cost Totals											41.785	28.990		24.345		0.000		24.345			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT S36: <i>PRECISION GUIDANCE KIT</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Increment 1 Production and Deployment							#	#	#	#	#	#	#	#	#	#	#											
IPR- Approve First Article Test(FAT)/Production Verification Test(PVT) Material			#																									
Milestone C-Type Classification Limited Procurement							#																					
FAT/PVT								#	#																			
Initial Operational Test and Evaluation (IOTE)									#	#																		
Type Classification Standard/Full Materiel Release										#																		
IOC											#																	
PGK Increment 2			#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#								
Program Initiation IPR			#																									
Milestone A					#																							
Milestone B									#																			
Contract award										#																		
Competitive Down Select													#															
Milestone C																			#									
FAT																			#									
IOTE																			#									
Material Release/ IOC																			#									
EMD Phase Increment 3																	#	#	#	#	#	#	#	#	#	#	#	#
Milestone A - 2																	#											

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army			DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY <i>2040: Research, Development, Test & Evaluation, Army</i> <i>BA 5: Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE <i>PE 0604802A: Weapons and Munitions - Eng Dev</i>		
		PROJECT <i>S36: PRECISION GUIDANCE KIT</i>		

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015							
	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 - 2																												#				

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT S36: <i>PRECISION GUIDANCE KIT</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Increment 1 Production and Deployment	3	2010	1	2013
IPR- Approve First Article Test(FAT)/Production Verification Test(PVT) Material	3	2009	3	2009
Milestone C-Type Classification Limited Procurement	3	2010	3	2010
FAT/PVT	4	2010	1	2011
Initial Operational Test and Evaluation (IOTE)	1	2011	2	2011
Type Classification Standard/Full Materiel Release	2	2011	2	2011
IOC	3	2011	3	2011
PGK Increment 2	4	2009	3	2013
Program Initiation IPR	4	2009	4	2009
Milestone A	2	2010	2	2010
Milestone B	1	2011	1	2011
Contract award	2	2011	2	2011
Competitive Down Select	1	2012	1	2012
Milestone C	4	2013	4	2013
FAT	1	2014	1	2014
IOTE	2	2014	2	2014
Material Release/ IOC	3	2014	3	2014
EMD Phase Increment 3	4	2013	4	2015

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604802A: <i>Weapons and Munitions - Eng Dev</i>	PROJECT S36: <i>PRECISION GUIDANCE KIT</i>
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Event	Start		End	
	Quarter	Year	Quarter	Year
Milestone A - 2	4	2013	4	2013
Milestone B - 2	4	2014	4	2014

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	29.884	37.023	41.039	0.000	41.039	39.905	36.634	31.041	31.351	Continuing	Continuing
194: <i>ENGINE DRIVEN GEN ED</i>	6.190	1.383	7.166	0.000	7.166	4.214	1.605	1.551	1.581	Continuing	Continuing
H01: <i>COMBAT ENGINEER EQ ED</i>	3.169	8.451	7.044	0.000	7.044	8.349	8.049	4.971	4.956	Continuing	Continuing
H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>	4.393	9.733	8.741	0.000	8.741	10.350	10.090	10.575	10.560	Continuing	Continuing
H14: <i>MATERIALS HANDLING EQUIPMENT - ED</i>	0.441	1.692	0.955	0.000	0.955	1.060	1.197	1.218	1.237	Continuing	Continuing
L39: <i>Field Sustainment Support ED</i>	2.024	4.503	5.804	0.000	5.804	6.799	4.261	4.120	4.184	Continuing	Continuing
L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>	5.699	2.490	2.734	0.000	2.734	2.104	3.974	3.844	3.904	Continuing	Continuing
L42: <i>CAMOUFLAGE SYSTEM ED</i>	0.239	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>	0.499	0.973	0.874	0.000	0.874	3.533	3.790	3.060	3.142	Continuing	Continuing
L46: <i>Maintenance Support Equipment</i>	1.465	3.249	3.178	0.000	3.178	3.177	3.668	1.702	1.787	Continuing	Continuing
L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>	5.765	4.549	4.543	0.000	4.543	0.319	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element (PE) provides system development and demonstration for various projects. This PE includes the development of military tactical bridging, material handling equipment, construction equipment, engineer support equipment, soldier support equipment (to include shelter systems, environmental control, field service equipment, camouflage systems and aerial delivery equipment), water purification equipment, petroleum distribution equipment, mobile electric power and water craft.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>
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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	38.391	36.018	35.992	0.000	35.992
Current President's Budget	29.884	37.023	41.039	0.000	41.039
Total Adjustments	-8.507	1.005	5.047	0.000	5.047
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	-0.195			
• Congressional Adds		1.200			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-8.254	0.000			
• SBIR/STTR Transfer	-1.053	0.000			
• Adjustments to Budget Years	0.000	0.000	5.047	0.000	5.047

Change Summary Explanation

Change Summary Explanation: Funding - FY 2011: Accelerate product development for Field Sustainment Support.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
194: <i>ENGINE DRIVEN GEN ED</i>	6.190	1.383	7.166	0.000	7.166	4.214	1.605	1.551	1.581	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>This project supports the Mobile Electric Power (MEP) program which is established to develop a Modernized, Standard Family of Mobile Electric Power Sources for All Services throughout the Department of Defense. Building on the device/component evaluations conducted in PE 0603804A project G11, this project supports the system development and demonstration of a series of innovative mobile electric power sources that are essential to the development and eventual fielding of modernized mobile electric power sources from 0.5 kW to 920 kW. These sources will ensure compliance with federally mandated environmental statutes and significantly lower noise and thermal signatures (thereby improving battlefield survivability), improve fuel and electrical efficiency, reduce weight, enhance portability, improve reliability and maintainability, and reduce operational and support costs. FY10 will fund completion of DT/OT for AMMPS in preparation for MSC. FY11 will fund the performance specification preparation and will award two Phase I contracts for Large Advanced Mobile Power Sources (LAMPS). Proof of principle to support milestone B in FY12 for Small Tacticle Electrical Power (STEP).</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 FY09: Complete AMMPS pre-production test sets. Continue engineering and logistics data deliverables. Begin Developmental Testing. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base							6.190	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 FY10: Complete DT Operational Test (OT) for AMMPS. Complete Documentation for Type Classification (TC), Materiel Release (MR) and other actions required for Milestone C Production Award, e.g., TM's, sustainment test, fielding plans. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	1.344	0.000	0.000	0.000
Program #3 FY10-FY11: LAMPS Prepare performance Spec. Begin PHASE I SDD. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		0.000	0.000	6.000	0.000	6.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO								
Program #4 FY11: STEP Prepare performance specification begin Phase I of SDD. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO				0.000	0.000	1.166	0.000	1.166
Program #5 Small Business Innovative Research/Small Business Technology Transfer Program <i>FY 2009 Accomplishments:</i> FY 2009				0.000	0.039	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>			PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						6.190	1.383	7.166	0.000	7.166	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>0603804A - Logistics and Engineer Equipment - Adv Dev G11</i>	3.346	2.636	2.632	0.000	2.632	1.338	0.464	0.653	0.654	Continuing	Continuing
• Ord. #2: <i>OPA3, MA9800, Generators and Associated Equipment</i>	240.609	212.600	113.573	37.479	151.052	127.919	18.080	10.625	10.778	Continuing	Continuing
D. Acquisition Strategy											
Perform Developmental Testing (DT)/Operational Testing (OT) for the AMMPS family; perform phase II contract award through a down select. Developmental test and evaluation of technologies that transition into procurement after Milestone C. Complete Delivery of Technical Drawing Packages, Repair Parts and Special Tools List (RPSTL), Technical Manuals and Training Packages in preparation of Milestone C and Phase III-Production and Fielding. Prepare performance Specification for LAMPS (Large Advanced Mobile Power Sources). Begin Phase I SDD for LAMPS.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
AMMPS(5-60kW)	C/CPFF	Various Location could not be determined.	28.137	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Follow-on 2kW Improvement Program	C/CPFF	Various Location could not be determined.	3.300	0.000		0.000		0.000		0.000	Continuing	Continuing	0
IECU	C/CPFF	Various Location could not be determined.	0.613	0.000		0.000		0.000		0.000	Continuing	Continuing	0
LAMPS (100-200kw)	C/CPFF	Various Location could not be determined.	0.000	0.000		5.181		0.000		5.181	Continuing	Continuing	0
STEP	C/CPFF	Various Location could not be determined.	0.000	0.000		0.900		0.000		0.900	Continuing	Continuing	0
Subtotal			32.050	0.000		6.081		0.000		6.081			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>					

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
AMMPS(5-60kW)	C	CECOM Ft Belvoir, VA	2.375	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Follow-on 2kW Improvement Program	C	CECOM Ft Belvoir, VA	0.065	0.000		0.000		0.000		0.000	Continuing	Continuing	0
IECU	C	CECOM Ft Belvoir, VA	0.372	0.000		0.000		0.000		0.000	Continuing	Continuing	0
STEP	C	CECCOM Ft Belvoir, VA	0.000	0.000		0.485		0.000		0.485	Continuing	Continuing	0
Subtotal			2.812	0.000		0.485		0.000		0.485			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
AMMPS(5-60kW)	C	Various Location could not be determined.	2.031	1.337		0.000		0.000		0.000	Continuing	Continuing	0
Follow-on 2kW Improvement Program	C	CECOM Ft Belvoir, VA	0.216	0.000		0.000		0.000		0.000	Continuing	Continuing	0
STEP	C	Aberdeen Proving Ground	0.000	0.000		0.600		0.000		0.600	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>					

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		MD											
Subtotal			2.247	1.337			0.600			0.000		0.600	0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
AMMPS(5-60kW)	C	CECOM Ft Belvoir, VA	2.507	0.046		0.000		0.000		0.000	Continuing	Continuing	0
IECU	C	CECOM Ft Belvoir, VA	0.015	0.000		0.000		0.000		0.000	Continuing	Continuing	0
LAMPS (100-200kw)	C	CECOM Ft Belvoir, VA	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			2.522	0.046		0.000		0.000		0.000			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	39.631	1.383	7.166	0.000	7.166			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army							DATE: February 2010						
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>					

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
MS C								#																				
Production Release								# #																				
Transition to Production								# #																				
Proof of Principle Milestone B								# # # #	#	#	#	#																
No label was entered								#																				
Award SDD Contract Phase I																#												
SDD Phase I																# # # #	#											
Award SDD Contract Phase II																				#								
SDD Phase II																				# # # #	#	#						
MS C - 2																											#	
LAMPS (Large Advanced Mobile Power Systems)					#	#																						
Prepare Performance Spec						#	#	# # #																				
Award SDD Contract Phase I - 2									#																			
SDD Phase I - 2									# # # # #																			
Award SDD Phase II									# # # # #																			
SDD Phase II - 2													# # # # #	#														
MS C - 3																	#	#										

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT 194: <i>ENGINE DRIVEN GEN ED</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
MS C	4	2010	4	2010
Production Release	4	2010	1	2011
Transition to Production	4	2010	1	2011
Proof of Principle Milestone B	1	2011	1	2012
No label was entered	1	2011	1	2011
Award SDD Contract Phase I	1	2013	1	2013
SDD Phase I	1	2013	1	2014
Award SDD Contract Phase II	1	2014	1	2014
SDD Phase II	1	2014	2	2015
MS C - 2	2	2015	2	2015
LAMPS (Large Advanced Mobile Power Systems)	2	2010	3	2010
Prepare Performance Spec	3	2010	3	2011
Award SDD Contract Phase I - 2	3	2011	3	2011
SDD Phase I - 2	3	2011	3	2012
Award SDD Phase II	3	2011	3	2012
SDD Phase II - 2	3	2012	1	2014
MS C - 3	1	2014	2	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
H01: <i>COMBAT ENGINEER EQ ED</i>	3.169	8.451	7.044	0.000	7.044	8.349	8.049	4.971	4.956	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>This project supports the System Development and Demonstration(SDD) of military Construction Equipment used in support of horizontal and vertical engineer construction tasks; required in order to develop a variety of enabling systems that will support and improve mobility for Engineers in the Brigade Combat Teams (BCT) and Combat Support Brigades (CSB) modular forces. This project also supports the SDD of enabling systems to meet critical capabilities of joint interdependence through Air and Ground (A/G) Line of Communication (LOC) and Rapid Tactical Earthmoving (RTE) repair and construction which increase the operational reach of modular forces. The BCT and CSB systems include: High Mobility Engineer Excavators (HMEE, Types I); Scrapers, Scoop Loaders, Skid Steer Loaders, Dozers and Graders.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							0.270	0.000	0.000	0.000	0.000
FY09: Conducts market research and update specs for future engineer transformation. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #2 FY09: Continues development of engineer and acquisition documents required for Milestone Decisions. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.020	0.000	0.000	0.000	0.000
Program #3 FY09: Conducts Test and Evaluation of future engineer equipment. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.150	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #4		1.319	0.000	0.000	0.000	0.000
FY09: Development of Robotics Research <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #5		1.410	0.000	0.000	0.000	0.000
FY09: Simulator Development <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #6 FY10: Design armor kits for Combat Engineer Equipment. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.820	0.000	0.000	0.000
Program #7 FY10: Development of Robotics Research <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.100	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #8		0.000	2.000	0.000	0.000	0.000
FY10: Simulator Development						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						
Program #9		0.000	0.800	0.000	0.000	0.000
FY10: Heavy Scraper Ballistic Testing						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #10 FY10: Forced Entry (Airborne/Air Assault) HMEE Type II, Grader and Loader Type 1 Study/Development <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	3.164	0.000	0.000	0.000
Program #11 FY10: Survivability Enhancements and Armor for Combat Engineer Equipment <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.550	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #12 FY10: Test non nuclear soil density test sets. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.781	0.000	0.000	0.000
Program #13 FY11: Design armor kits for Combat Engineer Equipment. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.500	0.000	0.500

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #14		0.000	0.000	0.100	0.000	0.100
FY11: Development of Robotics Research <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #15		0.000	0.000	1.500	0.000	1.500
FY11: Simulator Development <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #16 FY11: Force Entry (Airborne/Air Assault) HMEE Type II, Grader and Loader Type I Study/Development <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	4.894	0.000	4.894
Program #17 FY11: Test non nuclear soil density test sets. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.050	0.000	0.050

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>

B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #18	0.000	0.236	0.000	0.000	0.000
FY10: Small Business Innovative Research/Small Business Technology Transfer Program					
<i>FY 2009 Accomplishments:</i>					
FY 2009					
<i>FY 2010 Plans:</i>					
FY 2010					
<i>FY 2011 Base Plans:</i>					
FY 2011 Base					
<i>FY 2011 OCO Plans:</i>					
FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	3.169	8.451	7.044	0.000	7.044

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: OPA3, R05900, High Mobility Engineer Excavator I	24.237	41.497	56.503	3.750	60.253	12.572	0.482	0.000	0.000	Continuing	Continuing
• Ord. #2: OPA3, R05910, High Mobility Engineer Excavator III	30.110	11.339	8.456	0.000	8.456	2.222	0.241	0.000	0.000	0	52.368
• Ord. #3: OPA3, R03801, Grader, Mtzd, Hvy	57.086	44.157	48.379	3.390	51.769	2.250	0.000	0.000	0.000	Continuing	Continuing
• Ord. #4: OPA3, M06400, Loader, Scoop Type, 2 1/2 CU YD	20.030	13.493	7.205	1.157	8.362	7.278	6.807	0.000	0.000	0	55.970
	31.066	8.365	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	39.431

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>				
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #5: <i>OPA3, R03900, Loader, Scoop Type, 4 - 5 CU YD</i>											
• Ord. #6: <i>OPA3, X01500, Hydraulic Excavator</i>	9.537	19.016	8.458	0.000	8.458	3.312	0.000	0.000	0.000	0	40.323
• Ord. #7: <i>OPA3, M08100, Plant, Asphalt Mixing</i>	7.883	15.374	10.783	0.000	10.783	11.484	10.841	0.000	0.000	0	56.365
• Ord. #8: <i>OPA3, M06100, Tractor Full Tracked, Med T-9</i>	66.716	49.944	64.032	0.000	64.032	66.892	101.099	97.977	102.361	0	549.021
D. Acquisition Strategy											
Conduct research, development, and investigations on future Construction Equipment (CE) and identify the path forward for programs to be transitioned for PEO program management. Identify technical advancements that can improve reliability, , survivability, transportability, availability, and maintainability and reduce the logistical footprints for future CE equipment.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Market Research, Studies, Update Specs for future engineer	C	multiple activities Location could not be determined.	1.423	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Continue development of engineer and acquisition documents	C	multiple activities Location could not be determined.	1.622	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Design armor kits for Combat Engineer	C	TARDEC Warren, MI	3.372	0.820		0.500		0.000		0.500	Continuing	Continuing	0
Development of Robotic Research for Combat Engineer	C/TBD	TBD Location could not be determined.	0.000	0.100		0.100		0.000		0.100	Continuing	Continuing	0
Development of Simulator	C	PEO Stricom Orlando, FL	0.000	2.000		1.500		0.000		1.500	Continuing	Continuing	0
Survivability Enhancements and Armor for Combat Engineer	C	Multiple Activities Location could not be determined.	0.000	0.550		0.000		0.000		0.000	Continuing	Continuing	0
Forced Entry Airborne(Air Assault) HMEE Type II, Grader and Loader Type I Study/Development	C	TARDEC Warren, MI	0.000	3.128		4.894		0.000		4.894	Continuing	Continuing	0
Subtotal			6.417	6.598		6.994		0.000		6.994			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>					

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Matrix Support	C	TACOM & TARDEC Warren, MI	10.580	0.081		0.000		0.000		0.000	Continuing	Continuing	0
Engineering Operational Integrator Support	C	DA/Pentagon Washington, DC	0.156	0.000		0.000		0.000		0.000	Continuing	Continuing	.156
Construction Equipment Lease Study	C	TACOM & TARDEC Warren, MI	0.200	0.000		0.000		0.000		0.000	Continuing	Continuing	.400
Subtotal			10.936	0.081		0.000		0.000		0.000			0.556

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Future Engineer Equipment (various)	C	ATEC Aberdeen, MD	2.882	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Test Nuclear soil density test sets.	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.736		0.050		0.000		0.050	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Heavy Scraper Ballistic Test	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.800		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			2.882	1.536		0.050		0.000		0.050			0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Mgt	C	PM CE/MHE Warren, MI	0.762	0.000		0.000		0.000		0.000	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.236		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.762	0.236		0.000		0.000		0.000			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	20.997	8.451	7.044	0.000	7.044			0.556

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Simulator Development for Construction Equipment	#	#	#																									
HMEE Type II Development Phase I					#	#	#	#	#	#	#																	
Survivability Enhancements for Construction Equipment					#	#	#	#	#	#	#																	

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H01: <i>COMBAT ENGINEER EQ ED</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Simulator Development for Construction Equipment	1	2009	3	2009
HMEE Type II Development Phase I	1	2010	3	2011
Survivability Enhancements for Construction Equipment	1	2010	3	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>	4.393	9.733	8.741	0.000	8.741	10.350	10.090	10.575	10.560	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>This project supports the engineering, system development and demonstration, and transition to procurement of Future Force Tactical Bridge Systems. Efforts supported include the integration and testing of forty-six meter capability for the Dry Support Bridge (DSB) as well as the development, integration and testing for float capabilities for the Dry Support Bridge (DSB). Other efforts include the development, integration and testing of the Bridge Erection Boat (BEB) and testing of the Program of Record (POR) Line of Communication (LOC) bridge. Additionally, these funds support the refurbishment of Joint Assault Bridge (JAB) test assets following USMC operational testing and the development of an Armored Engineer Vehicle (AEV) driving simulator based on the Abrams tank Common Driver Trainer. This project also includes the development and testing of light assault gap crossing capability, a remote controlled automatic launch for the REBS and integrate and test the REBS on a Stryker chassis, various bridging product improvements such as upgrade of AVLB, to higher Military Load Classifications, development of a health monitoring system, and testing of failure modes for composite bridges.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 FY09: Continues Development, integration, and test for the DSB 46 meter bridge. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base							0.850	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2		0.000	1.500	0.000	0.000	0.000
FY10: LOC Bridge POR Testing						
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3		0.000	0.000	1.800	0.000	1.800
FY11: LOC Bridge POR Testing						
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 FY11: JAB Testing <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	2.541	0.000	2.541
Program #5 FY09: ABV Tests <i>FY 2009 Accomplishments:</i> FY 2009		0.350	0.000	0.000	0.000	0.000

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #6 FY10: ABV Tests <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.200	0.000	0.000	0.000
Program #7 FY10: AVLB Upgrade Test (SANG)		0.000	0.300	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #8 FY09: BEB Testing		3.193	0.000	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #9		0.000	6.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY10: BEB Testing <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #10 FY11: BEB Testing <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	3.500	0.000	3.500

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #11 FY10: Development, integration and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT). <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	1.111	0.000	0.000	0.000
Program #12 FY11: Development, integration and testing of REBS Auto Launch-Retrieve with Common Bridge Transporter (CBT). <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base		0.000	0.000	0.500	0.000	0.500

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #13 <i>FY 11: Light Assault Gap Crossing Development and Testing.</i>		0.000	0.000	0.400	0.000	0.400
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #14 <i>FY 10: Small Business Innovative Research/Small Business Technology Transfer Program.</i>		0.000	0.272	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #15 FY10: Advanced Modular Composite Bridge Testing <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.150	0.000	0.000	0.000
Program #16 FY10: Structural Health Monitoring Project <i>FY 2009 Accomplishments:</i> FY 2009		0.000	0.200	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
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B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						4.393	9.733	8.741	0.000	8.741	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>OPA3, MX0100, Tactical Bridging</i>	265.653	53.739	62.817	0.000	62.817	75.635	57.138	75.463	63.401	Continuing	Continuing
• Ord. #2: <i>OPA3, MA8890, Tactical Bridging, Float Ribbon</i>	141.896	148.113	105.837	3.220	109.057	72.358	50.807	63.232	60.389	Continuing	Continuing
• Ord. #3: <i>WTCV, G82925, Armored Breacher Vehicle</i>	0.000	63.055	77.930	0.000	77.930	125.166	39.088	114.765	115.526	Continuing	Continuing
• Ord. #4: <i>WTCV, GZ3001, Joint Assault Bridge</i>	12.714	70.419	44.133	0.000	44.133	58.779	72.868	100.762	111.904	Continuing	Continuing
D. Acquisition Strategy Limited RDT&E effort to support testing and follow-on production.											
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DSB 46 meter bridge	SS	WFEL Stockport, England/ ATEC, APG/ TARDEC, MI	1.070	0.000		0.000		0.000		0.000	Continuing	Continuing	1.366
ABV Tests	C	ATEC APG	0.000	0.200		0.000		0.000		0.000	Continuing	Continuing	0
AVLB Upgrade Test	C	TBD Location could not be determined.	0.000	0.300		0.000		0.000		0.000	Continuing	Continuing	0
BEB Development	C	TBD Location could not be determined.	0.000	2.000		0.000		0.000		0.000	Continuing	Continuing	0
Light Assault Gap Crossing Development and Testing	C	TBD Location could not be determined.	0.000	0.000		0.400		0.000		0.400	Continuing	Continuing	0
REBS Auto Launch-Retrieve	SS	GDELS Germany, DE	0.000	1.111		0.500		0.000		0.500	Continuing	Continuing	0
Structural Health Monitoring Project	C	TARDEC Warren, MI	0.000	0.200		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			1.070	3.811		0.900		0.000		0.900			1.366

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Other Government Agencies	C	TACOM Warren, MI-- Various	0.140	0.000		0.000		0.000		0.000	0	.140	0
Subtotal			0.140	0.000		0.000		0.000		0.000	0.000	0.140	0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
LOC Testing	C	ATEC APG/ FT. Leonardwood	0.000	1.500		1.800		0.000		1.800	Continuing	Continuing	0
BEB Testing	C	TBD Location could not be determined.	0.000	4.000		3.500		0.000		3.500	Continuing	Continuing	0
JAB Testing	C/TBD	TBD Location could not be determined.	0.000	0.000		2.541		0.000		2.541	Continuing	Continuing	0
Advanced Modular Composite Bridge Testing	C	TARDEC Warren, MI	0.000	0.150		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.000	5.650		7.841		0.000		7.841			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>					
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
<u>Remarks</u>													
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Small Business Innovative Research/Small Business Technology Transfer Program	C	TACOM Warren, MI	0.000	0.272		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.000	0.272		0.000		0.000		0.000			0.000
<u>Remarks</u>													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			1.210	9.733		8.741		0.000		8.741			1.366
<u>Remarks</u>													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
LOCB POR Testing					#	#	#	#	#	#	#	#																
JAB Testing									#	#	#	#	#	#	#													
ABV Tests		#	#	#	#	#	#																					
AVLB Upgrade Test					#	#	#	#	#																			
BEB Testing			#	#	#	#	#	#	#	#	#																	
Dev, Integr, & Test REBS Auto Launch-Retrieve					#	#	#	#	#	#	#																	
Light Assault Gap Crossing Testing and Development									#	#	#	#	#	#	#	#	#	#	#	#								
Advanced Modular Composit Bridge Testing					#	#	#																					
Structural Health Monitoring Project					#	#	#	#	#	#	#	#	#															

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H02: <i>TACTICAL BRIDGING - ENGINEERING DEVELOPMENT</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
LOCB POR Testing	1	2010	4	2011
JAB Testing	1	2011	3	2012
ABV Tests	2	2009	3	2010
AVLB Upgrade Test	1	2010	1	2011
BEB Testing	3	2009	3	2011
Dev, Integr, & Test REBS Auto Launch-Retrieve	2	2010	3	2011
Light Assault Gap Crossing Testing and Development	1	2011	3	2013
Advanced Modular Composit Bridge Testing	1	2010	3	2010
Structural Health Monitoring Project	1	2010	1	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT H14: <i>MATERIALS HANDLING EQUIPMENT - ED</i>					
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost	
H14: <i>MATERIALS HANDLING EQUIPMENT - ED</i>	0.441	1.692	0.955	0.000	0.955	1.060	1.197	1.218	1.237	Continuing	Continuing	
Quantity of RDT&E Articles												
A. Mission Description and Budget Item Justification												
This project supports system development and demonstration of Material Handling Equipment (MHE) that support Combat Service Support units with MHE for world wide rapid movement of supplies including container handling equipment, forklifts, and other cargo handling related items. Necessary efforts include simulator development, validating requirements, developing acquisition strategies, developing performance specifications, and test and evaluation planning.												
B. Accomplishments/Planned Program (\$ in Millions)												
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
Program #1 Development and integration of 5 Channel Simulators for MHE systems. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						0.000	1.613	0.955	0.000	0.955		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H14: <i>MATERIALS HANDLING EQUIPMENT - ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #2 Rough Terrain Container Handler Crew Protection Kit Development. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.363	0.000	0.000	0.000	0.000
Program #3 Rough Terrain Container Handler Crew Protection Kit Testing at Aberdeen Proving Grounds <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.033	0.033	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT H14: <i>MATERIALS HANDLING EQUIPMENT - ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #4 Engineering for Modification Work Orders required (based off testing) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.033	0.033	0.000	0.000	0.000
Program #5 Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.012	0.013	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT H14: <i>MATERIALS HANDLING EQUIPMENT - ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Accomplishments/Planned Programs Subtotals						0.441	1.692	0.955	0.000	0.955	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>RDTE, 0603804.DG14, Logistics Support Equipment, Advance</i>	0.210	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• Ord. #2: <i>OPA3, M41200, Rough Terrain Container Handler (RTCH)</i>	94.967	95.469	29.460	4.562	34.022	0.000	0.000	0.843	0.000	Continuing	Continuing
• Ord. #3: <i>OPA3, M41800, All Terrain Lifting Army System (ATLAS)</i>	54.837	94.075	17.352	56.609	73.961	8.936	0.000	0.000	0.000	Continuing	Continuing
• Ord. #4: <i>OPA3, G41002, 5K Light Capacity Rough Terrain (LCRT) Forklift</i>	0.000	0.000	12.936	0.000	12.936	0.000	0.000	4.719	0.000	0	17.655
D. Acquisition Strategy											
RDT&E Engineering - Engineering efforts will be conducted: Programmatic Pre-Milestone C support of 5,000 LB Light Capacity Rough Terrain Forklift; Rough Terrain Container Handler Crew Protection Kit Development; Rough Terrain Container Handler Crew Protection Kit Testing and Engineering Support at Aberdeen Proving Grounds; Engineering for Modification Work Orders required (based off testing).											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L39: <i>Field Sustainment Support ED</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
L39: <i>Field Sustainment Support ED</i>	2.024	4.503	5.804	0.000	5.804	6.799	4.261	4.120	4.184	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>This project supports the System Development and Demonstration (SDD) of critical distribution and sustainment capabilities to include cargo aerial delivery, field shelters, showers, latrines, heaters, mortuary affairs systems, organizational equipment, and other combat service support equipment to fill identified theater distribution and services capability gaps, improve unit sustainability, and increase combat effectiveness. Project supports the demonstration of engineering development models and Type Classification of cargo parachutes, airdrop containers and other aerial delivery equipment to improve safety, effectiveness, and efficiency of airborne operations. Project supports development of tactical field systems and support equipment such as heaters, canouflage systems and base camp equipment. This project develops critical enablers that support the Quartermaster (QM) Force Transformation Strategy and the Army's Modular Force Capabilities by maintaining readiness through fielding and integrating new equipment. This project also ensures Army Expeditionary Forces are capable of rapid deployment by providing aerial delivery initiatives. These reduce sustainment requirements, related Combat Support/Combat Service Support (CS/CSS), lift demands, the combat zone footprint, and costs for logistical support.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 FY 09: Obtain Joint Precision Airdrop System (JPADS) 2K Milestone C and Full Material Release and transition into production. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010							2.024	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L39: <i>Field Sustainment Support ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 FY 10: Complete JPADS 10K Design Validation (DV). Conduct and Complete JPADS 10K Developmental Testing (DT). Initiate JPADS 10K Operational Testing (OT). <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	3.828	0.000	0.000	0.000
Program #3 FY 11: Complete OT and obtain Milestone C for JPADS 10K. <i>FY 2009 Accomplishments:</i> FY 2009		0.000	0.000	2.191	0.000	2.191

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L39: <i>Field Sustainment Support ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 FY 11: Conduct and complete DT for Advanced Low Velocity Airdrop Systems (ALVADS-L). <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	2.171	0.000	2.171
Program #5 FY 10: Execute Low Cost Aerial Delivery System (LCADS) P3I efforts with a focus on reusable Low Cost Low Altitude (LCLA) personnel parachutes for cargo use.		0.000	0.548	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L39: <i>Field Sustainment Support ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #6 FY 11: Execute Low Cost Aerial Delivery System (LCADS) P3I efforts with a focus on reusable Low Cost Low Altitude (LCLA) personnel parachutes for cargo use.		0.000	0.000	0.406	0.000	0.406
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #7		0.000	0.000	0.300	0.000	0.300

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L39: <i>Field Sustainment Support ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>FY 11: Complete the Operational Field Evaluation on the Space Heater Convective 120,000 BTUH (SHC 120K) and obtain Milestone C LRIP.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #8</p> <p>FY 11: Conduct OT on Pyrolysis Waste to Energy System transitioning from Foreign Comparative Test Program and conduct Milestone C.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p>		0.000	0.000	0.736	0.000	0.736

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>			PROJECT L39: <i>Field Sustainment Support ED</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Program #9 Small Business Innovative Research/Small Business Technical Transfer Program (SBIR/STTR)							0.000	0.127	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals							2.024	4.503	5.804	0.000	5.804
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>OPA 3, MA7806 Precision Airdrop</i>	16.192	18.969	21.402	0.000	21.402	14.874	14.437	14.678	14.916	Continuing	Continuing
	5.383	15.994	18.908	0.000	18.908	5.414	5.271	5.365	5.447	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L39: <i>Field Sustainment Support ED</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Ord. #2: <i>RDT&E, 643804.K39 Field Sustainment Support AD</i>											

D. Acquisition Strategy

Accelerate product development and testing to transition into production.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L39: <i>Field Sustainment Support ED</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Soldier Support Equipment	C	PM FSS Natick	2.809	0.362		0.176		0.000		0.176	Continuing	Continuing	3.241
Soldier Support Equipment - 2	C	Various Location could not be determined.	13.075	0.326		0.118		0.000		0.118	Continuing	Continuing	0
JPADS 10K Development	C	Various Location could not be determined.	0.000	1.218		2.000		0.000		2.000	Continuing	Continuing	0
LCADS P3I efforts	C	Various Location could not be determined.	0.000	0.125		0.500		0.000		0.500	Continuing	Continuing	0
Subtotal			15.884	2.031		2.794		0.000		2.794			3.241

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Soldier Support Equipment	C	DTC MD and ATC, MD	1.686	0.000		0.000		0.000		0.000	Continuing	Continuing	.130
Soldier Support Equipment - 2	C	Yuma Proving Ground (YPG)	6.284	0.800		0.500		0.000		0.500	Continuing	Continuing	.076

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L39: <i>Field Sustainment Support ED</i>					

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		AZ, AEC											
JPADS 10K DT and OT	C	YPG. AZ Location could not be determined.	0.000	1.055		0.000		0.000		0.000	Continuing	Continuing	0
JPADS 10k DT and OT	C	GSA Location could not be determined.	0.000	0.054		0.000		0.000		0.000	Continuing	Continuing	0
LCADS P3I efforts	C	YPG AZ/ OTC, NC	0.000	0.211		2.220		0.000		2.220	Continuing	Continuing	0
Subtotal			7.970	2.120		2.720		0.000		2.720			0.206

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Project Management Support	C	PM FSS Natick	0.982	0.225		0.290		0.000		0.290	Continuing	Continuing	0
Small Business Innovative Research/Small Business Technical Transfer Program (SBIR/STTR)	C	Nothing entered for Activity and Location.	0.000	0.127		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L39: <i>Field Sustainment Support ED</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Location could not be determined.											
Subtotal			0.982	0.352		0.290		0.000		0.290			0.000

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	24.836	4.503		5.804		0.000		5.804			3.447

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L39: <i>Field Sustainment Support ED</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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 JPADS 2K	#																											
Milestone C JPADS 10K/LRIP										#																		
OT on JPADS 10 K									#																			
OT on ACPRS									#	#	#																	
Milestone C on ACPRS													#															
Milestone C on Helicopter External/Internal Cargo Delivery																					#							
Complete ALVADS-L Milestone C																					#							
Conduct DT/OT on ALVADS-L													#	#	#	#	#	#										
Conduct Milestone C for JMICS light duty increment														#														
Conduct Milestone C on next generation Human Remains Transfer Case														#														
Conduct DT and OT on ALVADS Rapid Rigging/ Derigging Airdrop System																#	#	#	#	#	#							
Conduct Milestone C on ALVADS Rapid Rigging/ Derigging Airdrop System																					#							
Conduct Milestone C on Mobile Integrated Shop Shelter System																						#						
Conduct Milestone C on JMICS Intermodal Platform Capability (IPC)																										#		
Execute LCADS P3I efforts				#	#	#	#	#	#	#	#																	

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L39: <i>Field Sustainment Support ED</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
JPADS 10K FMR/FRP											#																	
Conduct DT on JPADS 10K					#	#																						
Obtain Milestone C for Space Heater Convective 120K BTUH											#																	
Conduct Milestone C for JMICS standard duty increment																			#									
Conduct OT on Pyrolysis Waste to Energy System									#	#																		
Conduct Milestone C on Pyrolysis Waste to Energy System												#																

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L39: <i>Field Sustainment Support ED</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Milestone C JPADS 2K	2	2009	2	2009
Milestone C JPADS 10K/LRIP	2	2011	2	2011
OT on JPADS 10 K	4	2010	4	2010
OT on ACPRS	1	2011	3	2011
Milestone C on ACPRS	2	2012	2	2012
Milestone C on Helicopter External/Internal Cargo Delivery	3	2014	3	2014
Complete ALVADS-L Milestone C	3	2013	3	2013
Conduct DT/OT on ALVADS-L	4	2011	1	2013
Conduct Milestone C for JMICS light duty increment	1	2012	1	2012
Conduct Milestone C on next generation Human Remains Transfer Case	1	2012	1	2012
Conduct DT and OT on ALVADS Rapid Rigging/Derigging Airdrop System	4	2012	1	2014
Conduct Milestone C on ALVADS Rapid Rigging/Derigging Airdrop System	3	2014	3	2014
Conduct Milestone C on Mobile Integrated Shop Shelter System	4	2014	4	2014
Conduct Milestone C on JMICS Intermodal Platform Capability (IPC)	3	2015	3	2015
Execute LCADS P3I efforts	4	2009	3	2011
JPADS 10K FMR/FRP	3	2011	3	2011
Conduct DT on JPADS 10K	1	2010	2	2010
Obtain Milestone C for Space Heater Convective 120K BTUH	2	2011	2	2011

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L39: <i>Field Sustainment Support ED</i>
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Event	Start		End	
	Quarter	Year	Quarter	Year
Conduct Milestone C for JMICS standard duty increment	1	2013	1	2013
Conduct OT on Pyrolysis Waste to Energy System	4	2010	1	2011
Conduct Milestone C on Pyrolysis Waste to Energy System	3	2011	3	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>	5.699	2.490	2.734	0.000	2.734	2.104	3.974	3.844	3.904	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u>											
Description: This project provides all services ample supply of clean fuel and water. The Army has the mission to supply fuel for all land-based forces, including the Marines and the Air Force, and must supply bulk drinking water to the soldiers. This System Development and Demonstration (SDD) program enables the Army to improve maneuver sustainment operations to meet the demands of the Stryker Brigade Combat Teams and Future Force. The mission includes receiving and transferring petroleum from trucks, ships, pipelines and permanent and temporary storage facilities; moving petroleum from storage to and within corps and division areas; fuel quality surveillance testing; and, dispensing in support of tactical operations, including rapid refueling of aircraft. The mission covers purification, storage, distribution, and quality control of water. The Army cannot fight without clean fuel and water. These research and development (R&D) missions support the development and enhancement of rapidly deployed Petroleum and Water equipment which enables the Army to achieve transformation vision by providing a highly mobile and self-sustaining system in hostile theaters of operation.											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							1.383	0.000	0.000	0.000	0.000
FY09: Develop prototype Petroleum Test Kit (PTK).											
<i>FY 2009 Accomplishments:</i>											
FY 2009											
<i>FY 2010 Plans:</i>											
FY 2010											
<i>FY 2011 Base Plans:</i>											
FY 2011 Base											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 FY09: Continue improvements for the Family of Fuel System Supply Points (FSSPs). Conduct system level demonstrations and evaluations of the common 600 Gallon Per Minute (GPM) Fuel/Water tactical pump and prepare technical data package and logistic support data. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.978	0.000	0.000	0.000	0.000
Program #3 FY09: Integrate product improvements and conduct system level testing and evaluation of improved Tactical Water Purification System (TWPS) and Lightweight Water Purification System (LWP) and Reverse Osmosis Water Purification Units, Hippo system and the Unit Water Pod (Camel) System. Based on component testing results, perform engineering integration analysis and system design to incorporate in-line water quality monitoring, LP, opus and perform technical and operational testing. Perform engineering integration analysis and system design to incorporate chlorine dosing and control into the Hippo system and Unit Water Pod System		2.338	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>(Camel) system and conduct technical and operational testing. Prepare technical data to incorporate improved components into production units and to support system modernization through spares.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #4</p> <p>FY10: Evaluate the portability advancements designed into the NIR from earlier efforts. Evaluate new fiber optic probes and demonstrate for CASCOM</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p>		0.000	0.122	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #5 FY10: Continue improvements for the Family of Fuel System Supply Points (FSSPs). <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.141	0.000	0.000	0.000
Program #6 FY10: Integrate product improvements and conduct system level testing and evaluation of improved Tactical Water Purification System (TWPS) and Lightweight Water Purification System (LWP) and Reverse Osmosis Water Purification Units, Hippo System and the Unit Water Pod (Camel) system. Based on component testing results, perform engineering integration analysis and system design to incorporate in-line water quality monitoring, LP, opus and perform technical and operational testing. Perform engineering integration analysis and system design to incorporate chlorine dosing and control into the Hippo system and Unit Water Pod System (Camel) system and conduct technical and operational testing. Prepare technical data to incorporate improved components into production units and to support system modernization through spares.		0.000	0.220	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #7 FY10: Introduction of new technologies to enhance the Petroleum Quality Analysis System (PQAS). Market surveys and component testing. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.445	0.000	0.000	0.000
Program #8		0.000	1.493	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>FY10: Integration of component level improvements at the system level for the Fuel System Supply Point (FSSP). Reliability and limited user testing. Preparation of component level performance based specifications.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #9</p> <p>FY10: Small Business Innovative Research/Small Business Technology Transfer Program (SBIR/STTR).</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>		0.000	0.069	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #10 FY11: Continue to refine the property prediction models. In-house low/high temperature testing. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.301	0.000	0.301
Program #11 FY11: Continue improvements for the Family of Fuel System Supply Points (FSSPs). <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.120	0.000	0.120

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #12 FY11: Integrate product improvements and conduct system level testing and evaluation of improved Tactical Water Purification System (TWPS) and Lightweight Water Purification System (LWP) and Reverse Osmosis Water Purification Units, Hippo System and the Unit Water Pod (Camel) system. Based on component testing results, perform engineering integration analysis and system design to incorporate in-line water quality monitoring, LP, opus and perform technical and operational testing. Perform engineering integration analysis and system design to incorporate chlorine dosing and control into the Hippo system and Unit Water Pod System (Camel) system and conduct technical and operational testing. Prepare technical data to incorporate improved components into production units and to support system modernization through spares. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.755	0.000	0.755
Program #13 FY11: Integration of component level improvements at the system level for the Fuel System Supply Point (FSSP). Reliability and limited user testing. Preparation of component level performance based specifications. <i>FY 2009 Accomplishments:</i> FY 2009		0.000	0.000	0.278	0.000	0.278

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #14 FY11: Introduction of new technologies to enhance the Petroleum Quality Analysis System (PQAS). Market surveys and component testing. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.340	0.000	0.340
Program #15 FY11: Future Water Storage and Distribution (Water Packaging System).		0.000	0.000	0.940	0.000	0.940

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
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B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals							5.699	2.490	2.734	0.000	2.734
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>RDTE, 0603804/K41, Logistics and Engineer Equipment - Advanced Development</i>	0.427	3.208	2.586	0.000	2.586	4.468	2.858	2.909	2.953	Continuing	Continuing
• Ord. #2: <i>OPA 3, R05600, Water Purification Systems</i>	50.636	10.168	3.597	12.086	15.683	3.539	4.280	4.643	0.000	Continuing	Continuing
• Ord. #3: <i>OPA 3, MA6000, Distribution Systems, Petroleum & Water</i>	75.251	142.309	175.069	55.105	230.174	58.962	29.401	33.850	22.575	Continuing	Continuing
D. Acquisition Strategy											
N/A											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
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E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Advanced Petroleum Test Kit (PTK)	C	TBD Location could not be determined.	0.000	0.000		0.180		0.000		0.180	Continuing	Continuing	0
Advanced Petroleum Test Kit (PTK) - 2	C	TARDEC Warren, MI	0.000	0.102		0.121		0.000		0.121	Continuing	Continuing	0
Fuel System Supply Point (FSSP) Improvements	C	TARDEC Warren, MI	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	.050
FSSP Improvements	C	TBD Location could not be determined.	0.000	1.493		0.278		0.000		0.278	Continuing	Continuing	.400
Water Purification Systems Improvements	C	TARDEC Warren, MI	0.000	0.074		0.150		0.000		0.150	Continuing	Continuing	0
Water Purification Systems Improvements - 2	C	TBD Location could not be determined.	0.000	0.075		0.150		0.000		0.150	Continuing	Continuing	0
Unit Water Pod (Camel) 900 Gallon	C	TARDEC Warren, MI	0.150	0.000		0.000		0.000		0.000	Continuing	Continuing	.100
Water Packaging System	C	TARDEC Warren, MI	0.000	0.000		0.150		0.000		0.150	Continuing	Continuing	0
Water Packaging System - 2	C/CPFF	DRS Location could not be determined.	0.000	0.000		0.790		0.000		0.790	Continuing	Continuing	0
Petroleum Quality Analysis System (PQAS-E)	C	TARDEC Warren, MI	0.000	0.445		0.300		0.000		0.300	Continuing	Continuing	0
Subtotal			0.150	2.189		2.119		0.000		2.119			0.550

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Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Remarks													
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Advanced Petroleum Test Kit (PTK)	C	TARDEC Warren, MI	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Fuel System Supply Point (FSSP)	C	TARDEC Warren, MI	0.000	0.122		0.120		0.000		0.120	Continuing	Continuing	.025
Water Purification Systems Improvements	C	TARDEC Warren, MI	0.000	0.000		0.100		0.000		0.100	Continuing	Continuing	0
Unit Water Pod (Camel) 900 Gallon	C	TARDEC Warren, MI	0.100	0.000		0.000		0.000		0.000	Continuing	Continuing	.075
Unit Water Pod (Camel) 900 Gallon - 2	C/CPFF	TBD Location could not be determined.	1.394	0.000		0.000		0.000		0.000	Continuing	Continuing	.125
Subtotal			1.494	0.122		0.220		0.000		0.220			0.225
Remarks													

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>					

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Advanced Petroleum Test Kit (PTK)	C	TARDEC Warren, MI	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Fuel System Supply Point (FSSP)	C	TARDEC Warren, MI	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	.075
Fuel System Supply Point (FSSP) - 2	C	Yuma Proving Ground Yuma, AZ	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	.450
Water Purification Improvements	C	NFESC Port Hueneme, CA	0.332	0.000		0.240		0.000		0.240	Continuing	Continuing	0
Water Purification Improvements - 2	C	TARDEC Warren, MI	0.000	0.110		0.155		0.000		0.155	Continuing	Continuing	0
Water Purification Improvements	C	Aberdeen Proving Ground Aberdeen, MD	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Unit Water Pod (Camel) 900 Gallon	C	Yuma Proving Ground Yuma, AZ	1.996	0.000		0.000		0.000		0.000	Continuing	Continuing	1.200
Petroleum Quality Analysis System (PQAS-E)	C	TBD Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			2.328	0.110		0.395		0.000		0.395			1.725

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>					
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.069		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.000	0.069		0.000		0.000		0.000			0.000
Remarks not applicable													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			3.972	2.490		2.734		0.000		2.734			2.500
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Future Water Storage and Distribution								#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#					
Petroleum Quality Analysis System (PQAS-E)								#	#	#	#	#																

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L41: <i>WATER AND PETROLEUM DISTRIBUTION - ED</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Future Water Storage and Distribution	4	2010	3	2014
Petroleum Quality Analysis System (PQAS-E)	4	2010	4	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L42: <i>CAMOUFLAGE SYSTEM ED</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
L42: <i>CAMOUFLAGE SYSTEM ED</i>	0.239	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>This project provides for System Development and Demonstration of low cost, low observable camouflage systems to counter emerging enemy threat technologies such as Thermal Sensors, Near Infrared (Night Vision) sensors, Short Wave Infrared Sensors by suppression of visual, near-infrared, thermal radar, and acoustic signatures of highly critical mobile and semi-mobile weapon systems and strategic equipment. Efforts include development of Arctic/Snow variants, as well as system unique Ultra Lightweight Camouflage Net System (ULCANS) for the Future Combat Systems. This project also includes development of a threat database that includes spectral, visual and topographic data for primary threat areas supporting mission unique and Special Operations camouflage requirements. This program develops a critical capability that supports the Army's Modular Force by providing signature suppression and counter-surveillance superiority that reduces vulnerability. In addition, this program is clearly focused on dramatically reducing the logistics footprint by providing substantial reductions in weight and cube, while providing superior camouflage protection to the warfighter. Further, more efficient and easier to employ systems will provide vast improvements in mobility, supporting the Army's Modular Concept.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							0.239	0.000	0.000	0.000	0.000
<p>FY 09: Worked with Night Vision Laboratory (NVL) to define Short Wave Infrared Requirement (SWIR) for improvement to the ULCANS Nets. Jointly with NVL began development of an improved ULCANS Woodland Net to include improvements in the Visible, Near IR and especially the SWIR range which is an emerging threat. Worked with National Ground Intelligence Center (NCIG) and Naval research Laboratory for worldwide background data collection and imagery. Supported NVL's Cooperative Research Development Activities (CRADA) with private industries to help evolve camouflage technology. Continued development and fielding of Counter Snipe NETS for STRYKER, HMMWV and Perimeter/Guard Tower Security Veils (separately funded under Counter Snipe Initiatives/PEO Soldier).</p>											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army						DATE: February 2010					
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>			PROJECT L42: <i>CAMOUFLAGE SYSTEM ED</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						0.239	0.000	0.000	0.000	0.000	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>RDTE, 0622712.AH35, Camouflage Technology</i>	2.778	2.846	2.876	0.000	2.876	2.932	2.990	3.044	3.096	Continuing	Continuing
D. Acquisition Strategy											
Develop camouflage systems for Services and transition developmental items into procurement with a competitive award. Continual upgrade to counter technology improvements of sensors, and to counter new emerging technologies. Continual leveraging of technology with other special operations programs.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>					
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost	
L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>	0.499	0.973	0.874	0.000	0.874	3.533	3.790	3.060	3.142	Continuing	Continuing	
Quantity of RDT&E Articles												
Note Not applicable for this item.												
A. Mission Description and Budget Item Justification This project supports development, demonstration, testing and evaluation within the Engineering Support Equipment arena for the Hydraulic Electric Pneumatic Petroleum Operated Equipment (HEPPOE), Surveying, Individual Firefighter Support, Concrete and Masonry, Electrician, Plumbers, Pipefitters, Field Lighting Sets, Diving Equipment, Surface Swimmer Support Sets, Surface Supplied Diving Set, Procurement of new Technical Tools, Pioneer Support Set, and the Pioneer Land Clearing and Building Set. Funding will support the procurement of market samples and testing for Hazard ID & Marking, Pioneer Light Field Engineering, and Allied Trades. Efforts will also involve modernization of the Swimmer Support Sets and Individual Swimmer Support Sets as well as existing Sets, Kits, and Outfits (SKOs).												
B. Accomplishments/Planned Program (\$ in Millions)												
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
Program #1 Coordinate to have Initial Capabilities Documents (ICDs), Capability Development Documents (CDDs), and Capabilities Production Documents (CPDs) written for various programs. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010						0.100	0.000	0.000	0.000	0.000		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Coordinate to have Initial Capabilities Documents (ICDs), Capability Development Documents (CDDs), and Capabilities Production Documents (CPDs) written for various programs. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.125	0.000	0.125
Program #3 Development of the Hydraulic Electric Pneumatic Petroleum Operated Equipment (HEPPOE) <i>FY 2009 Accomplishments:</i> FY 2009		0.186	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO								
Program #4 Modernization of diving sets: Underwater Photo Set, Recompression Chamber, and Remote Operated Vehicle <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO				0.075	0.000	0.000	0.000	0.000
Program #5 Conduct market research on Underwater Construction Sets.				0.000	0.000	0.175	0.000	0.175

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #6 Procure Market Samples for Test and Evaluation of Surveying, Individual Firefighter Support, Concrete & Masonry, Electrician, Plumbers, Pipefitters, Field Lighting Sets, Power Plant Installation Sets, and various Soldier Portable Sets and Support equipment. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.138	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>		PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #7 Procure Market Samples for Test and Evaluation of Surveying, Individual Firefighter Support, Concrete & Masonry, Electrician, Plumbers, Pipefitters, Field Lighting Sets, Power Plant Installation Sets, and various Soldier Portable Sets and Support equipment. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO				0.000	0.000	0.343	0.000	0.343
Program #8 Description For Purchase (DFP) development for Surface Supplied Diving Set, and procurement of test articles for the Surface Supplied Diving Set and the Deep Sea Set, based on latest technology (Life Support Equipment). <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010				0.000	0.246	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #9 Procure test articles and field test Closed Circuit Scuba Set for suitability. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.250	0.000	0.000	0.000
Program #10 Procurement of test articles based on Capabilities Production Document (CPD) requirements for the family of diving air compressors. <i>FY 2009 Accomplishments:</i> FY 2009		0.000	0.250	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #11 Redevelopment of state of the art Deep Sea Set based on the latest technology (Life Support Equipment). <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.200	0.000	0.000	0.000
Program #12 Redevelopment of state of the art Deep Sea Set based on the latest technology (Life Support Equipment).		0.000	0.000	0.175	0.000	0.175

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #13 Modernization Analysis for modularity of Soldier Portable/Shelter Mounted Sets, Kits, and Outfits to determine the feasibility of upgrading/combining sets. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.056	0.000	0.056
Program #14		0.000	0.027	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army						DATE: February 2010					
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>			PROJECT L43: <i>ENGINEER SUPPORT EQUIPMENT - ED</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Small Business Innovative Research/Small Business Technology Transfer Programs											
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						0.499	0.973	0.874	0.000	0.874	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>OPA 3 ML5301, Items Less than \$5.0M (Engineering Support)</i>	38.435	30.437	31.420	0.000	31.420	32.483	4.428	35.905	30.931	Continuing	Continuing
D. Acquisition Strategy											
Progression of Programs will be developed by the completion of the Initial Capabilities Document, Capabilities Development Document, Capability Production Document, and Description For Purchase continuing into Low Rate Initial Production. Modernization and Optimization of existing tools and testing of market samples will progress from System Development and Demonstration (SDD) and transition into production.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L46: <i>Maintenance Support Equipment</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
L46: <i>Maintenance Support Equipment</i>	1.465	3.249	3.178	0.000	3.178	3.177	3.668	1.702	1.787	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>This project supports requirements generation for Sets, Kits, and Outfits (SKOs) and the subsequent creation of technical data as well as purchase descriptions. Modernize the Shop Equipment, Contact Maintenance (SECM) for the next generation armored vehicle to lower weight of enclosure to accommodate required tool load. Continue efforts on rapid deploying SKOs to support rapid emerging missions including joint efforts. Acquire and test support equipment items. Conduct research, procure and test various towbar configurations. Efforts to include development of the Metalworking and Machining Shop Set (MWMSS) as well as Armament SKOs that support the merging of Military Occupational Specialties (MOS). Research, develop, and test fire suppression systems and investigate feasibility of Joint Modular Container Systems for SKO.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							0.000	0.100	0.000	0.000	0.000
<p>Optimization of antiquated SKOs to support modularity in a 2 level maintenance environment including Towbar redesign.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p>											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L46: <i>Maintenance Support Equipment</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Modernize and update tool loads - Procure and verify additional items based on field feedback. Create Purchase Descriptions and purchase Support Equipment test articles. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.334	0.000	0.000	0.000
Program #3 Hydraulic Systems Test and Repair Unit (HSTRU) development, testing, and modernization <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		0.875	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Unique Identification Codes and Warranty/Replacement system enhancements/testing. Joint Modular Intermodal Container System/Joint Modular Intermodal Distribution System (JMICS/JMIDS) Containers. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.625	0.000	0.000	0.000
Program #5 Future Combat Systems <i>FY 2009 Accomplishments:</i> FY 2009		0.000	0.070	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #6 Design, Develop, Build, and Test Metalworking & Machining Shop Set (MWMSS) configurations.		0.015	0.000	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #7 Design, Develop, Build, and Test Metalworking & Machining Shop Set (MWMSS) configurations.		0.000	0.922	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #8 Design, Develop, Build, and Test Metalworking & Machining Shop Set (MWMSS) configurations. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	1.000	0.000	1.000
Program #9		0.000	0.063	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Composite Manipulation. Joint container utilization research. Virtual Engineering incorporation and enhancements.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #10</p> <p>Perform testing on Flatrack design and Universal Sling for the Forward Repair System (FRS).</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>		0.047	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #11 Procure new technical tools and subsequent evaluations of tools for SKO optimization. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.012	0.000	0.000	0.000
Program #12 Modernization / Redesign efforts of SECM for next generation of vehicles. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.105	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #13 Modernization / Redesign efforts of SECM for next generation of vehicles. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.400	0.000	0.000	0.000
Program #14 Modernization / Redesign efforts of SECM for next generation of vehicles. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	1.600	0.000	1.600

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #15 Support for requirements generation. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.161	0.000	0.000	0.000	0.000
Program #16 Support for requirements generation. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.232	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #17 Support for requirements generation. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.073	0.000	0.073
Program #18 Develop Rapid Deployment Sets, Kits, and Outfits (SKO) - Special Tool Initiative. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.100	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #19 Engineering and Quality Assurance in support of Sets, Kits, Outfits, and Tools. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.135	0.000	0.000	0.000	0.000
Program #20 Engineering and Quality Assurance in support of Sets, Kits, Outfits, and Tools. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.380	0.000	0.380

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #21		0.127	0.000	0.000	0.000	0.000
Fire Suppression Systems						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						
Program #22		0.000	0.300	0.000	0.000	0.000
Fire Suppression Systems						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #23 Armament Shop Upgrades <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.125	0.000	0.125
Program #24 Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.091	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)												
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
Accomplishments/Planned Programs Subtotals						1.465	3.249	3.178	0.000	3.178		
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost	
• Ord. #1: <i>OPA 1, DL5110, Items Less Than \$5.0M (TACTICAL VEHICLE)</i>	0.516	4.763	0.000	0.000	0.000	0.315	0.320	0.326	0.332	Continuing	Continuing	
• Ord. #2: <i>OPA 3, G05302/D16400, Forward Repair System</i>	128.583	62.884	63.678	9.068	72.746	2.575	0.000	0.000	0.000	Continuing	Continuing	
• Ord. #3: <i>OPA 3, M61500, Shop Equipment, Contact Maintenance</i>	17.803	49.651	56.554	25.448	82.002	12.241	0.000	5.715	0.000	Continuing	Continuing	
• Ord. #4: <i>OPA 3, MA9650, Standard Automotive Tool Set</i>	39.437	35.344	38.075	5.622	43.697	10.797	14.912	15.160	15.406	Continuing	Continuing	
• Ord. #5: <i>OPA 3, ML5345, Items Less Than \$5.0M (MAINTENANCE EQUIPMENT)</i>	1.325	3.848	3.702	0.000	3.702	3.911	0.000	0.621	0.000	Continuing	Continuing	
D. Acquisition Strategy												
Programs will progress from requirements generation through market research, development, market samples and testing. Efforts will support two level maintenance concept utilizing commercial technologies and incorporating them into SKO to support next generation weapon and support systems.												
E. Performance Metrics												
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.												

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Maintenance Support Equipment Life Cycle Configuration Analyses and ICD Development Support	C	PM SKOT Rock Island Location could not be determined.	0.865	0.566		0.073		0.000		0.073	Continuing	Continuing	0
Further develop SATS Field Maintenance Module & viability of adding Load Handling System capability	C	PM SKOT Rock Island Location could not be determined.	0.183	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Expedited Modernization Initiative Procedure (EMIP) Procurement of new Technical Tools	C	PM SKOT Rock Island Location could not be determined.	0.000	0.012		0.000		0.000		0.000	Continuing	Continuing	0
Metalworking & Machining Shop Set Configuration	C	PM SKOT Rock Island Location could not be determined.	0.000	0.872		0.000		0.000		0.000	Continuing	Continuing	0
Modernization / Redesign efforts of Shop Equipment, Contact Maintenance for next generation vehicles	C	PM SKOT Rock Island Location could not be determined.	0.000	0.000		1.600		0.000		1.600	Continuing	Continuing	0
Develop Rapid Deployment Sets, Kits, & Outfits - Special Tool Initiative. Joint Aviation Tool Set	C	PM SKOT Rock Island Location could not be determined.	0.000	0.100		0.000		0.000		0.000	Continuing	Continuing	0
Development of Fire Suppression Systems	C	PM SKOT Rock Island	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Location could not be determined.											
Hydraulic Systems Test & Repair Unit (HSTRU) development	C	PM SKOT Rock Island Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Upgrades to Armament Shop Sets	C	PM SKOT ROCK Island Location could not be determined.	0.000	0.000		0.125		0.000		0.125	Continuing	Continuing	0
Subtotal			1.048	1.550		1.798		0.000		1.798			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Life Cycle Configuration Analyses & Support to Initial Capabilities Development Document	C	PM SKOT Rock Island/ CASCOM Ordnance Center & School/ Maneuver Support Center (MANSCEN)	0.152	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L46: <i>Maintenance Support Equipment</i>
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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Location could not be determined.											
Modernization of Tool Loads based on Field Feedback	C	PM SKOT Rock Island Location could not be determined.	0.000	0.300		0.000		0.000		0.000	Continuing	Continuing	0
Industrial Plant Equipment Documentation for new test articles	C	TBD / PM SKOT Rock Island Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Engineer and Quality Assurance in support of Sets, Kits, Outfits, and Tools.	C	ECBC / ARDEC / PM SKOT Rock Island Location could not be determined.	0.000	0.063		0.380		0.000		0.380	Continuing	Continuing	0
Subtotal			0.152	0.363		0.380		0.000		0.380			0.000

Remarks

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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Life Cycle Configuration Analyses & Support to Initial Capabilities Development Document	C	Army Test & Evaluation Command (ATEC)/ PM SKOT Rock Island/CASCOM Ordnance Center & School Ft. Lee	0.830	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Testing of the Metalworking & Machining Shop Set (MWMSS)	C	Army Test & Evaluation Command (ATEC) Aberdeen, MD	0.000	0.000		1.000		0.000		1.000	Continuing	Continuing	0
Further develop SATS Field Maintenance Module & viability of adding Load Handling System capability	C	PM SKOT Rock Island Location could not be determined.	0.263	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Forward Repair System Flatrack Redesign and Universal Sling Testing.	C	PM SKOT Rock Island/Army Test & Evaluation Command (ATEC) Aberdeen, MD	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Testing of Support Equipment Items and Configurations	C	Army Test & Evaluation Command (ATEC)/ PM SKOT/ECBC Location could not be determined.	0.000	0.400		0.000		0.000		0.000	Continuing	Continuing	0
Testing of Fire Suppression	C		0.000	0.300		0.000		0.000		0.000	Continuing	Continuing	0

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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Army Test & Evaluation Command (ATEC)/ PM SKOT/ECBC Location could not be determined.											
Testing of Hydraulic Systems Test & Repair Unit (HSTRU)	C	Army Test & Evaluation Command (ATEC)/ US Army Research Lab Aberdeen, MD	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			1.093	0.700		1.000		0.000		1.000			0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Conduct Sets, Kits, & Outfits (SKO) Modernization Efforts	C	Army Test & Evaluation Command & PM SKOT Rock Island	0.688	0.070		0.000		0.000		0.000	Continuing	Continuing	0

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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Location could not be determined.											
Unique Identification Codes, Joint Modular Intermodal Container/ Distribution System (JMICS/JMIDS)	C	PM SKOT Rock Island Location could not be determined.	0.000	0.475		0.000		0.000		0.000	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.091		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.688	0.636		0.000		0.000		0.000			0.000

Remarks

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.981	3.249	3.178	0.000	3.178			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L46: <i>Maintenance Support Equipment</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Joint Modular Intermodal Containerizing of Soldier Portable & Special Tools Sets				#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L46: <i>Maintenance Support Equipment</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Joint Modular Intermodal Containerizing of Soldier Portable & Special Tools Sets	4	2009	3	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>				
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>	5.765	4.549	4.543	0.000	4.543	0.319	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>The Improved Environmental Control Units (IECU) program will provide a new generation of ECUs that use environmentally approved refrigerants, with zero ozone-depleting chemicals (ODCs) to replace the current Military Standard (MIL-STD) Family of Environmental Control Units (ECUs). The IECUs will provide improved cooling, heating, and dehumidification to soldiers and materiel systems in combat, combat support and combat service support units. The IECUs are required to replace currently fielded environmental control units in order to comply with statutory and regulatory restrictions on the use of Class II Ozone Depleting Chemicals (ODCs) and to improve the performance of military ECUs. They are form, fit and function replacements to the current MIL-STD ECUs. Technical improvements over existing military-standard ECUs will yield significant fuel and weight savings, reduction in scheduled maintenance, and increased reliability. 60K British Thermal Unit/Hour (BTU/H) IECU: The 60K BTU/H IECU will be a replacement for the existing Army 54K BTU/H ECU and Air Force developed 66K BTU/H Field Deployable Environmental Control Unit (FDECU). 9,18, and 36K BTU/H IECUs: The 9,18 and 36K BTU/H IECUs will be a replacement for the current MIL-STD-ECU variants. The new family of IECUs will utilize a new refrigerant which complies with mandated EPA (Environmental Protection Agency) requirements (non-global warming). FY09 will fund System Development and Demonstration (SDD) Phase activities for 9,18 and 36K IECUs.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							4.714	0.000	0.000	0.000	0.000
FY09: Begin SDD for the 9, 18 and 36K IECUs. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Concept and Technology Development <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.885	0.626	1.500	0.000	1.500
Program #3 FY10: Continue SDD for the 9, 18 and 36K IECUs. <i>FY 2009 Accomplishments:</i> FY 2009		0.000	3.771	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 FY11: Continue SDD for the 9, 18 and 36K IECUs. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	3.043	0.000	3.043
Program #5 Small Business Innovative Research/Small Business Technology Transfer Program		0.166	0.152	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>			PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals							5.765	4.549	4.543	0.000	4.543
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>OPA 3, Improved Environmental Control Units, MF9303</i>	8.847	10.850	20.161	0.000	20.161	0.108	0.000	0.000	0.000	0	39.966
D. Acquisition Strategy											
<p>The 9/18/36K IECU variants contract will be executed in four phases: 1) one year Cost-Plus-Fixed-Fee contract for the first phase of System Development and Demonstration (SDD), 2) two year CPFF contract to complete the SDD efforts, 3) an eight-month Firm-Fixed-Price (FFP) option for the Low Rate Initial Production (LRIP) phase, and 4) 5 one-year Fixed Price, Indefinite Delivery-Indefinite Quantity (IDIQ) options for the Full Rate Production (FRP) phase. During Phase I, two contractors will be required to design and fabricate two prototypes each for two government selected variants. These units will be subjected to limited testing. A down select based primarily on test results will be used by the Government to determine which contractor will continue development of all four variants in Phase II of the SDD effort. These variants will include four configurations: (1) 9K BTU/H, 115V, 1 phase, 60 Hertz; (2) 18K BTU/H, 208V, 3 phase, 60 Hz; (3) 18K BTU/H, 230V, 1 phase, 60 Hz; and (4) 36K BTU/H, 208V, 3 phase, 60 Hz.</p>											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
9,18 and 36K IECU	C/CPFF	Various Location could not be determined.	0.000	2.225		2.060		0.000		2.060	Continuing	Continuing	0
Subtotal			0.000	2.225		2.060		0.000		2.060			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
9, 18 and 36K IECU	C	CERDEC Ft Belvoir, VA	0.000	1.048		0.900		0.000		0.900	Continuing	Continuing	0
Concept & Technology Development	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.626		1.500		0.000		1.500	Continuing	Continuing	0
Subtotal			0.000	1.674		2.400		0.000		2.400			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>				PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>					
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
9, 18 and 36K IECU	C	ATEC APG, MD	0.000	0.100		0.100		0.000		0.100	Continuing	Continuing	0
Subtotal			0.000	0.100		0.100		0.000		0.100			0.000
Remarks													
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
9,18 and 36K IECU	C	PM-MEP Ft Belvoir, VA	0.000	0.574		0.509		0.000		0.509	Continuing	Continuing	0
Subtotal			0.000	0.574		0.509		0.000		0.509			0.000
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	4.573		5.069		0.000		5.069			0.000
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604804A: <i>Logistics and Engineer Equipment - Eng Dev</i>	PROJECT L47: <i>IMPROVED ENVIRONMENTAL CONTROL UNITS ED</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
SDD Contract Award		#																										
SDD Phase I		#	#	#	#																							
SDD Phase II						#	#	#	#	#	#	#	#	#	#	#												
Conduct User Evaluation & Validation/Verification													#															
Milestone C Decision																#												

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
SDD Contract Award	2	2009	2	2009
SDD Phase I	2	2009	1	2010
SDD Phase II	2	2010	3	2012
Conduct User Evaluation & Validation/Verification	4	2011	4	2011
Milestone C Decision	3	2012	3	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	9.489	58.688	90.736	0.000	90.736	48.996	24.286	23.113	23.193	Continuing	Continuing
485: <i>Info Standards Interop Eng/Joint Interop Cert</i>	4.745	9.809	10,061.000	0.000	10.061	10.134	10.206	10.110	10.178	Continuing	Continuing
589: <i>ARMY SYS ENGINEERING & WARFIGHTING TECH SUP</i>	4.877	48.930	10.100	0.000	10.100	10.151	10.207	10.117	11.130	Continuing	Continuing
593: <i>JOINT BATTLE COMMAND - PLATFORM (JBC-P)</i>	0.000	0.000	70.628	0.000	70.628	28.786	3.964	2.974	1.981	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element (PE) supports efforts to develop interoperability of Army programs and products, horizontally and vertically for the digitized battlefield. Project D485 supports Information Standards Interoperability Engineering and Joint Interoperability Certification. It provides the critical elements of the Army/Joint Technical Architecture, the mandated standards and communication protocols for Army/Joint ground and air operations, and crucial certification test tools to evaluate systems' interoperability for the Warfighter in support of the Vice Chief of Staff of the Army (VCSA) and Army Acquisition Executive (AAE). It also provides Joint certification testing and certification recommendations to the Joint Chiefs of Staff (JCS) for Army systems. This Army-wide effort directly supports the management, oversight, development, maintenance, and interoperability at the Army enterprise level C4I/IT (Command, Control, Communications, Computers, and Intelligence/Information Technology) architecture efforts required to implement Unit Set Fielding (USF), Software Blocking (SWB) Policy and Army Knowledge Management. Project D589 Army Systems Engineering (ASE) & Warfighter Technical Support provides essential technology expertise on all Systems Engineering and Technical Architecture (SE/TA) matters critical to gain Information Dominance and foster interoperability among all Army systems.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	9.762	88.995	91.214	0.000	91.214
Current President's Budget	9.489	58.688	90.736	0.000	90.736
Total Adjustments	-0.273	-30.307	-0.478	0.000	-0.478
• Congressional General Reductions		-30.307			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.273	0.000			
• Adjustments to Budget Years	0.000	0.000	-0.478	0.000	-0.478

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>				PROJECT 485: <i>Info Standards Interop Eng/Joint Interop Cert</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
485: <i>Info Standards Interop Eng/Joint Interop Cert</i>	4.745	9.809	10,061.000	0.000	10.061	10.134	10.206	10.110	10.178	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Focus for this project is to support the engineering or evaluation of commercially-available information technology (IT) tools to develop architecture products Information Technology based Command, Control, Computers, and Communications (C4/IT) systems such as Applications Program Interfaces for Weapons Systems. A significant effort will be on building Army (consistent with DoD) C4/IT technical standards-compliant Army data repositories that are web-accessible but secure. These repositories will be consistent with DoD standards and policies and virtually appear to be a single repository for Army C4/IT architecture products. To support the Army Vice Chief of Staff (VCSA) and the Army Chief Information Officer/G6, as cited in the AEA Master Plan, this initiative fulfills the Clinger-Cohen Act mandate of developing sound integrated Information Technology (IT) architectures and the Army's Software Blocking Policy. The increased combat power of the Future Force will be dependent on the information superiority of network & knowledge centric warfare and the ability of systems to be fully -interoperable as a member of the joint, multinational, interagency team as well as emerging Future Force (FF) C4ISR (Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance) Systems. It identifies and reduces interoperability issues earlier in the life cycle by intra-Army/FF/Joint/combined experiments and assessments, and through the establishment & sustainment of common standards. This Army wide effort directly supports the management, oversight, development, maintenance, and interoperability of the Army enterprise level C4/IT architecture efforts required to implement Unit Set Fielding, Software Blocking and Army Enterprise Architecture (AEA). Specifically, this project resources the Army's messaging standards conformance authority in assessing compliance with the Defense Information Systems Repository (DISR), in meeting the warfighter information exchange requirements and in facilitating their interoperability. It also resources, in accordance with the DISR, the development and maintenance of the following information standards: Variable Message Format (VMF) & Combat Net Radio (CNR) protocol, which support Army/Joint ground operations; Tactical Digital Information Links (TADILs), which support Air Defense operations; and US Message Text Format (USMTF), which support Intel and Commanders operations. It provides the Army's lead for configuration management functions of these standards and test tools at both Army and Joint levels. This project resources the Army participation in joint/allied messaging certification testing & configuration management processes. This project also resources the development and fielding of a suite of four (4) crucial tools which are used throughout the entire Army. These tools which are currently under development will provide the ideal means to: a) validate JTA-A critical messaging and protocol standards; b) improve systems interoperability; c) verify/certify correct system implementations and interpretation to JTA-A; d) sustain/support digitization and transition of fielded systems; e) support Software Blocking and interoperability testing; f) provide Legacy AEA interoperability with Future Combat System (FCS) command and control systems. These crucial tools are critical to the JTA-A Compliance, Certification Testing mission & Interoperability programs. The task also supports the Army's transformation campaign while mitigating interoperability issues resulting in reducing cost & program slippages. This project also provides the Configuration Management & Control for the Software Blocking (SWB)/USF (Unit Set Fielding).

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>	PROJECT 485: <i>Info Standards Interop Eng/Joint Interop Cert</i>				
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Develop and update architecture standards and protocols necessary to ensure C4ISR systems interoperability. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.368	2.989	3.045	0.000	3.045
Program #2 Engineer, develop & publish Army Warfighter Information Standards (i.e. XML-USMTF/VMF, Wireless XML, database exchange, etc...) incorporating DoD standards requirements. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base		0.968	2.006	2.064	0.000	2.064

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3 Identify, analyze, and provide solutions to gaps in technical architecture standards requirements. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.045	2.206	2.270	0.000	2.270
Program #4 Develop and engineer Army Net-Centric Enterprise Service standards and protocols supporting OSD Global Information Grid messaging requirements and serve as Army focal point for messaging working group. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		1.101	2.307	2.373	0.000	2.373

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #5 Knowledge Center Development - Build & update as necessary access to website repositories for key policies, directives, and architecture products. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.130	0.301	0.309	0.000	0.309
Program #6 Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009		0.133	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010								
<i>FY 2011 Base Plans:</i> FY 2011 Base								
<i>FY 2011 OCO Plans:</i> FY 2011 OCO								
Accomplishments/Planned Programs Subtotals				4.745	9.809	10.061	0.000	10.061
C. Other Program Funding Summary (\$ in Millions) N/A								
D. Acquisition Strategy The efforts funded in this project are non-system specific, interoperability experimentation, evaluation and certification across multiple systems. The contractual efforts/services are obtained from existing competitive omnibus support service contracts.								
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.								

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Labor	C	USACECOM Fort Monmouth, NJ	27.746	4.745		9.809		0.000		9.809	Continuing	Continuing	0
Travel	C	USACECOM Fort Monmouth, NJ	0.457	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			28.203	4.745		9.809		0.000		9.809			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Development Support	C/CPFF	Arinc Fort Monmouth, NJ	5.699	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Development Support - 2	C/CPAF	Telos Fort Monmouth, NJ	4.581	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Development Support - 3	C/CPFF	CSC Fort Monmouth, NJ	1.963	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Development Support - 4	C/CPFF	C3I Fort Monmouth, NJ	1.374	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Development Support - 5	SS/CPFF	Mitre Fort Monmouth, NJ	0.280	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Development Support/ Army Enterprise Applications Architecture	C	Binary Ft. Belvoir, VA	0.046	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Development Support-Knowledge Center	C	ITEL Ft Monmouth, NJ	1.198	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Development Support - 6	C	ITEL Ft Monmouth, NJ	2.640	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Development Support - 7	C	Northrop Grumman (SEC SSES) Ft Monmouth, NJ	2.579	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Technical Support	C/CPFF	TFE Fort Monmouth, NJ	0.095	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Technical Support - 2	C/CPFF	Marconi Fort Monmouth, NJ	0.183	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Equipment	C	USACECOM NJ	0.485	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Equipment (Development Support)	C/FFP	GTE Tauton, MA	0.106	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Telecommunications	C	USASC Fort Huachuca, AZ	1.145	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			22.374	0.000		0.000		0.000		0.000			0.000

Remarks

*Contracts/awards cited are 5 year (1 base + 4 option years). Future award dates imply future competitive award, contractor TBD.

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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	50.577	4.745	9.809	0.000	9.809			0.000

Remarks

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
589: <i>ARMY SYS ENGINEERING & WARFIGHTING TECH SUP</i>	4.877	48.930	10.100	0.000	10.100	10.151	10.207	10.117	11.130	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project has been re-aligned to better support the mission of Army Chief of Staff (CSA) sanctioned Army Architecture Integration Center (AAIC) for developing, implementing and maintaining the Army Enterprise Architecture for Information Technology based Command, Control, Computers & Communications (C4/IT) systems. AAIC mission is to develop standards-based architecture products that are inter-operable within the Army as well as the with Joint, Interagency, and Multinational systems. This project funded the Army Systems Engineering Office (ASEO) by providing technical research and development and modeling and simulation with the primary mission of developing technical architecture standards without compromising DoD-mandated standards but ensuring Army C4/IT systems under development are interoperable with legacy systems still utilized by the Army warfighter, which extend from tactical levels up through operational and strategic components of the Army Battle Command Architecture (ABCA), as well as, the institutional portions of the Enterprise to include the Army's Business Enterprise Architecture (BEA). The ASEO supports the Army CIO/G6 Architecture Integration Center (AAIC) in establishing an integrated AEA framework that complements, and is a natural extension of, the GIG-Enterprise Services (GIG-ES). In addition, the ASEO is an essential contributor in the development of the JBMC2 integrated architecture, the Battle Command Architecture, and emerging Cross-Service Integrated Architecture efforts. Each of these architecture definition and integration efforts is elemental to achieving the Army's goal of a NetCentric Future Force. Previously, the Joint Technical Architecture (JTA) and JTA-Army (JTA-A) have provided the foundation for designing, building, fielding and supporting Joint interoperable Army systems in an expedient and cost-effective manner. With the revision to the standardization process as implemented by the Defense Information Systems Agency (DISA), technical architecture standards are encompassed in the new Defense Information Systems Repository (DISR) program. The Army must participate in DISR to ensure Army requirements are adequately captured and reflected in any new baseline developed by DISA. The ASEO identifies emerging standards in support of the integration of new technologies into existing Army systems and Advanced Technology Demonstrations/Advanced Concept Technology Demonstrations (ATD/ACTDs), enabling the Army transformation to the Future Force. The ASEO's work efforts in the development and maintenance of Army IT standards within the context of DISR guidelines are critical path elements to achieve transformation, increase joint interoperability and to provide the future Army with the ability to fight and win on tomorrow's battlefields. However, the Technical Architecture (TA) alone only provides the foundation for interoperability. Integrated Army Enterprise Architectures (e.g., ABCA, BEA, etc.) fuse Operational, Systems and Technical views of the Army Enterprise into cohesive and manageable information sets that allow the Army to make consequent decisions regarding the Army's inventory of present and future systems and their associated funding. In this area the ASEO specializes in defining and exploiting (through analysis) the relationships between architectural views to provide quantitative answers to complex questions regarding the Army's future capabilities and the roadmap the Army will pursue in realizing them. The allocated resources fund two support efforts for CIO/G6. First, subsequent to the development of the AKEA (Army Knowledge Enterprise Architecture) Guidance Document, V1.1, the effort has shifted to development of the Army Technical Reference Model (TRM) for information broker/mediation services, and mapping the Army's architecture requirements to DOD Net-Centric Operations and Warfare Reference Model, including NCES (Net-Centric Enterprise Services). Second, support of the design, development,

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<p>deployment and maintenance of the AAIC (Army Architecture Integration Cell) Web-based Knowledge Center continues with increased development requirements and functionality, including the consolidation of architectural repositories, design of the DARS-A (Defense Architecture Repository-Army) database, and acting as the Army's agent for DARS/DARS-A.Joint Battle Command - Platforms (JBC-P), which includes Blue Force Tracking (BFT) and Army Aviation, provides true Joint force Command and Control (C2) Situational Awareness (SA) and communications (e.g., terrestrial, celestial) capability at the platform level through command center locations (e.g., Network Operations Centers (NOC), TOCs, Brigade Command Posts) and enables mission accomplishment across the entire spectrum of military operations. JBC-P serves as the cornerstone for Joint Blue Force Situational Awareness (JBFSA). It provides continuous near-real-time identification of friendly locations to populate the Joint Common Operating Picture (JCOP). JBC-P enhances Joint Combat Identification to increase combat effectiveness and reduce fratricide in a secure environment. It enables Joint, Net-Centric C2/Battle Command by seamlessly passing/sharing relevant information vertically and horizontally, within all levels of command, regardless of Service unit hierarchy. In addition to utilizing the FBCB2/BFT system, JBC-P system hardware consists of a family of computers (e.g., handhelds, tablets, ruggedized computers, beacons, and in-dash computers), communications equipment (e.g., satellite transceivers/antennas), encryption devices (e.g., KGV-72), and ancillary equipment (e.g., Mission Data Loader, Disc Duplicator, cables, installation kits, etc.).JBC-P RDTE Funding begins in FY10. FY10 RDTE funding is shown in this Program Element (654805) and Project No. (589).Beginning in FY11, JBC-P RDTE funding will be shown in Program Element 654805, Project No. 593.</p>						
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Analyze and provide Systems Engineering solutions to fill in gaps identified in C4ISR systems under development as well as fielded systems. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.442	3.104	3.180	0.000	3.180

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #2 Identify unique Army requirements to influence Army/DoD Architecture Technical standards under new Defense information Systems Repository developed under Defense Information Systems Agency (DISA) oversight. Prior years: Technically influence the development/implementation of Joint Technical Architecture (JTA). FY03 accomplishments: JTA Versions 5.x, 6.0 restructured and aligned with Net-Centric Philosophy and redefined scope and standards applicability. Planned activities: JTA-A version 7.0, 7.5 to include major revision of Information Security Section, to include results of Tactical Imagery Transport Study <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.176	0.417	0.416	0.000	0.416
Program #3 Investigate information technical standards for inclusion in DSR, Defense Standards Repository. Global Information Grid (GIG) Technologies (XML, JPEG 2000, MPEG 4, IPV6) <i>FY 2009 Accomplishments:</i> FY 2009		0.181	0.312	0.312	0.000	0.312

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Research and incorporate applicable emerging open standards-based commercial technologies to influence future force systems. Ensure that open commercial standards adopted by Future Force enabling systems are reflected in the DISR baseline. Maintain subject matter expertise on DISR, Defense Standards Repository Information Technology (IT) standards' mandates to ensure current and future force systems remain interoperable. Ensure a logical and cost-effective evolution of TA baselines while maximizing Joint interoperability. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.732	1.458	1.458	0.000	1.458
Program #5		0.350	0.729	0.729	0.000	0.729

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>DISR Compliance Requirements -Ensure Program Managers have an executable and effective strategy for implementing the Army/DoD Technical Architecture standards.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #6</p> <p>Validate/Integrate Army Enterprise Technical Views to enable the Army Technical and Systems Architect (CIO/G6) to monitor, assess and control the inherent risks associated with leveraging continuously changing technologies across all Army Enterprise Functionals/PEO/Communities.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p>		0.800	1.666	1.506	0.000	1.506

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
<p>Program #7</p> <p>Provide systems analysis for implementing IPv6 protocol across Army to ensure communications/data-sharing/data-exchange between systems. Prior Years: As a result of the decision agreed to at the 19 Dec 02 AKEA, GOSC, direction of MU17 funding was realigned to support the Protocols Investigation for the Next Generation (PING) program. The PING supported current technology agreements with various technology developers such as HP, Cisco, Microsoft and Telecordia. In addition, PING represented the ARMY CIO/G6 office at various ASD (NII)/DoD CIO meetings discussing DoD IPv6 policy and Transition Planning, participated with JITC at DISA's Def Interop Comm Exercise 2003 (DICE 2003) demonstrating IPv6 interoperability, active member of DoD IPv6 Test Bed evaluating and testing IPv6 benefits and trade-offs, first Army lab participating with North American IPv6 Task Forces MoonV6 initiative, drafted ARmy's Phase I IPv6 Transition plan and initial transition strategy to migrate Army systems and networks to native IPv6 by FY08 in compliance with DoD policy, prepared evaluation criteria for selecting early IPv6 adopter candidates in support of the Army GIO/G6 office, hosted first Army IPv6 data call to collect systems impact information and baseline on Army IPv6 transition plan, provided IPv6 technical guidance and knowledge to the Army acquisition community.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p>		0.365	0.729	0.729	0.000	0.729

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #8 Define and exploit (through analysis) the relationships between architectural views to provide quantitative answers to complex questions regarding the Army's future capabilities and the roadmap the Army will pursue in realizing them. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.365	0.729	0.729	0.000	0.729
Program #9 Provide systems engineering solutions including technical architectures for Army systems supporting Joint Blue Force Situational Awareness (JBFSA) initiative <i>FY 2009 Accomplishments:</i> FY 2009		0.466	0.958	1.041	0.000	1.041

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #10 Develop Capabilities, Product Applications, Platform Interoperability, and System Services across the JBC-P family of systems, to include the development of capabilities to meet Key Performance Parameters (KPPs) and in support of Multi-Level Security Domains for Network, Users, and Information. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	20.000	0.000	0.000	0.000
Program #11		0.000	12.500	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Perform Software/Systems Engineering in support of the development of JBC-P Capabilities, Applications, and Services, to include, but not limited to, Conducting Engineering Studies, Architecture Development (both Software and Network), Systems Analyses, Technical Readiness Assessments, Technical Interchange Meetings/ Events, and development of Related Reports and other deliverables.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #12</p> <p>Design, Develop, and Procure Prototypes for Platform Dismountable Product, Standalone Dismounted Handheld Product, Beacon Product, Embedded Encryption, and Satellite Transceiver.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p>		0.000	1.100	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #13 Develop and Conduct Integration Events <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	1.100	0.000	0.000	0.000
Program #14 PM FBCB2 Program Management <i>FY 2009 Accomplishments:</i> FY 2009		0.000	3.042	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #15 Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	1.086	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals		4.877	48.930	10.100	0.000	10.100

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>	PROJECT 589: <i>ARMY SYS ENGINEERING & WARFIGHTING TECH SUP</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
D. Acquisition Strategy The JBC-P program was Joint Requirements Oversight Council (JROC) approved in May 2008. The Acquisition Strategy Report (ASR) was approved in September 2009. An Acquisition Decision Memorandum, approving a Modified Milestone B and entry into the Engineering and Manufacturing Development phase, was issued in September 2009. RDTE funding for JBC-P begins in FY10. The FY10 JBC-P RDTE program funding is in this Program Element (654805) and Project Number (589). Beginning in FY11, JBC-P RDTE program funding will be shown in Program Element 654805, Project Number 593.		
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>	PROJECT 589: <i>ARMY SYS ENGINEERING & WARFIGHTING TECH SUP</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Systems Engineering Support	C	ASEO DCTS, PING/03 only, Fort Monmouth, NJ	19.667	1.953		6.030		0.000		6.030	Continuing	Continuing	0
Contract Support	C	C3ISGI Tinton Falls, NJ	3.080	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Contract Support - 2	C/FP	TRW Domingues Hills, CA	1.281	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Overhead	C	ASEO/WTS CECOM Fort Monmouth, NJ	1.422	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Contract Systems Engineering Support	C/FP	Battelle Alexandria, VA	0.354	0.000		0.000		0.000		0.000	Continuing	Continuing	0
System Development and Integration	C	PEO C3S PM TOCS, Fort Monmouth, NJ	0.025	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Travel	C	SEC USACECOM, Ft. Monmouth, NJ	0.095	0.025		0.025		0.000		0.025	Continuing	Continuing	0
Development Support	C	Northrop Grummon (SEC SSES) Ft. Monmouth, NJ	0.200	0.050		0.050		0.000		0.050	Continuing	Continuing	0
Contract Systems Engineering Support - 2	C/FP	SRI Menlo Park, CA	0.199	0.000		0.000		0.000		0.000	Continuing	Continuing	0
	C	SEC	3.468	0.856		0.856		0.000		0.856	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>	PROJECT 589: <i>ARMY SYS ENGINEERING & WARFIGHTING TECH SUP</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Labor (Internal Government)		USACECOM, Ft. Monmouth, NJ											
Equipment	C	USACECOM NJ	0.020	0.005		0.005		0.000		0.005	Continuing	Continuing	0
Development Support - 2	C	ITEL Mays Landing, NJ	0.200	0.050		0.050		0.000		0.050	Continuing	Continuing	0
Contract Support - 3	C/FP	Lockheed Martin Eatontown, NJ	0.545	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Development Support - Army Enterprise Applications Architecture	C	Binary Ft. Belvoir, VA	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Contract Support - 4	C	SAIC Falls Church, VA	1.811	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Contract Systems Engineering Support - 3	C/FP	SRC Atlanta, GA	0.612	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Contract Systems Engineering Support - 4	SS/FP	MITRE Tinton Falls, NJ	8.597	0.290		0.350		0.000		0.350	Continuing	Continuing	0
Systems Engineering and Integration	C	WTS - ISIO CECOM Fort Monmouth, NJ	2.341	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Contract Support - 5	C	Datron Simi Valley, CA	0.305	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Contract Systems Engineering Support - 5	C/FP	Gemini Billerica, MA	0.137	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Development Support-Knowledge Center	C	ITEL Mays Landing, NJ	0.849	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Contract Support - 6	C	Rutgers University New Brunswick, NJ	0.528	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Contract Systems Engineering Support - 6	C/FP	Suntek Systems Eatontown, NJ	0.460	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Contract Systems Engineering Support - 7	C/FP	HTPi Shrewsbury, NJ	0.145	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Contract Support - 7	C	Telos Eatontown, NJ	0.024	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Engineering Support	C	ISEC Fort Huachuca, AZ	1.357	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Contract Support - 8	C	PTG/CACI Eatontown, NJ	0.026	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Contract Systems Engineering Support - 8	C/FP	Litton Reading, MA	0.490	0.240		0.240		0.000		0.240	Continuing	Continuing	0
Contract Support - 9	C/FP	CSC Eatontown, NJ	1.746	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Contract Support - 10	C	BAE Tinton Falls, NJ	0.139	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Contract Support - 11	C/FP	Janus Research Group Appling GA	0.072	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Contract Systems Engineering Support - 9	C/FPI	CSC Eatontown, NJ	17.948	1.468		2.500		0.000		2.500	Continuing	Continuing	0
Contract Systems Engineering Support - 10	C/FP	GTE/BBN Cambridge, MA	0.960	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>	PROJECT 589: <i>ARMY SYS ENGINEERING & WARFIGHTING TECH SUP</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Travel - 2	C	ASEO/WTS CECOM Fort Monmouth, NJ	1.696	0.080		0.080		0.000		0.080	Continuing	Continuing	0
Development of software based VOIP	C/TBD	Nothing entered for Activity and Location. Location could not be determined.	2.400	0.000		0.000		0.000		0.000	Continuing	Continuing	0
JBC-P Software Development	C/TBD	TBD Location could not be determined.	0.000	20.000		37.000		0.000		37.000	Continuing	Continuing	0
JBC-P Software/Systems Engineering	C/TBD	TBD Location could not be determined.	0.000	12.500		24.000		0.000		24.000	Continuing	Continuing	0
JBC-P Hardware Development	C/TBD	TBD Location could not be determined.	0.000	1.100		2.000		0.000		2.000	Continuing	Continuing	0
Subtotal			73.199	38.617		73.186		0.000		73.186			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>				PROJECT 589: <i>ARMY SYS ENGINEERING & WARFIGHTING TECH SUP</i>					

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
JBC-P PM Office Support	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	1.010		1.000		0.000		1.000	Continuing	Continuing	0
JBC-P Matrix Support	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	1.000		1.000		0.000		1.000	Continuing	Continuing	0
JBC-P Miscellaneous Contractor Support	C/TBD	TBD Location could not be determined.	0.000	1.000		2.000		0.000		2.000	Continuing	Continuing	0
Subtotal			0.000	3.010		4.000		0.000		4.000			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
JBC-P Contractor Test Support	C/TBD	TBD Location could not be determined.	0.000	1.100		2.000		0.000		2.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>	PROJECT 589: <i>ARMY SYS ENGINEERING & WARFIGHTING TECH SUP</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	1.100		2.000		0.000		2.000			0.000

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
		Cost	Award Date	Cost	Award Date	Cost	Award Date				
	73.199	42.727		79.186		0.000		79.186			0.000

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>				PROJECT 593: <i>JOINT BATTLE COMMAND - PLATFORM (JBC-P)</i>				
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost	
593: <i>JOINT BATTLE COMMAND - PLATFORM (JBC-P)</i>	0.000	0.000	70.628	0.000	70.628	28.786	3.964	2.974	1.981	Continuing	Continuing	
Quantity of RDT&E Articles												
A. Mission Description and Budget Item Justification												
<p>Joint Battle Command - Platforms (JBC-P), which includes Blue Force Tracking (BFT) and Army Aviation, provides true Joint force Command and Control (C2) Situational Awareness (SA) and communications (e.g., terrestrial, celestial) capability at the platform level through command center locations (e.g., Network Operations Centers (NOC), TOCs, Brigade Command Posts) and enables mission accomplishment across the entire spectrum of military operations. JBC-P serves as the cornerstone for Joint Blue Force Situational Awareness (JBFSFA). It provides continuous near-real-time identification of friendly locations to populate the Joint Common Operating Picture (JCOP). JBC-P enhances Joint Combat Identification to increase combat effectiveness and reduce fratricide in a secure environment. It enables Joint, Net-Centric C2/Battle Command by seamlessly passing/sharing relevant information vertically and horizontally, within all levels of command, regardless of Service unit hierarchy. In addition to utilizing the FBCB2/BFT system, JBC-P system hardware consists of a family of computers (e.g., handhelds, tablets, ruggedized computers, beacons, and in-dash computers), communications equipment (e.g., satellite transceivers/antennas), encryption devices (e.g., KGV-72), and ancillary equipment (e.g., Mission Data Loader, Disc Duplicator, cables, installation kits, etc.).JBC-P RDTE Funding begins in FY10. FY10 RDTE funding is shown in Progm Element (654805) and Project No. (589).Beginning in FY11, JBC-P RDTE funding will be shown in this Program Element (654805) and Project No. (593)</p>												
B. Accomplishments/Planned Program (\$ in Millions)												
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
Program #1 Develop Capabilities, Product Applications, Platform Interoperability, and System Services across the JBC-P family of systems, to include the development of capabilities to meet Key Performance Parameters (KPPs) and in support of Multi-Level Security Domains for Network, Users, and Information. <i>FY 2009 Accomplishments:</i> FY 2009						0.000	0.000	28.000	0.000	28.000		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>	PROJECT 593: <i>JOINT BATTLE COMMAND - PLATFORM (JBC-P)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Perform Software/Systems Engineering in support of the development of JBC-P Capabilities, Applications, and Services, to include, but not limited to, Conducting Engineering Studies, Architecture Development (both Software and Network), System Analyses, Technical Readiness Assessments, Technical Interchange Meeting/Events, and development of Related Reports and other deliverables. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	20.000	0.000	20.000
Program #3		0.000	0.000	5.000	0.000	5.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>	PROJECT 593: <i>JOINT BATTLE COMMAND - PLATFORM (JBC-P)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Design, Develop and Procure Prototypes for Platform Dismountable Product, Standalone Dismounted Handheld Product, and Beacon Product, Embedded Encryption and Satellite Transceiver. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Develop and Conduct Integration Events (i.e., Tests and Assessments) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	12.000	0.000	12.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>			PROJECT 593: <i>JOINT BATTLE COMMAND - PLATFORM (JBC-P)</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #5						0.000	0.000	5.628	0.000	5.628	
FBCB2 Program Management											
<i>FY 2009 Accomplishments:</i>											
FY 2009											
<i>FY 2010 Plans:</i>											
FY 2010											
<i>FY 2011 Base Plans:</i>											
FY 2011 Base											
<i>FY 2011 OCO Plans:</i>											
FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						0.000	0.000	70.628	0.000	70.628	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>OPA W61990</i>	0.000	17.188	0.147	0.000	0.147	64.961	86.203	179.469	125.857	0	473.825
• Ord. #2: <i>RDTE PE 654805, Proj. No. 589</i>	0.000	37.710	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	37.710
• Ord. #3: <i>RDTE PE 273759, Proj. No. 122</i>	0.000	0.000	3.935	0.000	3.935	0.000	0.000	0.000	0.000	0	3.935
D. Acquisition Strategy											
The JBC-P program was Joint Requirements Oversight Council (JROC) approved in May 2008. RDTE funding for JBC-P begins in FY10. The Acquisition Strategy Report (ASR) was approved in September 2009. An Acquisition Decision Memorandum, approving a Modified Milestone B, and entry into the Engineering and Manufacturing Development phase, was											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>	PROJECT 593: <i>JOINT BATTLE COMMAND - PLATFORM (JBC-P)</i>
issued in September 2009.\$3.935 million for FY11 C2/SA Convergence is shown in Program Element 273759, Project Number 122.The FY10 JBC-P RDTE program funding is shown in Program Element 654805, Project Number 589.Beginning in FY11, JBC-P RDTE program funding will be shown in this Program Element (654804) and Project Number (593).		
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>				PROJECT 593: <i>JOINT BATTLE COMMAND - PLATFORM (JBC-P)</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Joint Battle Command - Platforms (JBC-P) development	C/TBD	TBD Location could not be determined.	0.000	0.000		30.000		0.000		30.000	Continuing	Continuing	0
JBC-P Software/System Engineering	C/TBD	TBD Location could not be determined.	0.000	0.000		20.000		0.000		20.000	Continuing	Continuing	0
Design, Develop, and Procure Hardware Prototypes	C/TBD	TBD Location could not be determined.	0.000	0.000		5.000		0.000		5.000	Continuing	Continuing	0
Subtotal			0.000	0.000		55.000		0.000		55.000			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government In-House System/Project Management	C	Aberdeen Proving Ground (APG) MD	0.000	0.000		2.000		0.000		2.000	Continuing	Continuing	0
Government Matrix System/Project Management	C	Aberdeen Proving Ground (APG) MD	0.000	0.000		1.000		0.000		1.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>				PROJECT 593: <i>JOINT BATTLE COMMAND - PLATFORM (JBC-P)</i>					
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor System/Project Management Support	C/TBD	TBD Location could not be determined.	0.000	0.000		2.628		0.000		2.628	Continuing	Continuing	0
Subtotal			0.000	0.000		5.628		0.000		5.628			0.000
Remarks													
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Develop and Conduct Tests and Assessments	C/TBD	TBD Location could not be determined.	0.000	0.000		10.000		0.000		10.000	Continuing	Continuing	0
Subtotal			0.000	0.000		10.000		0.000		10.000			0.000
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	0.000		70.628		0.000		70.628			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army							DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604805A: <i>Command, Control, Communications Systems - Eng Dev</i>			PROJECT 593: <i>JOINT BATTLE COMMAND - PLATFORM (JBC-P)</i>			
	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks									

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	41.081	41.794	34.474	0.000	34.474	30.059	45.077	52.751	54.061	Continuing	Continuing
812: <i>MIL HIV VAC&DRUG DEV</i>	4.550	4.448	4.456	0.000	4.456	4.434	3.380	4.986	5.250	Continuing	Continuing
832: <i>Field Medical Systems Engineering Development</i>	14.392	15.634	17.791	0.000	17.791	16.849	27.054	31.800	32.264	Continuing	Continuing
834: <i>SOLDIER SYS PROT-ED</i>	1.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
849: <i>INFEC DIS DRUG/VACC ED</i>	13.236	13.634	12.227	0.000	12.227	8.776	14.643	15.965	16.547	Continuing	Continuing
A11: <i>LSTAT MEDICAL TECHNOLOGY (CA)</i>	2.393	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
CS5: <i>MED MATERIEL/MED BIO DEFENSE INITIATIVES (CA)</i>	4.784	8.078	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element (PE) funds advanced development of medical materiel within the System Demonstration and Low Rate Initial Production portions of the acquisition life cycle using 6.5 funding. It supports products successfully developed in the Systems Integration portion of the Systems Development and Demonstration phase through completion of the Milestone C Decision Review. When available, commercially-off-the-shelf (COTS) medical products are also tested and evaluated for military use. This PE primarily includes pivotal (conclusive) human clinical trials necessary for licensure by the US Food and Drug Administration, along with related product stability, production manufacturing, supportability analysis, and operational testing for biologics (products derived from living organisms) and devices to demonstrate that products are safe and effective. Combat Casualty Care devices and medicines: (1) enhance care at the first responder level to save lives, and (2) provide more effective post evacuation medical care and rehabilitation to shorten recovery time. The F2 concept places Soldiers into a more austere environment with lengthened evacuation times (both arrival and transit). This requires medics and first responders to improve their ability to save lives and extend stabilization. Reduction in weight, cube, and sustainment allows medical units to increase mobility and maintain contact with their supported Units of Action. Soldier performance enhancers in the form of drugs or diagnostics, allow commanders to increase Soldiers cognitive awareness and stamina. This improves Soldiers operational capabilities and has the potential to reduce casualties. Disease and non-battle injuries (DNBI) are the largest contributor to the medical footprint. Infectious disease vaccines and preventive drugs reduce the risk of warfighters contracting debilitating or fatal diseases, reducing levels of DNBI affected Soldiers and in turn, significantly reducing a large portion of the requirement for supporting combat support hospitals in the theater of operations, and the strain placed on the Army's personnel replacement and logistical systems. This is especially important due to the higher risk posed by the ever expanding urban warfare environments. The reduction of patient evacuation requirements within the current and Future Force (F2) units will act as a force multiplier, due to the retention of uniquely skilled and combat tested Soldiers in the theater. Military Human Immunodeficiency Virus

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

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(HIV) Vaccine and Drug Development funds militarily relevant HIV medical countermeasures. These include advanced component development of candidate vaccines and drugs for large-scale field testing. This program is managed by U.S. Army Medical Materiel Development Activity (USAMMDA) and U.S. Army Medical Materiel Agency (USAMMA) of the US Army Medical Research and Materiel Command.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	45.222	33.893	34.527	0.000	34.527
Current President's Budget	41.081	41.794	34.474	0.000	34.474
Total Adjustments	-4.141	7.901	-0.053	0.000	-0.053
• Congressional General Reductions		-0.219			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		8.120			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.951	0.000			
• Adjustments to Budget Years	0.000	0.000	-0.053	0.000	-0.053

Change Summary Explanation

Congressional Program reduction in FY 09 was due to Plasma Sterilizer project was moved to 0603002A, medical, project number MK8. Congressional increases in FY 10 was directed research in following areas: Army Portable Oxygen system, \$1.2 Million. Nanophotonic biosensor Detection of BioAgents and Pathogens, \$1.520 Million. Plasma Sterilizer, \$2.4 Million. Military applications for Medical Grade Chitosan, \$3.0 Million.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>				PROJECT 812: <i>MIL HIV VAC&DRUG DEV</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
812: <i>MIL HIV VAC&DRUG DEV</i>	4.550	4.448	4.456	0.000	4.456	4.434	3.380	4.986	5.250	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
This project funds militarily relevant human immunodeficiency virus (HIV) medical countermeasures. These funds provide for engineering and manufacturing development of candidate vaccines and drugs to permit large-scale field testing. Development is focused on militarily unique needs effecting manning, mobilization, and deployment. The major contractor is The Henry M. Jackson Foundation for the Advancement of Military Medicine, Rockville, MD. Research efforts are coordinated with the National Institutes of Health.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							4.550	0.000	0.000	0.000	0.000
In FY09, completed the observation and follow-up phase of the expanded safety/efficacy trial (> 16,000 subjects) in Thailand and begin data analysis for this HIV Vaccine (conduct Design Readiness Review (DRR).											
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Program #2</p> <p>In FY10, prepare preliminary clinical study report on the completed expanded safety/efficacy trial in Thailand and conduct a critical design review (CDR) to determine future development of the prime-boost vaccine based on trial results. Follow up clinical trial for HIV positive for viral load in order to validate viral load as a surrogate endpoint for use in HIV vaccine studies.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>		0.000	4.327	0.000	0.000	0.000
<p>Program #3</p> <p>In FY11, will finalize and submit to the Food and Drug Administration (FDA) results from the expanded safety/efficacy trial in Thailand, update/revise the clinical development plan, and continue to follow up clinical trial for HIV positive for viral load.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p>		0.000	0.000	4.456	0.000	4.456

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 812: <i>MIL HIV VAC&DRUG DEV</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Small Business Innovative Research/Small Business Technology Transfer Programs.		0.000	0.121	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Accomplishments/Planned Programs Subtotals		4.550	4.448	4.456	0.000	4.456
C. Other Program Funding Summary (\$ in Millions)						
N/A						
D. Acquisition Strategy						
Test and evaluate commercially developed vaccine candidates in government-managed trials.						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
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E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 812: <i>MIL HIV VAC&DRUG DEV</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Product Development	C	Henry M. Jackson Foundation Rockville, MD	15.280	3.093		3.231		0.000		3.231	Continuing	Continuing	0
Subtotal			15.280	3.093		3.231		0.000		3.231			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
No product/contract costs greater than \$1M individually	C	Nothing entered for Activity and Location. Location could not be determined.	0.394	0.047		0.046		0.000		0.046	0	.579	0
Subtotal			0.394	0.047		0.046		0.000		0.046	0.000	0.579	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>				PROJECT 812: <i>MIL HIV VAC&DRUG DEV</i>					

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test and Evaluation	C	Walter Reed Army Institute of Research (WRAIR) Silver Spring, MD	4.950	1.213		1.088		0.000		1.088	0	8.464	0
Subtotal			4.950	1.213		1.088		0.000		1.088	0.000	8.464	0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
No product/contract costs greater than \$1M individually	C	Nothing entered for Activity and Location. Location could not be determined.	0.483	0.095		0.091		0.000		0.091	0	.854	0
Subtotal			0.483	0.095		0.091		0.000		0.091	0.000	0.854	0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 812: <i>MIL HIV VAC&DRUG DEV</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Prime-Boost HIV Vaccine (DRR)			#																									
HIV Vaccine (CDR)							#																					

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 812: <i>MIL HIV VAC&DRUG DEV</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Prime-Boost HIV Vaccine (DRR)	3	2009	3	2009
HIV Vaccine (CDR)	3	2010	3	2010

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>				PROJECT 832: <i>Field Medical Systems Engineering Development</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
832: <i>Field Medical Systems Engineering Development</i>	14.392	15.634	17.791	0.000	17.791	16.849	27.054	31.800	32.264	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project funds development of medical products for enhanced combat casualty care and follow-on care, including rehabilitation. This project funds pivotal (conclusive) human clinical trials or mechanical engineering evaluations for efficacy of devices or biologics (products derived from living organisms) to fulfill unique military requirements. Mature commercially-off-the-shelf (COTS) medical products are also evaluated for military use. Consideration will also be given to reducing the medical sustainment footprint through smaller weight and cube volume, or equipment independence from supporting materiel. This work is frequently completed through a laboratory/contractor team with the contractor obtaining the U.S. Food and Drug Administration (FDA) licensure for sale of the product. In FY10, Project 834 Soldier Sys Prot-ED will be consolidated into Project 832. Major contractors/ intra-governmental agencies include: IGR Enterprises, Inc.; Army Medical Department Board Test Center; SeQual Technologies, Inc.; Enginivity, Inc.; Ultrasound Diagnostics, Inc.; HemCon Medical Technologies, Inc.; Cerdak Ltd; Hemerus Medical, LLC; Fast Track Drugs & Biologics, LLC; Integrated Medical Systems, Inc; the National Institutes of Health National Heart, Lung and Blood Institute (NHLBI), and the U.S. Army Aeromedical Research Laboratory Walter Reed Army Institute of Research (WRAIR) and Institute of Surgical Research (ISR) for user evaluation.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 In FY 09, Ceramic Oxygen Generator (COG): transitioned from project 836, conducted technical and user evaluations, obtained FDA clearance, conducted a Milestone C review in Qtr 3 FY 09 and transitioned to Production and Deployment. Rotary Valve Pressure Swing Adsorption Oxygen Generator (RVPSAOG): conducted Milestone C review of Omni II, and initiated low rate production, with an estimated completion of Qtr 4 FY 09. Battery Powered IV Fluid Warmer: In Qtr 4 FY 09 conducted a Milestone C review and transition to Production and Deployment. Field Sterilizer: following multiple vendor review, conducted technical and user evaluation to determine the best solution. 120 LPM (liter per minute) Oxygen Generator: initiated request for	14.392	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>proposal for review of production capabilities - performance characteristics will be reviewed to determine if a commercial-off-the-shelf (COTS) solution can meet current capabilities defined or if research and development refinement of a COTS system is feasible. Freeze-dried Plasma Program: transitioned from project 836 and based on a down-select, manufacture clinical lots of a freeze-dried plasma product, and began pre-trial activities for a safety/efficacy human clinical trial. Red Blood Cell Extended Life (RBCXL) program (severe bleeding treatment candidate - a new blood collection and storage system that extends the shelf-life of red blood cells from 6 to 8 weeks): transitioned from 836 and began a human safety/efficacy study, and performed good manufacturing practices validation of the blood collection and storage system. Lab, Blood Bank, and Anatomical testing for COTS equipment to meet essential characteristics and enhance technology. Testing completed Qtr 1 FY09. Woundstat Safety Study: completed testing and moved to production.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
Program #2	Continued accomplishments for FY 09. Dental Field Unit:In FY09, completed request for proposal for review of production capabilities - performance characteristics was reviewed to determine if a commercial-off-the-shelf (COTS) solution can meet current capabilities defined or if research and development refinement of a COTS	0.000	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>system is feasible. Noise Immune Stethoscope: In 4Q FY09, transitioned from project 879 and successfully conducted Milestone C.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #3</p> <p>In FY 10, COG: conduct developmental and operational testing to obtain Milestone C. Follow on testing and report analysis will be performed to facilitate FDA and UL approval and ascertain that production capabilities adhere to good manufacturing practices. Further analysis may be performed to facilitate FDA and UL approval and ascertain that production capabilities adhere to good manufacturing processes. In 2Q FY10 for the RVPSAOG submit final reports for FDA clearance. Field Sterilizer: complete analysis and validation report of down select products in OT&E trials for final selection and movement to production and deployment. Ultrasonic Brain Imager (UBI): transition from project 836, begin safety and effectiveness human clinical trial, conduct a human factor evaluation of the prototype, and conduct a Milestone C for transition to Production and Deployment. Freese Dried Plasma Program: initiate a multi-center safety/efficacy human clinical trial, and perform stability studies on product. Red blood cell extended life program: will prepare and complete enrollment in human safety/efficacy study. Woundstat Safety Study: complete the study. Continue testing of commercial lab equipment: expand study to include Hematology Analyzers, continue testing and evaluation for final report in 3Q FY10. Noise immune</p>		0.000	15.196	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>stethoscope: conduct environmental/ transportation testing. Verify stethoscope will be able to stand up to the military environment. Conduct storage and operational temperature, drop and vibration, as well as air-worthiness testing. Life Support for Trauma and Transport (LSTAT): transition from project 834, conduct Milestone C 3Q and transition to Production and Deployment.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #4</p> <p>In FY11, Freeze-dried Plasma: will start enrollment in the multi-center limited human safety/efficacy clinical trial and evaluate stability profile of the product. Red Blood Cell Extended Life Program: will complete the human safety/efficacy study, conduct data analysis, and prepare and submit report to the FDA. Platelet Derived Hemostatic Agent (PDHA):will transition from project 836 to begin enrollment/follow-up in the human safety/efficacy trial. Intranasal Ketamine (low dose pain management via nasal spray): will transition from project 836 and conduct pre-clinical trial activities for human drug use in aeromedical evacuation and burn patients. Hypertonic Saline Dextran (treatment of shock due to blood loss): will support human expanded safety/efficacy trial for treatment of shock. Will continue market analysis and surveys for candidate resuscitative fluids for treatment of shock. Enhanced SAVE: will conduct clinical user evaluation and operational testing. Remote Diagnostic Access: will conduct Prototype field testing and refinement for MOC Sensor Modular Development</p>		0.000	0.000	17.791	0.000	17.791

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>phase of this device. Treatment Table for PM, HBCT Medical Mission Package for Treatment Variants: will transition from Project 836. Will transition to production for use on PM, HBCT Treatment Variant. Refrigerator for PM, HBCT for Medical Mission Package for Treatment Variant: will transition from Project 836. Will conduct environmental and operational testing. Shelter for PM, HBCT Treatment Variant: will transition from Project 836. Will evaluate alternatives in operational setting. Shock and Vibration Isolation System for Patient Litters in Ground and Air Medical Evacuation Vehicles: will transition from Project 836. Will conduct Shock and Vibration Isolation System for patient litters - air worthiness and ground vehicle testing.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #5</p> <p>Continued FY 11 projects: One-handed tourniquet update: Conduct study to update medical set and down select product. Passive Cold Chain Capability for Temperature Sensitive Medical Materiel: will transition from Project 836. Will conduct environmental testing and user testing.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p>		0.000	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 832: <i>Field Medical Systems Engineering Development</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #6 Small Business Innovative Research/Small Business Technology Transfer Programs. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.438	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals		14.392	15.634	17.791	0.000	17.791

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 832: <i>Field Medical Systems Engineering Development</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
D. Acquisition Strategy Develop in-house or industrial prototypes in government-managed programs to meet military and regulatory requirements for production and fielding.		
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>				PROJECT 832: <i>Field Medical Systems Engineering Development</i>					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Rotary Valve Pressure Swing Adsorption oxygen Generator	C	Sequal Technologies Inc., San Diego, CA	3.197	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Hypertonic Saline Dextran	C	National Institutes of Health National Heart, Lung and Blood Institute (NHLBI)	0.000	4.800		5.500		0.000		5.500	Continuing	Continuing	0
Freeze-dried Human Plasma	C	HemCon Medical Technologies Inc, Tigard, OR	0.000	7.150		0.500		0.000		0.500	Continuing	Continuing	0
Extended Life Red Blood Cell Product	C	Hemerus Medical LLC, St. Paul, MN	0.000	0.745		0.500		0.000		0.500	Continuing	Continuing	0
Virtual Imaging	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.450		0.000		0.000		0.000	Continuing	Continuing	0
No product/contract costs greater than \$1M individually	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		2.000		0.000		2.000	Continuing	Continuing	0
Subtotal			3.197	13.145		8.500		0.000		8.500			0.000
Remarks													

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>				PROJECT 832: <i>Field Medical Systems Engineering Development</i>					
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Regulatory Support	C	Clinical Research Management Inc., Hinckley, OH	0.000	1.400		1.400		0.000		1.400	Continuing	Continuing	0
No product/contract costs greater than \$1 Million individually	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.186		2.354		0.000		2.354	Continuing	Continuing	0
Subtotal			0.000	1.586		3.754		0.000		3.754			0.000
Remarks													
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Not Applicable	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.399		4.108		0.000		4.108	Continuing	Continuing	0
Subtotal			0.000	0.399		4.108		0.000		4.108			0.000
Remarks													

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 832: <i>Field Medical Systems Engineering Development</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
No product/contract costs greater than \$1M individually	C	Nothing entered for Activity and Location. Location could not be determined.	18.173	0.504		1.429		0.000		1.429	Continuing	Continuing	0
Subtotal			18.173	0.504		1.429		0.000		1.429			0.000

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	21.370	15.634		17.791		0.000		17.791			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 832: <i>Field Medical Systems Engineering Development</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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) Ceramic Oxygen Gen Sys (MS-C)		#																										
(2) Rotary Valve Press Swing Oxy (MS-C)			#																									
(3) Battery Powered Iv Fld Warm (MS-C)			#																									
(4) Field Sterilizer (MS-B)			#																									
(6) Ultrasonic Brain Imager (MS-C)				#																								
(7) Freeze-dried Human Plasma - clinical lots						#	#	#	#	#	#																	
(8)Red Blood Cell Extend Life - submit for FDA approval										#	#	#																
(14) Noise Immune Stethoscope, (MS-C)			#																									
(15) Life Support for Trauma and Transport (LSTAT) (MS-C)							#																					

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 832: <i>Field Medical Systems Engineering Development</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
(1) Ceramic Oxygen Gen Sys (MS-C)	2	2009	2	2009
(2) Rotary Valve Press Swing Oxy (MS-C)	3	2009	3	2009
(3) Battery Powered Iv Fld Warm (MS-C)	3	2009	3	2009
(4) Field Sterilizer (MS-B)	3	2009	3	2009
(6) Ultrasonic Brain Imager (MS-C)	1	2010	1	2010
(7) Freeze-dried Human Plasma - clinical lots	2	2010	3	2011
(8) Red Blood Cell Extend Life - submit for FDA approval	1	2011	3	2011
(14) Noise Immune Stethoscope, (MS-C)	3	2009	3	2009
(15) Life Support for Trauma and Transport (LSTAT) (MS-C)	3	2010	3	2010

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>				PROJECT 834: <i>SOLDIER SYS PROT-ED</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
834: <i>SOLDIER SYS PROT-ED</i>	1.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>This project funds system development and demonstration of preventive medicine materiel, to include devices and medicines, in order to provide protection, sustainment, and enhancement of the physical and psychological capabilities of Soldiers engaged in combat operations across environmental conditions. The focus is on reduction of personnel losses due to preventable disease and non-battle injuries through development of environmental and physiological performance monitors and other preventive medicine countermeasures. In FY10, Project 834 will be consolidated into Project 832 Combat Medical Matl ED. Major contractors/performers are Pacific Technologies, Inc, Redwood, WA; Integrated Medical Systems, Inc, Signal Hill, CA, and the U.S. Army Aeromedical Research Laboratory, Fort Rucker, AL.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Coliform Analyzer: In FY09, transition from project 837, performed operational testing, conduct Milestone C 4Q, and transition to Production and Deployment. In FY09, complete development of LSTAT-Lite, produce test articles, and conduct airworthiness, operational, and environmental testing. In FY10, transition to project 832. In FY09, conduct air worthiness testing on commercial off the shelf and non-developmental medical devices for military field use. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010							1.726	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 834: <i>SOLDIER SYS PROT-ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Accomplishments/Planned Programs Subtotals		1.726	0.000	0.000	0.000	0.000
C. Other Program Funding Summary (\$ in Millions)						
N/A						
D. Acquisition Strategy						
Test and evaluate in-house and commercially developed preventative medicine materiel to meet FDA and EPA regulatory requirements.						
E. Performance Metrics						
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.						

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>				PROJECT 834: <i>SOLDIER SYS PROT-ED</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
No product/contract costs greater than \$1M individually	C	Nothing entered for Activity and Location. Location could not be determined.	3.688	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Congressional Add in Support of Chem-Bio Protection	C	Nothing entered for Activity and Location. Location could not be determined.	4.550	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			8.238	0.000		0.000		0.000		0.000			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
No product/contract costs greater than \$1M individually	C	Nothing entered for Activity and Location. Location could not be determined.	0.163	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.163	0.000		0.000		0.000		0.000			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 834: <i>SOLDIER SYS PROT-ED</i>
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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
No product/contract costs greater than \$1M individually	C	Nothing entered for Activity and Location. Location could not be determined.	1.046	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			1.046	0.000		0.000		0.000		0.000			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 834: <i>SOLDIER SYS PROT-ED</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
No product/contract costs greater than \$1M individually	C	Nothing entered for Activity and Location. Location could not be determined.	1.792	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			1.792	0.000		0.000		0.000		0.000			0.000

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	11.239	0.000		0.000		0.000		0.000			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 834: <i>SOLDIER SYS PROT-ED</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015							
	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				
Coliform Analyzer (MS C)			#																													

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 834: <i>SOLDIER SYS PROT-ED</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Coliform Analyzer (MS C)	3	2009	3	2009

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>				PROJECT 849: <i>INFEC DIS DRUG/VACC ED</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
849: <i>INFEC DIS DRUG/VACC ED</i>	13.236	13.634	12.227	0.000	12.227	8.776	14.643	15.965	16.547	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>This project funds development of candidate medical countermeasures for militarily relevant infectious diseases. These products fall within four major areas: vaccines, drugs, diagnostic kits/devices, and insect control measures to limit exposure and disease transmission. It funds research that supports conclusive human clinical trials for large-scale human efficacy testing, expanded human safety clinical trials, long-term animal studies, and related manufacturing tests. This work, which is jointly performed by military laboratories, civilian contracted pharmaceutical firms and foreign research partners, is directed toward the prevention of disease, early diagnosis, and speeding recovery once diagnosed. Medical products approved for human use must successfully complete a series of clinical trials that are required and regulated by the U.S. Food and Drug Administration (FDA). FDA approval is a mandatory obligation for all military products placed into the hands of medical providers or service members for human use. Development priority is based upon four major factors: (1) the extent of the disease within the Combatant Commands' theater of operations, (2) the clinical severity of the disease, (3) the technical maturity of the proposed solution, and (4) the affordability of the solution (development, production, and sustainment). Malaria, dysentery, hepatitis, and dengue diseases (a severe debilitating disease transmitted by mosquitoes), which are found in Africa Command, Central Command, European Command, Southern Command, and Pacific Command areas are at the top of the infectious diseases requirements list.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #1 In FY 09, conducted Clinical trials, developmental testing, and reviews of malarial/antimalarial vaccines, drugs, diagnostics and insect repellents. For Tafenoquine, conducted enrollment for small human clinical challenge trial exposing volunteers to the malaria parasite (using current FDA-approved malaria drug mefloquine) to gather a baseline of the human body's immune responses to malaria and collect blood samples to be used in the validation of a laboratory assay to be used as a tool to determine the rate of malaria infection. For Combined Camouflage Face Paint (CCFP), completed the Soldier acceptability clinical study, finalized the study report, and conducted a Milestone C for transition to Production and Deployment.						7.536	0.000	0.000	0.000	0.000	

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 849: <i>INFEC DIS DRUG/VACC ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 For FY 10, conducted clinical trials, developmental testing, and reviews of malarial/antimalarial vaccines, drugs, diagnostics and insect repellents. For Tafenoquine, conduct data analysis and prepare a final report on the small human challenge clinical trial, and will begin pre-trial activities for a large-scale safety/efficacy human clinical trial (treatment indication) in a malaria endemic country. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base		0.000	6.459	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 849: <i>INFEC DIS DRUG/VACC ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3 For FY 11, conduc clinical trials, developmental testing, and reviews of malarial/antimalarial vaccines, drugs, diagnostics and insect repellents. For Tafenoquine, will complete pre-trial activities for a large-scale safety/efficacy human clinical trial (treatment indication) in a malaria endemic country. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	4.568	0.000	4.568
Program #4 For FY 09, conducted clinical trials, developmental testing, and appropriate reviews of grouped vaccines, drugs, and diagnostics (Leishmaniasis (a skin-based disease caused by a parasite and transmitted by sand flies), Dengue (a severe debilitating disease caused by a virus and transmitted by a mosquito), and other viral diseases: for Topical Antileishmanial Cream, transitioned from project 808. The overseas human clinical trial activities continued enrollment in the Tunisian large scale (> 300 subjects) pivotal human safety/efficacy treatment trial, began enrollment in three small (<35 subjects) pharmacokinetic (drug metabolism) human trials in France, Peru and Panama, and prepared for a second large scale (> 300 subjects) human trial in Central/South America. For		5.700	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 849: <i>INFEC DIS DRUG/VACC ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>efforts. For Dengue Tetravalent Vaccine, complete subject follow-up and begin the data analysis on the expanded human safety and immunity trial in Puerto Rico, complete the study report on the human safety and immune response trial (adults) in the U.S., complete the study reports (infant, children and adult) on the expanded human safety and immune response trial in Thailand, and complete pre-trial activities for the expanded safety and efficacy trial in children in Thailand. For Hepatitis E vaccine, maintenance of study blood specimens kept under cold storage and monitoring of industry partner's Hepatitis E vaccine development effort.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #6</p> <p>In FY11, for Topical Antileishmanial Cream, will analyze the data and prepare the final report on the Tunisia large scale human safety/efficacy trial, will continue enrollment/follow-up in the second large scale (> 300 subjects) human safety/efficacy trial in Central/South America, and will analyze the data and prepare the final report for the three small scale (<35 subjects) pharmacokinetic (drug metabolism) human trials in France, Peru and Panama. For Pentostam, will monitor progress of industry partner's FDA licensure submission efforts. For DTV vaccine, will complete the study report on the expanded human safety and immunity trial in Puerto Rico and begin the expanded safety and efficacy trial in children in Thailand. For Hepatitis E vaccine will continue</p>		0.000	0.000	7.659	0.000	7.659

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 849: <i>INFECTION DISRUPTION/VACCINATION</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
maintenance of study blood specimens kept under cold storage and monitoring of industry partner's Hepatitis E vaccine development effort. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #7 Small Business Innovative Research/Small Business Technology Transfer Programs. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.382	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>		PROJECT 849: <i>INFEC DIS DRUG/VACC ED</i>				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Accomplishments/Planned Programs Subtotals				13.236	13.634	12.227	0.000	12.227
C. Other Program Funding Summary (\$ in Millions) N/A								
D. Acquisition Strategy Test and evaluate in-house and commercially developed products in government-managed trials to meet FDA requirements and Environmental Protection Agency registration.								
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.								

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>				PROJECT 849: <i>INFEC DIS DRUG/VACC ED</i>					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than \$1M individually	C	Nothing entered for Activity and Location. Location could not be determined.	8.389	3.480		3.116		0.000		3.116	Continuing	Continuing	0
Subtotal			8.389	3.480		3.116		0.000		3.116			0.000
Remarks													
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
No product/contract costs greater than \$1M individually	C	Nothing entered for Activity and Location. Location could not be determined.	0.595	2.783		2.492		0.000		2.492	Continuing	Continuing	0
Subtotal			0.595	2.783		2.492		0.000		2.492			0.000
Remarks													

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>				PROJECT 849: <i>INFEC DIS DRUG/VACC ED</i>					

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
No product/contract costs greater than \$1M individually	C	Nothing entered for Activity and Location. Location could not be determined.	12.265	4.936		4.611		0.000		4.611	Continuing	Continuing	0
Subtotal			12.265	4.936		4.611		0.000		4.611			0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
No product/contract costs greater than \$1M individually	C	Nothing entered for Activity and Location. Location could not be determined.	3.592	2.435		2.008		0.000		2.008	Continuing	Continuing	0
Subtotal			3.592	2.435		2.008		0.000		2.008			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 849: <i>INFEC DIS DRUG/VACC ED</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	24.841	13.634	12.227	0.000	12.227			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 849: <i>INFEC DIS DRUG/VACC ED</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015							
	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				
Combination Camouflage Face Paint/Insect Repellent (MS-C)			#																													

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT 849: <i>INFEC DIS DRUG/VACC ED</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Combination Camouflage Face Paint/Insect Repellent (MS-C)	3	2009	3	2009

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>				PROJECT A11: <i>LSTAT MEDICAL TECHNOLOGY (CA)</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
A11: <i>LSTAT MEDICAL TECHNOLOGY (CA)</i>	2.393	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
The LSTAT is a life support piece of combat medical equipment. It is a litter with imbedded life support equipment, which is capable of sustaining an injured soldier for an extended period of time. This equipment will allow a soldier to be transported while maintaining all medical surveillance and diagnostics continually intact.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							2.393	0.000	0.000	0.000	0.000
Congressional Add											
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals							2.393	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT A11: <i>LSTAT MEDICAL TECHNOLOGY (CA)</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
D. Acquisition Strategy N/A		
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>				PROJECT A11: <i>LSTAT MEDICAL TECHNOLOGY (CA)</i>					
Product Development (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
No product/contract cost greater than \$1M individually	C	Nothing entered for Activity and Location. Location could not be determined.	2.078	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			2.078	0.000		0.000		0.000		0.000			0.000
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2.078	0.000		0.000		0.000		0.000			0.000
Remarks													

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE				PROJECT				
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)			PE 0604807A: Medical Materiel/Medical Biological Defense Equipment - Eng Dev				CS5: MED MATERIEL/MED BIO DEFENSE INITIATIVES (CA)				
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
CS5: MED MATERIEL/MED BIO DEFENSE INITIATIVES (CA)	4.784	8.078	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
Congressional Special Interest funding for medical materiel/medical biological Defense initiatives.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Congressionally directed advanced development research in Advanced Packaging Solutions for Biotherapeutics. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO							1.550	0.000	0.000	0.000	0.000
Program #2 Congressionally directed advanced development research in Lightweight Trauma Module							2.400	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT CS5: <i>MED MATERIEL/MED BIO DEFENSE INITIATIVES (CA)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3 Congressionally directed advanced development research in Rotary Valve Pressure Swing Absorption Oxygen Generator <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.834	0.000	0.000	0.000	0.000
Program #4		0.000	2.390	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT CS5: <i>MED MATERIEL/MED BIO DEFENSE INITIATIVES (CA)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Congressionally directed advanced development research in Plasma Sterilizer.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #5</p> <p>Congressionally directed advanced development research in Nanophotonic biosensor Detection of bioagents and Pathogens</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>		0.000	1.510	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT CS5: <i>MED MATERIEL/MED BIO DEFENSE INITIATIVES (CA)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #6 Congressionally directed advanced development research in Army Portable Oxygen Concentration System <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	1.190	0.000	0.000	0.000
Program #7 Congressionally directed advanced development research project to conduct military applications for Medical Grade Chitosan <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base		0.000	2.988	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604807A: <i>Medical Materiel/Medical Biological Defense Equipment - Eng Dev</i>	PROJECT CS5: <i>MED MATERIEL/MED BIO DEFENSE INITIATIVES (CA)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Accomplishments/Planned Programs Subtotals		4.784	8.078	0.000	0.000	0.000
C. Other Program Funding Summary (\$ in Millions)						
N/A						
D. Acquisition Strategy						
N/A						
E. Performance Metrics						
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.						

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	113.590	72.380	95.577	0.000	95.577	30.460	21.334	29.382	26.002	Continuing	Continuing
016: <i>Close Combat Capabilities ENG DEV</i>	71.691	39.427	59.305	0.000	59.305	10.474	2.945	2.941	1.984	Continuing	Continuing
415: <i>MINE NEUTRAL/DETECTION</i>	39.108	32.953	36.272	0.000	36.272	19.986	18.389	26.441	24.018	Continuing	Continuing
443: <i>APL-A (MIXED SYSTEMS)</i>	2.791	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element (PE) provides for System Development and Demonstration of networked munitions and countermine systems. This PE implements the National Landmine Policy to develop alternatives to the non-self-destructing anti-vehicle and anti-personnel landmine systems. Project 016, Close Combat Capabilities Engineering Development, provides for the development of the anti vehicle mine replacement, Scorpion (previously the Intelligent Munitions System (IMS)) supports the current force in accordance with the landmine policy. Project 415, Mine Neutralization/Detection provides for development of next generation standoff detection capability programs such as the Airborne Counter Explosive Reconnaissance and Targeting System (ACERTS), Ground Vehicle Sub Surface Sensor System (GVS4), and the Advanced Mine Detection System (AMDS). It also supports development of training devices for Military Working Dogs involved in mine/IED detection. Project 443, APL-A (Mixed Systems) provides for a variety of demolition efforts to include development of Magneto-Inductive Remote Activation Munition System (MI-RAMS), and for performance enhancing product improvements to demolitions, grenades, pyrotechnics and non-lethal systems.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>
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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	116.687	82.260	40.481	0.000	40.481
Current President's Budget	113.590	72.380	95.577	0.000	95.577
Total Adjustments	-3.097	-9.880	55.096	0.000	55.096
• Congressional General Reductions		-9.880			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.079	0.000			
• SBIR/STTR Transfer	-3.176	0.000			
• Adjustments to Budget Years	0.000	0.000	55.096	0.000	55.096

Change Summary Explanation

Change Summary Explanation: FY 2010: \$9.5 million Congressional decrement for Mine Neutralization/Detection (Project 415) for FCS program termination.FY 2011: \$40.0 million increase for Close Combat Capabilities ED (Scorpion - Project 016) and \$15.0 million increase for Mine Neutralization/Detection (Project 415).

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>				PROJECT 016: <i>Close Combat Capabilities ENG DEV</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
016: <i>Close Combat Capabilities ENG DEV</i>	71.691	39.427	59.305	0.000	59.305	10.474	2.945	2.941	1.984	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u>											
<p>The Intelligent Munitions System (IMS) Scorpion is an anti-vehicular weapons system that provides highly responsive terrain-shaping and protection capabilities to the unit commander. Trained operators remotely control ground-emplaced munitions via a portable control station out to distances of 1.5 kilometers. The commander integrates IMS Scorpion into his scheme of maneuver and fires in order to attack the enemy's freedom of maneuver while maintaining full friendly freedom of maneuver. He directs the emplacement of the munitions on the ground in building block fashion to achieve the desired effects against mounted threats ranging from single light wheeled vehicles to large armored formations. IMS Scorpion is a full spectrum weapons system effective in offensive, defensive, and stability operations. IMS Scorpion supports the National Landmine Policy by serving as a far superior alternative to the non-self-destructing anti-vehicular mines being removed from the U.S Inventory by 31st December 2010.</p>											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 FY09-FY12: Complete IMS/Scorpion Increment-I system development. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base							21.883	2.896	2.584	0.000	2.584

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>	PROJECT 016: <i>Close Combat Capabilities ENG DEV</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 FY10-FY11 Fabricate hardware for Government Qualification testing <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		17.390	14.277	28.426	0.000	28.426
Program #3 FY09-FY11: Continues to conduct IMS/Scorpion Increment-I modeling and simulation. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		7.765	2.250	0.537	0.000	0.537

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 FY09-FY10: Conduct IMS/Scorpion Increment-I system contractor development testing. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		15.295	7.741	0.000	0.000	0.000
Program #5 FY10-FY11: Conduct IMS/Scorpion Increment-I Government Development and Operational Testing. . <i>FY 2009 Accomplishments:</i> FY 2009		5.940	7.304	24.581	0.000	24.581

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #6 FY09-12 Develop IMS Trainer in coordination with PEO STRI <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		3.418	3.855	3.177	0.000	3.177
Program #7 Small Business Innovative Research/Small Business Technology Transfer Programs		0.000	1.104	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009					
<i>FY 2010 Plans:</i> FY 2010					
<i>FY 2011 Base Plans:</i> FY 2011 Base					
<i>FY 2011 OCO Plans:</i> FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	71.691	39.427	59.305	0.000	59.305

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>PAA E96901 - Intelligent Munitions System</i>	0.000	19.447	10.246	0.000	10.246	93.474	58.840	103.168	48.234	Continuing	Continuing
• Ord. #2: <i>OPA2 B55503 - Intelligent Munitions System (IMS) Remote Control Unit</i>	0.000	9.227	6.603	0.000	6.603	73.667	73.301	69.227	68.338	Continuing	Continuing

D. Acquisition Strategy

The IMS Scorpion is being developed as an evolutionary acquisition program utilizing an incremental approach. This strategy will address all IMS Scorpion capabilities in the requirements document. The first increment supports National Landmine Policy and provides full spectrum weapons system effectiveness in offensive, defensive, and stability operations. In June 2006, a competitive Engineering and Manufacturing Development (EMD) Contract was awarded to Textron Defense Systems of Wilmington, MA. This contract has two Low Rate Initial Production (LRIP) Options which will be exercised in FY12 and FY13. Increment I will serve as the baseline design for the follow-on increments and enabling technology development will be conducted to ensure all requirements can be rapidly achieved with the follow-on increments at the lowest cost possible. Increment II will

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<p>provide a networked munitions reload capability, enhanced ground and airborne sensing, enhanced anti-vehicle and anti-personnel lethal and non-lethal capability, integration of the JTRS radio when it becomes available, common control station, FBCB2/BFT seamless interoperability and remote ground delivery.</p> <p>E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Scorpion System Development & Demonstration	C/CPIF	Textron Defense System Corp. Wilmington, MA	165.455	28.000		28.500		0.000		28.500	Continuing	Continuing	0
Scorpion - MITRE provide C4 support	C	MITRE McLean, VA	3.996	0.500		0.500		0.000		0.500	Continuing	Continuing	0
Subtotal			169.451	28.500		29.000		0.000		29.000			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
IMS Engineering Support	C	ARDEC Picatinny Arsenal NJ	23.737	3.870		5.605		0.000		5.605	Continuing	Continuing	0
Modeling and Simulation	C	NVESD Ft Belvoir VA Location could not be determined.	0.500	0.450		0.500		0.000		0.500	Continuing	Continuing	0
C4ISR and IA	C	CECOM Ft Monmouth NJ	0.519	0.180		0.200		0.000		0.200	Continuing	Continuing	0
Simple Key Loader (SKL)	C	PEO C3T	0.200	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Ft Monmouth NJ											
IMS Engineering Support - 2	C	Various Location could not be determined.	8.062	0.201		0.795		0.000		0.795	Continuing	Continuing	0
IMS - PM HMS	C	Fort Monmouth NJ	4.144	0.000		0.000		0.000		0.000	Continuing	Continuing	0
PEO STRI	C	Orlando FL Location could not be determined.	0.000	0.070		0.250		0.000		0.250	Continuing	Continuing	0
Subtotal			37.162	4.771		7.350		0.000		7.350			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SLAD, AMSAA, AEC, DTC, ERDEC, CRTC, TRTC, NTS, FLW	C	SLAD AMSAA, AEC, DTC, ERDEC, CRTC, TRTC, NTS, FLW	2.869	1.225		6.284		0.000		6.284	Continuing	Continuing	0
DT-G & Live Fire	C		0.000	1.500		3.550		0.000		3.550	Continuing	Continuing	0

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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Yuma Proving Grounds AZ Location could not be determined.											
Risk Reduction, Environmental	C	White Sands Missile Range. MN Location could not be determined.	0.575	0.350		0.950		0.000		0.950	Continuing	Continuing	0
Operational Test	C	OTC Location could not be determined.	0.000	0.100		2.400		0.000		2.400	Continuing	Continuing	0
Live Fire, Limited User Test	C	TMO Location could not be determined.	0.000	0.000		5.656		0.000		5.656	Continuing	Continuing	0
Arena Frag Testing	C	ARDEC Picatinny NJ	0.000	0.000		1.515		0.000		1.515	Continuing	Continuing	0
Subtotal			3.444	3.175		20.355		0.000		20.355			0.000

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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
IMS	C	PM CCS Picatinny Arsenal, NJ	7.207	1.000		2.000		0.000		2.000	Continuing	Continuing	0
IMS - 2	C	Robbins-Goia Alexandria, VA	2.503	0.350		0.000		0.000		0.000	Continuing	Continuing	0
IMS - 3	C	BRTRC Alexandria, VA	1.624	0.450		0.600		0.000		0.600	Continuing	Continuing	0
IMS TSM Spt	C	MTS Alexandria VA	0.500	0.000		0.000		0.000		0.000	Continuing	Continuing	0
LCCE	C	Tecolote Fort Monmouth, NJ	0.000	0.077		0.000		0.000		0.000	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	1.104		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			11.834	2.981		2.600		0.000		2.600			0.000

Remarks

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	221.891	39.427	59.305	0.000	59.305			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
User Jury III	#																											
System Verification Test	#	#																										
IMS Critical Design Review (CDR)		#																										
Risk Reduction Testing			#	#																								
Government Development Testing					#	#	#	#																				
Limited User Test								#																				
Facilitization Decision							#																					
LRIP 1 Contract Award													#															
IMS Milestone C											#																	
IMS Initial Operational Capability																	#											
LRIP 2 Contract Awd																#												
IOT&E																	#											
Full Rate Production Decision																	#											
Full Rate Production Award																		#										
INCREMENT II IMS													#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	
Milestone B													#															

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
User Jury III	1	2009	1	2009
System Verification Test	1	2009	2	2009
IMS Critical Design Review (CDR)	2	2009	2	2009
Risk Reduction Testing	3	2009	4	2009
Government Development Testing	2	2010	1	2011
Limited User Test	1	2011	1	2011
Facilitization Decision	4	2010	4	2010
LRIP 1 Contract Award	1	2012	1	2012
IMS Milestone C	4	2011	4	2011
IMS Initial Operational Capability	3	2013	3	2013
LRIP 2 Contract Awd	1	2013	1	2013
IOT&E	2	2013	2	2013
Full Rate Production Decision	2	2013	2	2013
Full Rate Production Award	1	2014	1	2014
INCREMENT II IMS	1	2012	3	2015
Milestone B	1	2012	1	2012

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
415: <i>MINE NEUTRAL/DETECTION</i>	39.108	32.953	36.272	0.000	36.272	19.986	18.389	26.441	24.018	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This Project provides for Engineering Manufacturing and Development (EMD) for the next generation of technologies to detect, identify and neutralize explosive hazards such as Improvised Explosive Devices (IEDs) and landmines. As a consequence of the Acquisition Decision Memorandum that terminates the Future Combat Systems (FCS) platforms (TUAV and MULE), these next generation programs are undergoing significant changes. Research and development of the next generation capabilities must be preserved because Engineer Mobility requirements still persist while the divestiture from FCS is completed. The next generation of standoff detection capabilities is a Family of Systems (FOS) encompassing handheld, vehicle mounted, small robotic mounted, aerial platform mounted and area clearance systems operating in manned, remotely controlled, semi-autonomous or fully autonomous modes. Continued development of this FOS is necessary to support the Army's Brigade Combat Team Modernization program as well as Overseas Contingency Operations (OCO). The Handheld Standoff Mine Detection System (HSTAMIDS) develops explosive hazard detection systems for individual Soldiers. The Autonomous Mine Detection System (AMDS) will develop explosive hazard detection and neutralize packages on a small robotic platform. The Advanced Mine Detection System (AMDS) that will develop the next generation of explosive hazard detection systems for dismounted Soldiers. The Airborne Counter Explosive Reconnaissance and Targeting System (ACERTS) uses Multi-Spectral Imaging (MSI) and visible/Near Infrared sensors mounted on manned or unmanned aerial vehicles to detect and locate explosive hazards, IEDs and other obstacles that impede maneuver forces. The Ground Vehicle Sub Surface Sensor System (GVS4) is a payload with detection and neutralization equipment mounted and integrated on manned or unmanned platforms to support Army Heavy and Infantry BCTs. This package may include downward looking, forward looking and side-looking radars, articulating crane arms with digging attachments and standoff optical and thermal viewing capabilities. The Husky Mounted Detection System (HMDS) is a development to provide next generation ground penetrating radars (GPR) and semi-autonomous operations for the current fleet of Husky route clearance vehicles. This project will also fund development of training devices for Military Working Dogs involved in explosive hazard detection. This project will provide improved capabilities for area clearance of explosive hazards including remote control kits for the medium mine clearing flails and an Area Mine Proofing System (AMPS) that integrates a proofing mechanism with the prime mover.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 FY09: ACERTS - Completes Critical Design Review.	6.903	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 FY09-FY10: ACERTS - Initiates Spiral 3 Gimbal/Prototype Fabrication		4.700	3.577	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3		7.852	2.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY09-FY10: ACERTS - Complete Spiral 3 Prototype Fabrication AP#5, #6, #7 <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 FY09: ACERTS - Deliver Spiral 2 & 3 Prototypes for Test <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		2.200	2.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #5		1.500	0.750	0.000	0.000	0.000
FY09: ACERTS - Complete all SDD Contract Data Deliverables <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #6		2.000	1.500	0.000	0.000	0.000
FY09-FY10: ACERTS - Prepare MS C IPR Package <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #7 FY09-FY10: ACERTS - Prepare LRIP Procurement Package <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.000	0.750	0.000	0.000	0.000
Program #8 FY10-11: ACERTS Initiates Support to Flight Integration & Test <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	1.100	2.200	0.000	2.200

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #9 FY10-11: ACERTS Initiate Algorithm Detection Enhancement Development <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	2.900	0.000	2.900
Program #10 FY10-11: ACERTS Initiate Algorithm False Alarm Reduction Development <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	4.200	0.000	4.200

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>	PROJECT 415: <i>MINE NEUTRAL/DETECTION</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #11		0.000	1.531	2.045	0.000	2.045
FY10-11: ACERTS Initiate Change Detection Algorithm Development <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #12		0.000	0.908	1.055	0.000	1.055
FY10-11: ACERTS Initiate Next Generation Workstation (NGWS) Development <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>	PROJECT 415: <i>MINE NEUTRAL/DETECTION</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #13 FY09: GSV4 - Continue development of the Mine Neutralization Subsystem <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		3.750	0.000	0.000	0.000	0.000
Program #14 FY09: GSV4 - Complete integration and testing of the Mine Detection Subsystem on surrogate platform <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.850	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>	PROJECT 415: <i>MINE NEUTRAL/DETECTION</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #15 FY09: GSV4 - Complete integration and testing of the Lane Marking subsystem on surrogate platform <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		3.300	0.000	0.000	0.000	0.000
Program #16 FY09: GSV4 - Complete Integration and testing of the GSV4 Computer Subsystem on surrogate platform <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		2.950	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>	PROJECT 415: <i>MINE NEUTRAL/DETECTION</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #17 FY09: GSV4 - Complete Test Review for Final Prototype and conduct Contractor Verification Testing in the Systems Integration Laboratory and on the Surrogate Test Vehicle. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.103	0.000	0.000	0.000	0.000
Program #18 FY10: GSV4 Product Development <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base		0.000	11.249	16.231	0.000	16.231

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>	PROJECT 415: <i>MINE NEUTRAL/DETECTION</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #19 FY10: GSV4 Program Support <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	3.577	4.556	0.000	4.556
Program #20 FY10: GSV4 Test and Evaluation <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		0.000	0.435	1.455	0.000	1.455

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>		PROJECT 415: <i>MINE NEUTRAL/DETECTION</i>				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO								
Program #21 FY10: GSV4 Program Management <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO				0.000	2.653	1.630	0.000	1.630
Program #22 Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009				0.000	0.923	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>			PROJECT 415: <i>MINE NEUTRAL/DETECTION</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						39.108	32.953	36.272	0.000	36.272	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>PE 0603619A, Project 606, Countermine/Barrier Advanced Dev</i>	13.789	17.445	15.596	0.000	15.596	19.293	19.724	17.433	17.901	Continuing	Continuing
• Ord. #2: <i>OPA 3, R68102, GSV4</i>	197.885	50.064	35.002	0.000	35.002	70.868	28.767	55.215	39.650	Continuing	Continuing
• Ord. #3: <i>OPA 3, S11500, ACERTS</i>	12.735	0.199	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• Ord. #4: <i>OPA 3, MA7700, Countermine Equipment, Less than \$5 Million</i>	3.183	3.468	3.655	0.000	3.655	3.167	3.153	3.269	3.352	Continuing	Continuing
D. Acquisition Strategy											
<p>The ACERTS competitively selected Prime System contractor was awarded Cost Plus Incentive Fee (CPIF) System Development and Demonstration (SDD) in FY03 after MDA Milestone B approval. Milestone C is scheduled for 4QFY10. GSV4 entered the SDD Phase in June 2004 with MDA approval of MS B and competitively awarded a SDD Cost Plus Fixed Fee (CPFF) contract. Remaining effort includes completion of product development and integration with a surrogate platform and a technical demonstration of capabilities on surrogate platform in FY12.</p>											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
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E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>	PROJECT 415: <i>MINE NEUTRAL/DETECTION</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
GSV4	C/CPFF	BAE Systems Austin, TX	68.470	12.673		16.482		0.000		16.482	Continuing	Continuing	17.869
ACERTS	C/CPIF	Northrop Grumman Location could not be determined.	49.740	11.741		1.500		0.000		1.500	Continuing	Continuing	0
Subtotal			118.210	24.414		17.982		0.000		17.982			17.869

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
GSV4	C	Various OGAs Location could not be determined.	2.763	1.510		1.651		0.000		1.651	Continuing	Continuing	0
GSV4 Engineering Support	C	NVESD/CECOM Ft Belvoir, VA	5.469	1.692		2.705		0.000		2.705	Continuing	Continuing	0
GSV4 Support	C	Various Contractors Location could not be determined.	0.970	0.375		0.200		0.000		0.200	Continuing	Continuing	0
ACERTS Engineering Support	C	NVESD/CECOM Fort Belvoir, VA	4.082	1.243		3.887		0.000		3.887	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>	PROJECT 415: <i>MINE NEUTRAL/DETECTION</i>
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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
ACERTS (Change Detection)	C	NVESD/CECOM Fort Belvoir, VA	0.000	0.000		2.000		0.000		2.000	Continuing	Continuing	0
ACERTS Support	C/Various	Various Location could not be determined.	0.283	0.500		1.500		0.000		1.500	Continuing	Continuing	0
Subtotal			13.567	5.320		11.943		0.000		11.943			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
GSV4 Test Support	C	ATEC Alexandria, VA	1.749	0.435		1.455		0.000		1.455	Continuing	Continuing	0
ACERTS	C	ATEC Alexandria, VA	2.300	0.050		1.500		0.000		1.500	Continuing	Continuing	0
Subtotal			4.049	0.485		2.955		0.000		2.955			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>				PROJECT 415: <i>MINE NEUTRAL/DETECTION</i>					

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management	C	PM-CCS Picatinny Arsenal, NJ	3.516	0.853		1.908		0.000		1.908	Continuing	Continuing	0
Program Management Contractor Support	C	USFALCON Location could not be determined.	5.650	0.958		1.484		0.000		1.484	Continuing	Continuing	0
SIBR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.923		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			9.166	2.734		3.392		0.000		3.392			0.000

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	144.992	32.953		36.272		0.000		36.272			17.869

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>	PROJECT 415: <i>MINE NEUTRAL/DETECTION</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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 - Neutralization			#																									
Critical Design Review - Neutralization							#																					
Test Readiness Review							#																					
Contracting Testing			#	#	#	#	#																					
Delivery of Prototype												#																
Test Readiness Review - 2										#																		
Critical Design Review							#																					
Milestone C/LRIP										#																		
Integration and Testing on Air Platform(s)												#	#	#	#	#	#	#										
Full Rate Production Decision																												
Milestone B																												
Preliminary Design Review																												
Test Readiness Review - 3																												
Critical Design Review - 2																												
Contractor Testing																												
Operational Testing																												
Milestone C																											#	

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604808A: <i>Landmine Warfare/Barrier - Eng Dev</i>	PROJECT 415: <i>MINE NEUTRAL/DETECTION</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Preliminary Design Review - Neutralization	3	2009	3	2009
Critical Design Review - Neutralization	2	2010	2	2010
Test Readiness Review	2	2010	2	2010
Contracting Testing	3	2009	3	2010
Delivery of Prototype	3	2011	3	2011
Test Readiness Review - 2	4	2010	4	2010
Critical Design Review	1	2010	1	2010
Milestone C/LRIP	3	2010	3	2010
Integration and Testing on Air Platform(s)	1	2011	3	2012
Full Rate Production Decision	2	2013	2	2013
Milestone B	3	2012	3	2012
Preliminary Design Review	4	2012	4	2012
Test Readiness Review - 3	1	2013	1	2013
Critical Design Review - 2	2	2013	2	2013
Contractor Testing	1	2014	1	2014
Operational Testing	2	2014	2	2014
Milestone C	4	2015	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
443: <i>APL-A (MIXED SYSTEMS)</i>	2.791	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>This project was to provide alternatives to the anti-personnel submunitions used within mixed anti-tank (AT)/anti-personnel (AP)munition systems or the entire mixed AT/AP system. Alternative Beginning in FY 05, funding for this effort has transitioned to Project 016 within this Program Element.This line subsequently has been used for Congressional Adds for the Magneto Induction - Remote Activated Munition System (MI-RAMS).</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							1.900	0.000	0.000	0.000	0.000
MI RAMS Development and prototype assembly											
<i>FY 2009 Accomplishments:</i>											
FY 2009											
<i>FY 2010 Plans:</i>											
FY 2010											
<i>FY 2011 Base Plans:</i>											
FY 2011 Base											
<i>FY 2011 OCO Plans:</i>											
FY 2011 OCO											
Program #2							0.814	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Provide general engineering support. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3 Program Management Support <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.077	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010								
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B. Accomplishments/Planned Program (\$ in Millions)											
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total					
Program #4		0.000	0.000	0.000	0.000	0.000					
Small Business Innovative Research/Small Business Technology Transfer Programs											
<i>FY 2009 Accomplishments:</i>											
FY 2009											
<i>FY 2010 Plans:</i>											
FY 2010											
<i>FY 2011 Base Plans:</i>											
FY 2011 Base											
<i>FY 2011 OCO Plans:</i>											
FY 2011 OCO											
Accomplishments/Planned Programs Subtotals		2.791	0.000	0.000	0.000	0.000					
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>MA9200 Explosive Ordnance Disposal Equipment</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	3.200
D. Acquisition Strategy											
The Magneto Induction - Remote Activated Munition System (MI-RAMS) program has been a Congressionally funded program. The acquisition has been sole source to Ultra Electronics, Magnito Induction Systems.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604814A: <i>Artillery Munitions - EMD</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	70.008	42.230	26.371	0.000	26.371	7.954	2.364	2.413	2.462	Continuing	Continuing
708: <i>XM982 PROJECTILE</i>	70.008	42.230	26.371	0.000	26.371	7.954	2.364	2.413	2.462	Continuing	Continuing

A. Mission Description and Budget Item Justification

Excalibur provides improved fire support through a Precision Guided Extended Range family of munitions with greatly increased accuracy and offer significant reduction in collateral damage in most of all urban environments. The Excalibur is interoperable with the M777A2 Lightweight 155mm howitzer (LW155), and the M109A6 (Paladin) howitzer. Excalibur will provide a 33% range increase over current Rocket Assisted Projectiles, with a 10 meter accuracy (Circular Error Probable) at all ranges. Excalibur is an international program, teamed with the Kingdom of Sweden (KoS), who contributes resources towards the development in accordance with an established Project Agreement. The Excalibur program is using an incremental development approach to provide a combat capability to the Soldier as quickly as possible, and to deliver advanced capabilities at lower costs as technology matures. Increment Ia-1 has been fielded to units in Iraq and Afghanistan in response to urgent need requests in support of Operation Iraqi Freedom and Enduring Freedom (OIF/OEF). Production deliveries continue to support the Warfighters. Increment Ia-2 will be delivered in FY10 and will greatly increase range to LW155, and Paladin. Increment Ib is a follow on Artillery Precision development effort which will provide further performance improvements while significantly lowering unit costs.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	79.134	42.452	17.477	0.000	17.477
Current President's Budget	70.008	42.230	26.371	0.000	26.371
Total Adjustments	-9.126	-0.222	8.894	0.000	8.894
• Congressional General Reductions		-0.222			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-7.000	0.000			
• SBIR/STTR Transfer	-2.126	0.000			
• Adjustments to Budget Years	0.000	0.000	8.894	0.000	8.894

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604814A: <i>Artillery Munitions - EMD</i>	
<p><u>Change Summary Explanation</u> Change Summary Explanation: FY 2009: \$7.0 million reprogrammed to PE 0604802A Project S36 - Precision Guidance Kit (PFK). FY 2011: \$8.894 million increase for continuing development efforts and test hardware to conduct/support test and evaluation efforts.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604814A: <i>Artillery Munitions - EMD</i>	PROJECT 708: <i>XM982 PROJECTILE</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
708: <i>XM982 PROJECTILE</i>	70.008	42.230	26.371	0.000	26.371	7.954	2.364	2.413	2.462	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Excalibur provides improved fire support through a Precision Guided Extended Range family of munitions with greatly increased accuracy and offer significant reduction in collateral damage in most of all urban environments. The Excalibur is interoperable with the M777A2 Lightweight 155mm howitzer (LW155), and the M109A6 (Paladin) howitzer. Excalibur will provide a 33% range increase over current Rocket Assisted Projectiles, with a 10 meter accuracy (Circular Error Probable) at all ranges. Excalibur is an international program, teamed with the Kingdom of Sweden (KoS), who contributes resources towards the development in accordance with an established Project Agreement. The Excalibur program is using an incremental development approach to provide a combat capability to the Soldier as quickly as possible, and to deliver advanced capabilities at lower costs as technology matures. Increment Ia-1 has been fielded to units in Iraq and Afghanistan in response to urgent need requests in support of Operation Iraqi Freedom and Enduring Freedom (OIF/OEF). Production deliveries continue to support the Warfighters. Increment Ia-2 will be delivered in FY10 and will greatly increase range to LW155, and Paladin. Increment Ib is a follow on Artillery Precision development effort which will provide further performance improvements while significantly lowering unit costs.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Conduct Systems and Specialty Engineering activities to include specification development, Cost As Independent Variable (CAIV), program metric tracking, and conduct modeling of lethality, effectiveness, and aeroballistics, and reliability. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010	10.826	1.300	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604814A: <i>Artillery Munitions - EMD</i>	PROJECT 708: <i>XM982 PROJECTILE</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Procured development test hardware and conducted test and evaluation. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		2.314	0.000	0.000	0.000	0.000
Program #3 Engineering support for Excalibur platform integration to include development and qualification of the Enhanced Platform Integration Kit and Portable Inductive Artillery Fuze Setter (EPIAFS), Portable Excalibur Fire Control System (PEFCS), Advanced Field Artillery Tactical Direction System (AFATDS), and digital howitzer integration.		0.250	0.200	0.100	0.000	0.100

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604814A: <i>Artillery Munitions - EMD</i>	PROJECT 708: <i>XM982 PROJECTILE</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Conduct Independent Operational Test & Evaluation (IOT&E) efforts for Increment Ia. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		4.506	1.340	0.000	0.000	0.000
Program #5		45.633	31.507	19.139	0.000	19.139

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Initiate and implement Increment Ib the follow on Artillery Development efforts. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #6 Procure development test hardware and conduct test and evaluation. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		5.282	6.700	7.132	0.000	7.132

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #7 Advanced Cargo Projectile Technology (Congressional add not associated with Excalibur). <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.197	0.000	0.000	0.000	0.000
Program #8 Small Business Innovative Research/Small Business Technology Transfer Programs. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	1.183	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604814A: <i>Artillery Munitions - EMD</i>	PROJECT 708: <i>XM982 PROJECTILE</i>
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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Accomplishments/Planned Programs Subtotals	70.008	42.230	26.371	0.000	26.371

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Ord. #1: <i>Procurement Ammunition</i> <i>Army: Proj 155mm Extended Range:</i> <i>XM982-U Excalibur: E80103</i>	69.119	114.300	62.114	0.000	62.114	84.109	99.917	152.449	153.389	641.199	1,376.596
• Ord. #2: <i>OPA2: Enhanced Portable</i> <i>Inductive Fuze Setter (E-PIAFS):</i> <i>AD3260</i>	2.571	3.074	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	5.645

D. Acquisition Strategy
Excalibur is a family of Precision Guided Extended Range Munitions. A competitive source selection awarded an Engineering and Manufacturing Development (EMD) contract for the initial increment, with options for Low Rate Initial Production (LRIP) quantities. In coordination with the Army Acquisition Executive, the Army implemented an incremental development process that provided for an early fielding capability in FY07 in response to an Urgent Needs Statement in support of OIF/OEF. Increment Ib was solicited as a full and open competition and awarded to two contractors. Increment Ib strategy is to conduct a demonstration phase followed by a shoot off and down select to a single contractor for qualification and production.

E. Performance Metrics
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604814A: <i>Artillery Munitions - EMD</i>				PROJECT 708: <i>XM982 PROJECTILE</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Excalibur Increment Ia Development	C/CPIF	Raytheon Missile System Tucson, AZ	428.187	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Fee on Excalibur Development Contract	C	Raytheon Missile System Tucson, AZ	35.379	0.000		0.000		0.000		0.000	Continuing	Continuing	0
TCM Merger Assessment	C/FP	Bofors Defence Karlskoga, Sweden	14.430	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Platform Integration-Systems Contractor	C	ARES Annapolis, MD	0.840	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Misc Support Contracts	C/Various	Various Location could not be determined.	3.090	0.686		0.600		0.000		0.600	Continuing	Continuing	0
Platform Integration/Fire Control - AFATDS	SS/CPIF	Raytheon AFATDS Ft Wayne, IN	4.945	0.100		0.050		0.000		0.050	Continuing	Continuing	0
Platform Integration Firing Tables Development	C	ARDEC Firing Tables Branch, Picatinny, NJ/Aberdeen, MD	2.124	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Platform Integration LW155 M77A2	C/CPIF	BAE Burlington Vt.	11.989	0.000		0.000		0.000		0.000	Continuing	Continuing	0
SS-SFM Test Projectiles	C/FFP	Various Location could not be determined.	10.815	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Increment Ib Development	C/Various	TBS	21.000	26.729		15.873		0.000		15.873	Continuing	Continuing	0

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Location could not be determined.											
Govt Support Platform Integration Development	C	ARDEC Picatinny, NJ	6.775	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Platform Integration & EPIAFS Software Development	C	Navy Surface Warfare Center, MD	0.230	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Follow on Precision Artillery risk reduction	C/CPFF	Picatinny NJ	3.234	0.000		0.000		0.000		0.000	Continuing	Continuing	0
ARDEC fuze technology maturation	C	Picatinny NJ	2.500	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Advanced Cargo Projectile Technology	C	DMEA McClellan, CA	1.396	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			546.934	27.515		16.523		0.000		16.523			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management	C	PM Excalibur Picatinny, NJ	25.173	0.568		0.551		0.000		0.551	Continuing	Continuing	0

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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Support-Excalibur XM982	C	ARDEC Picatinny, NJ	58.833	1.400		1.445		0.000		1.445	Continuing	Continuing	0
Government TCM Support	C	ARDEC Picatinny, NJ	0.910	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Government Support- Ft Sill	C	Ft. Sill OK	3.724	0.120		0.120		0.000		0.120	Continuing	Continuing	0
Paladin Platform Integration	C	PM Paladin Picatinny NJ	0.930	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Modeling and Structural Development	C	Army Research Labs Adelphi, MD	9.034	0.104		0.100		0.000		0.100	Continuing	Continuing	0
Government Support Platform Integration	C	ARDEC Picatinny, NJ	6.241	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Milestone Support	SS/FP	Camber Alexandria, VA	1.540	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Technical Spt Contract for Platform Integration	SS/FP	Camber Dallas, TX	0.821	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Fire Control development support	C	Ft Monmouth NJ/Ft Sill, OK	1.008	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Miscellaneous Support	C	Various Location could not be determined.	4.150	0.800		0.500		0.000		0.500	Continuing	Continuing	0
Government Engineering Support for Precision Artillery Risk Reduction	C	ARDEC Picatinny NJ	0.000	2.500		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Platform Integration Software Support	C	Navy Surface Warfare Center MD	0.390	0.000		0.000		0.000		0.000	Continuing	Continuing	0
PM CAS SS-SFM	C	PM CAS Picatinny, NJ	0.700	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Government Support - SS-SFM	C	ARDEC Picatinny, NJ	1.625	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Increment Ia Engineering Services	C/CPFF	DRS Eatontown, NJ	12.850	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Increment Ia Engineering Services - 2	C	DMEA McClellan, CA	1.500	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Government Support-Advanced Cargo Projectile Technology	C	ARDEC Picatinny NJ	0.150	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			129.579	5.492		2.716		0.000		2.716			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
TECOM Test Range	C	YPG	19.843	1.870		1.235		0.000		1.235	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Yuma, AZ											
Test Instrumentation and Analysis	C	Army Research Labs Adelphi, MD	3.527	0.276		0.150		0.000		0.150	Continuing	Continuing	0
Telemetry Support	SS	Physical Science Laboratories (PSL) Las Cruces, NM	2.996	0.300		0.200		0.000		0.200	Continuing	Continuing	0
Telemetry Support - 2	C	ARDEC Picatinny, NJ	18.222	0.300		0.250		0.000		0.250	Continuing	Continuing	0
Telemetry Cryptographic Support & Anti-Jam Support	C	Ft. Huachuca AZ	0.555	0.050		0.050		0.000		0.050	Continuing	Continuing	0
Tri-Service Software Assessment	C	OSD Wash, DC	0.061	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Operational Test Support & AEC	C	ATEC Alexandria, VA	8.819	0.104		0.100		0.000		0.100	Continuing	Continuing	0
Target Replacement, Definition, Maintenance and Repair and Threat Assessment	C	Target Management Office Huntsville, AL.	1.250	0.050		0.100		0.000		0.100	Continuing	Continuing	0
ARDEC Testing	C	ARDEC Picatinny, NJ	2.354	0.250		0.250		0.000		0.250	Continuing	Continuing	0
Test Gun Equipment	C	Watervliet Arsenal NY	3.972	0.000		0.000		0.000		0.000	Continuing	Continuing	0
SS-SFM Testing	C	Yuma Proving Grounds	2.300	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Yuma, AZ											
Live Fire Test and Evaluation	C	ARL Aberdeen, MD	0.496	0.000		0.000		0.000		0.000	Continuing	Continuing	0
TECOM Test Range - 2	C	White Sands Missile Range NM	2.421	3.880		4.797		0.000		4.797	Continuing	Continuing	0
Test Hardware	SS/CPFF	SAVIT Parsippany, NJ	0.450	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Operational Test Support	C	Ft. Sill Ok	0.461	0.960		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			67.727	8.040		7.132		0.000		7.132			0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	1.183		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604814A: <i>Artillery Munitions - EMD</i>	PROJECT 708: <i>XM982 PROJECTILE</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	1.183		0.000		0.000		0.000			0.000

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
		Cost	Award Date	Cost	Award Date	Cost	Award Date				
	744.240	42.230		26.371		0.000		26.371			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604814A: <i>Artillery Munitions - EMD</i>	PROJECT 708: <i>XM982 PROJECTILE</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Increment Ia-2 Prod. Deliveries							#	#	#	#	#	#	#	#	#	#	#	#										
Increment Ia-2 IOT&E					#																							
Increment Ia-2 IOC							#																					
Increment Ib Downselect Decision						#																						
Increment Ib Milestone C											#																	
Increment Ib Production Award													#															
Increment Ib Production Deliveries																	#	#	#	#	#	#	#	#	#	#	#	#
Increment Ib First Article Testing																	#											

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604814A: <i>Artillery Munitions - EMD</i>	PROJECT 708: <i>XM982 PROJECTILE</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Increment Ia-2 Prod. Deliveries	3	2010	2	2013
Increment Ia-2 IOT&E	1	2010	1	2010
Increment Ia-2 IOC	3	2010	3	2010
Increment Ib Downselect Decision	2	2010	2	2010
Increment Ib Milestone C	3	2011	3	2011
Increment Ib Production Award	1	2012	1	2012
Increment Ib Production Deliveries	2	2013	4	2015
Increment Ib First Article Testing	1	2013	1	2013

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Exhibit R-5, RDT&E Termination Liability: PB 2011 Army							DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604814A: <i>Artillery Munitions - EMD</i>			PROJECT 708: <i>XM982 PROJECTILE</i>	
Cost (\$ in Millions)	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	
Program Termination Liability	0.000	0.000	20.146	13.465	4.704	0.000	0.000	

Notes

Increment Ia XM982 Excalibur Engineering and Manufacturing Development (EMD) contract completed. Increment Ib EMD contract awarded September 2008 as a Firm Fixed Price.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	8.967	10.018	29.884	0.000	29.884	15.041	0.000	12.500	12.500	Continuing	Continuing
482: <i>Ground Combat Identification</i>	8.967	10.018	29.884	0.000	29.884	15.041	0.000	12.500	12.500	Continuing	Continuing

A. Mission Description and Budget Item Justification

Combat Identification (CID) is a family of systems to maximize overall combat effectiveness by minimizing and mitigating incidents of fratricide and maximizing the situational understanding of the trigger puller across a broad spectrum of Joint and Coalition combat operations. This is accomplished by the identification of friends, enemies/foes, and neutrals in the Joint and Coalition battle space. Based on program prioritization from the Deputy Secretary of Defense and the Deputy's Advisory Working Group (DAWG), the Joint Cooperative Target Identification-Ground (JCTI-G) efforts have been refocused to address fratricide incidents involving Fires-on-Dismounts (FoD) and Air to Ground (A-G) fires. This is a Joint effort with the United States Marine Corps that will be equitably allocated in support of Fires-on-Dismount development. This program has been designated Special Interest by the Defense Acquisition Executive. FY11 supports JCTI-G program efforts for FoD and A-G. These efforts assume a Materiel Development Decision (MDD) and initiation of an Analysis of Alternatives (AoA) in 2QFY10 that results in a Materiel Solution decision by the end of 4QFY10. The results of the AoA will be used to adjust the program schedule as required and inform the Army funding resource requirements for FY13. Milestone (MS) A decisions for entry into Technology Development acquisition phase for both FoD and A-G efforts are assumed to occur in 4QFY11. Efforts will focus the execution of the MS decision process to include program and acquisition document preparation. Also, efforts will include technical and acquisition planning for contract solicitation such as requirements analyses and the generation of an Acquisition Requirements Package. In addition, funding in FY11 will continue with the technical maturation efforts associated with the FoD requirement.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>
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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	10.873	20.070	34.520	0.000	34.520
Current President's Budget	8.967	10.018	29.884	0.000	29.884
Total Adjustments	-1.906	-10.052	-4.636	0.000	-4.636
• Congressional General Reductions		-10.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-1.906	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Adjustments to Budget Years	0.000	-0.052	-4.636	0.000	-4.636

Change Summary Explanation

Program Summary Explanation: FY09, FY10 and FY11 funding realigned to higher priority requirements.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>				PROJECT 482: <i>Ground Combat Identification</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
482: <i>Ground Combat Identification</i>	8.967	10.018	29.884	0.000	29.884	15.041	0.000	12.500	12.500	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u>											
<p>A. Mission Description and Budget Item Justification: Combat Identification (CID) is a family of systems to maximize overall the combat effectiveness of forces by minimizing and mitigating incidents of fratricide and maximizing the situational understanding of the trigger puller across the broad spectrum of Joint and Coalition combat operations. This is accomplished by the identification of friends, enemies/foes and neutrals in the Joint and Coalition battle space. Based on program prioritization direction from the Deputy Secretary of Defense and the Deputy's Advisory Working Group (DAWG), the Joint Cooperative Target Identification - Ground (JCTI-G) efforts have been refocused to address fratricide incidents involving Fires-on-Dismounts (FoD) and Air to Ground (A-G) fires. This is a Joint effort with the United States Marine Corps that will be equitably allocated in support of Fires-on-Dismounts development. This program has been designated Special Interest by the Defense Acquisition Executive.FY11 supports JCTI-G program efforts for FoD and A-G. These efforts assume a Materiel Development Decision (MDD) and initiation of an Analysis of Alternatives (AoA) in 2QFY10 that results in a Materiel Solution by the end of 4QFY10. The results of the AoA will be used to adjust the program schedule as required and inform Army funding resource requirements for FY13. Milestone (MS) A decisions for entry into Technology Development acquisition phase for both FoD and A-G efforts are assumed to occur in 4QFY11. Efforts will focus the execution of the MS decision process to include program and acquisition document preparation. Also, efforts will include technical and acquisition planning for contract solicitation such as requirements analyses and the generation of an Acquisition Requirements Package. In addition, funding in FY11 will continue with the technical maturation efforts associated with the FoD requirement.</p>											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							1.000	0.000	0.000	0.000	0.000
Preparation for JCTI-G, Milestone (MS)											
<i>FY 2009 Accomplishments:</i>											
FY 2009											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>	PROJECT 482: <i>Ground Combat Identification</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Pre JCTI-G, Technology Development (TD) Activity <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.000	0.000	0.000	0.000	0.000
Program #3 JCTI-G, Risk Reduction Effort		4.589	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>	PROJECT 482: <i>Ground Combat Identification</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Execute JCTI-G, TD		1.073	0.000	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #5		1.305	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>	PROJECT 482: <i>Ground Combat Identification</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Air-to-Ground Risk Reduction Efforts						
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #6		0.000	2.738	0.000	0.000	0.000
Alternatives of Analysis (AOA) Conduct						
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>	PROJECT 482: <i>Ground Combat Identification</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #7 Preparation for JCTI-G, Milestone (MS) A <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	2.000	0.000	0.000	0.000
Program #8 Preparation for JCTI-G, Milestone (MS) A <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	10.000	0.000	10.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>	PROJECT 482: <i>Ground Combat Identification</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #9		0.000	5.000	0.000	0.000	0.000
Fires on Dismounts Maturation						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						
Program #10		0.000	0.000	14.500	0.000	14.500
Fires on Dismounts Maturation						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>	PROJECT 482: <i>Ground Combat Identification</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #11 Soldier Non Cooperative Target Identification <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	5.384	0.000	5.384
Program #12 SBIR/STTR <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.280	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>			PROJECT 482: <i>Ground Combat Identification</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Accomplishments/Planned Programs Subtotals						8.967	10.018	29.884	0.000	29.884	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>OPA2, SSN BA0510 Combat Identification Program</i>	0.000	0.000	0.000	0.000	0.000	85.014	93.158	0.000	0.000	Continuing	Continuing
• Ord. #2: <i>RDTE, USMC MCPC 11309</i>	0.000	0.000	20.374	0.000	20.374	21.531	15.033	14.968	14.999	Continuing	Continuing
D. Acquisition Strategy											
<p>Acquisition Strategy: Modified in accordance with the 2 Dec 2008 revision of the DoD Acquisition System (DoD Instruction 5000.2) and the direction received from the Deputy Secretary of Defense and the Deputy's Advisory Working Group (DAWG) meeting on 22 Sep 2009. The Joint Cooperative Target Identification - Ground (JCTI-G) has been refocused to prioritize efforts to address fratricide incidents involving Fires-on-Dismounts (FoD) as program Increment 1 and Air to Ground (A-G) fires as Increment 2. The JCTI-G program is a Joint Army-USMC effort with current plans for a Materiel Development Decision (MDD) in 2QFY10 followed the Materiel Solution Phase that will provide an evaluation and assessment of the Analysis of Alternatives (AoA). The AoA assessment will result in a MS A decision in FY11, the generation of an Acquisition Requirements Package (ARP), and solicitation for competitively awarded Technology Development (TD) contracts in FY12. Two (or more) TD cost-plus type contracts will be awarded to competing teams to develop system (or key system elements) prototypes consistent with the Joint Capabilities Development Document requirements for FoD and A-G increments. The TD phase will proceed to a system (or key system element) Preliminary Design Review (PDR). A successful PDR along with an approved CDD will be among the criteria supporting a MS B and entry into Engineering & Manufacturing Development (EMD) phase. The result of EMD will be a baseline system configuration for production. This strategy will require the support of other Government agencies.</p>											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>				PROJECT 482: <i>Ground Combat Identification</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
B-Kit Development	C/CPAF	TRW CA	69.765	0.000		0.000		0.000		0.000	0	69.765	69.765
A-Kit Development (Abrams)	C/CPFF	GDLS MI	10.909	0.000		0.000		0.000		0.000	0	10.909	10.909
A-Kit Development (Bradley)	C/CPFF	UDLP CA	3.364	0.000		0.000		0.000		0.000	0	3.364	3.364
A-Kit Development (Various)	C	E&S TRW, UDLP, AM General, Raytheon.	5.836	0.000		0.000		0.000		0.000	0	5.836	5.836
Air-to-Ground Efforts	C	I2WD Ft. Monmouth NJ	2.206	0.000		0.000		0.000		0.000	0	2.206	0
Air-to-Ground Solution Efforts	C	Sandia National Labs/DOE Albuquerque NM	0.550	0.000		0.000		0.000		0.000	0	.550	0
Combat Identification International Efforts	C/CPFF	Raytheon Ft. Wayne IN	0.415	0.000		0.000		0.000		0.000	0	.415	0
BTID Cost Reduction Efforts	C/FFP	Raytheon Ft. Wayne IN	6.745	0.000		0.000		0.000		0.000	0	6.745	0
RF Tags Program Efforts	C	I2WD Ft. Monmouth NJ	2.023	0.000		0.000		0.000		0.000	Continuing	Continuing	0
RF Tag Prototypes	C/CPFF	BAE Nashua	0.800	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>	PROJECT 482: <i>Ground Combat Identification</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		NH											
JCTI-G, MS B Documentation	C	CE LCMC/Support Contractors Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
JCTI-G, Risk Reduction	C/CPFF	Raytheon Ft. Wayne, IN	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
JCTI-G, Risk Reduction	C/CPFF	SRC Syracuse, NY	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
JCTI-G, Risk Reduction - 2	C/CPFF	BAE Greenlawn, NJ	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
AOA Conduct	C	TRADOC Location could not be determined.	0.000	2.790		0.000		0.000		0.000	Continuing	Continuing	0
Soldier Non Cooperative Target Identification	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		5.384		0.000		5.384	Continuing	Continuing	0
Fires on Dismounts Technical Maturation	C	CERDEC Ft. Monmouth, NJ	0.000	5.000		14.500		0.000		14.500	Continuing	Continuing	0
Air-to-Ground MS B Preparation	C	CE LCMC NJ	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			102.613	7.790		19.884		0.000		19.884			89.874

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>				PROJECT 482: <i>Ground Combat Identification</i>					

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Matrix Support	C	CE LCMC I2WD, Fort Monmouth NJ	8.467	0.428		1.686		0.000		1.686	Continuing	Continuing	0
System Eng/Tech Assistance	C	Lockheed Martin R4 Eatontown,NJ; CACI, Chantilly, VA; BAH,Mclean, Va	7.838	0.802		3.790		0.000		3.790	Continuing	Continuing	0
Test Planning	C	CERDEC Fort Monmouth NJ	0.437	0.000		1.250		0.000		1.250	Continuing	Continuing	0
Technical Support	C	Sandia National Laboratories/IDA Albuquerque NM	0.570	0.000		1.750		0.000		1.750	Continuing	Continuing	0
Subtotal			17.312	1.230		8.476		0.000		8.476			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>				PROJECT 482: <i>Ground Combat Identification</i>					

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Developmental Test, Log Demo, SCD, IOTE	C	ATEC TBD	3.513	0.000		0.000		0.000		0.000	0	3.513	0
Limited User Test	C	ATEC YPG, AZ	0.673	0.000		0.000		0.000		0.000	0	.673	0
ASCIET	C	Misc. Location could not be determined.	6.651	0.000		0.000		0.000		0.000	0	6.651	0
Subtotal			10.837	0.000		0.000		0.000		0.000	0.000	10.837	0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management	C	PM NavSys/PM TIMS Ft. Monmouth, NJ	6.335	1.050		1.524		0.000		1.524	Continuing	Continuing	0
Subtotal			6.335	1.050		1.524		0.000		1.524			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>	PROJECT 482: <i>Ground Combat Identification</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	137.097	10.070	29.884	0.000	29.884			89.874

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>	PROJECT 482: <i>Ground Combat Identification</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Materiel Development Decision				#																								
JCTI-G Materiel Solution Phase				#	#	#	#	#	#	#	#	#																
JCTI-G Milestone A												#																
JCTI-G, Request for Proposal Prep									#	#	#	#																
JCTI-G Source Selection												#	#	#														
JCTI-G Fires on Dismount Maturation					#	#	#	#	#	#	#	#	#	#														
JCTI-G Technology Development													#	#	#	#	#	#	#	#								
JCTI-G Milestone B																					#							
JCTI-G Engineering & Manufacturing Development																					#	#	#	#	#	#		

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604817A: <i>Combat Identification</i>	PROJECT 482: <i>Ground Combat Identification</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Materiel Development Decision	1	2010	1	2010
JCTI-G Materiel Solution Phase	1	2010	3	2011
JCTI-G Milestone A	3	2011	3	2011
JCTI-G, Request for Proposal Prep	4	2010	3	2011
JCTI-G Source Selection	3	2011	1	2012
JCTI-G Fires on Dismount Maturation	1	2010	1	2012
JCTI-G Technology Development	2	2012	1	2014
JCTI-G Milestone B	2	2014	2	2014
JCTI-G Engineering & Manufacturing Development	2	2014	3	2015

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	63.552	79.448	60.970	0.000	60.970	36.863	44.781	43.458	30.998	Continuing	Continuing
323: <i>COMMON HARDWARE SYSTEMS</i>	7.066	12.133	18.295	0.000	18.295	8.273	7.943	7.756	2.162	Continuing	Continuing
334: <i>COMMON SOFTWARE</i>	21.193	16.814	12.735	0.000	12.735	5.944	16.414	8.576	3.224	Continuing	Continuing
C15: <i>MOUNTED BATTLE COMMAND ON-THE-MOVE (MBCOTM)</i>	11.459	0.316	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
C29: <i>CENTRALIZED TECHNICAL SUPPORT FACILITY (CTSF)</i>	12.620	8.781	17.720	0.000	17.720	10.485	9.158	8.783	8.708	Continuing	Continuing
C34: <i>ARMY TAC C2 SYS ENG</i>	11.214	28.678	12.220	0.000	12.220	12.161	11.266	18.343	16.904	Continuing	Continuing
JN1: <i>JOINT NETWORK NODE (JNN) TESTING</i>	0.000	12.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

The umbrella program to exploit automation technology for the conduct of combat operations is the Army Tactical Command and Control System (ATCCS) program which is a component of the Army Battle Command System (ABCS). The ATCCS program provides automation in the five battlefield functional areas (BFAs) with the following specific systems: (1) Maneuver Control System (MCS); (2) Effects and Fires Command and Control Systems (EFCCS); (3) All Source Analysis System (ASAS) for Intelligence/Electronic Warfare; (4) Forward Area Air Defense Command, Control and Intelligence System (FAADC2I); and (5) Battle Command Sustainment Support System (BCS3). To provide an overall technically sound, cost effective, and operationally responsive approach, the design and development of ATCCS must be accomplished on a total systems basis. The ATCCS Engineering Program, known as the Technical Management Division (TMD (formerly Systems Engineering and Integration (SE&I))), provides the required overall systems engineering to assure integrated Army Tactical Command and Control and the utilization of common hardware and software throughout the five ATCCS nodal systems. TMD efforts will focus on "Systems of Systems" engineering and integration for evolution of the network (Warfighter Information Network-Tactical, Joint Tactical Radio System) and associated services (Unified Battle Command, Joint Battle Command-Platform, Net-Enabled Command Capability, Network Service Center) with increased emphasis on immediate Warfighter needs as

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>
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well as leveraging emerging technologies. This program element also includes the Central Technical Support Facility (CTSF) which is the Army's single strategic facility responsible for executing System of System Interoperability checkout, testing, physical system integration and configuration mgt of the Army's Land WarNet Baseline." The Common Hardware and Software projects provide common products to customers to meet their developmental and fielding needs. The Joint Network Node (JNN) Testing is the Increment 1b Technical Insertion to Increment 1a for Operational Test, which will be conducted in FY 2012 in conjunction with the Increment 2 Initial Operational Test and Evaluation. These systems support the Legacy to Objective transition path.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	65.317	90.864	73.001	0.000	73.001
Current President's Budget	63.552	79.448	60.970	0.000	60.970
Total Adjustments	-1.765	-11.416	-12.031	0.000	-12.031
• Congressional General Reductions		-11.416			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-1.765	0.000			
• Adjustments to Budget Years	0.000	0.000	-12.031	0.000	-12.031

Change Summary Explanation

Change Summary Explanation: FY 2011: Funds realigned to higher priority Army requirements.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
323: <i>COMMON HARDWARE SYSTEMS</i>	7.066	12.133	18.295	0.000	18.295	8.273	7.943	7.756	2.162	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>The Common Hardware Systems (CHS) program provides state-of-the-art, fully qualified, interoperable, compatible, deployable, and survivable hardware and computer networking equipment for command, control, and communications at all echelons of command for the United States Army and other DoD services. CHS also provides worldwide repair, maintenance, logistics, and technical support through strategically located contractor-operated Regional Support Centers (RSC) for tactical military units and management of a comprehensive 5-year warranty and 72-hour turnaround for repairs. In FY2011, CHS continues to manage the acquisition and delivery of CHS equipment, technology insertion and common standardized testing in support of customer requirements. CHS-4, to be awarded 3Q FY10, will be a follow-on to the CHS-3 Contract. Increases in FY2010 and FY2011 funding support award of the CHS-4 (next generation hardware) contract, product development and non-recurring engineering. Footnote: Decrement was applied against incorrect projects. The data base will be corrected in the next version.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Continue management of the acquisition and delivery of CHS equipment in support of customer requirements <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base							5.921	6.353	5.795	0.000	5.795

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Continue supporting customer testing efforts with CHS equipment		0.154	0.200	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3 Continue CHS technology insertion		0.991	0.244	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Design, development and testing (NRE Costs) for New CHS-4 Products <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	5.000	12.500	0.000	12.500
Program #5 Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR) <i>FY 2009 Accomplishments:</i> FY 2009		0.000	0.336	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT 323: <i>COMMON HARDWARE SYSTEMS</i>				
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Accomplishments/Planned Programs Subtotals		7.066	12.133	18.295	0.000	18.295
<u>C. Other Program Funding Summary (\$ in Millions)</u>						
N/A						
<u>D. Acquisition Strategy</u>						
<p>The overall goal is to improve interoperability and compatibility and lower life cycle costs by standardizing battlefield command and control automation and other warfighting systems (net centric, etc) through centralized buys of modified/ruggedized non-developmental items. This project provides a coherent migration strategy for acquisition warfighting systems through the use of technology insertion. CHS also conducts common environmental and developmental testing of hardware items thereby reducing the testing requirements for individual Project Managers. An Indefinite Delivery/Indefinite Quantity firm fixed priced, full and open competition contract was awarded to GDC4S in May 2003, for ruggedization and production. There is an increase in FY2010 & FY2011 for CHS-4 contract award, product development and Non-Recurring Engineering.</p>						
<u>E. Performance Metrics</u>						
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.						

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Product Development	C/Various	Fort Monmouth NJ	69.372	2.820		2.068		0.000		2.068	Continuing	Continuing	0
Support Costs	C	Fort Monmouth NJ	57.893	3.533		3.727		0.000		3.727	Continuing	Continuing	0
Technology Insertion	C/Various	Various Location could not be determined.	13.121	0.580		0.000		0.000		0.000	Continuing	Continuing	0
GDC4S/CHS-3 Non-Recurring Engineering	C	Taunton MA	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
CHS-4 Non-Recurring Engineering	C	Nothing entered for Activity and Location. Location could not be determined.	17.500	5.000		12.500		0.000		12.500	Continuing	Continuing	0
Subtotal			157.886	11.933		18.295		0.000		18.295			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Not applicable	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.000		0.000		0.000	0	0	0
Subtotal			0.000	0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
CHS Test Activities	C	Other Government Activities Location could not be determined.	1.800	0.200		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			1.800	0.200		0.000		0.000		0.000			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT 323: <i>COMMON HARDWARE SYSTEMS</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015							
	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				
CHS-4 Award						#																										

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT 323: <i>COMMON HARDWARE SYSTEMS</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
CHS-4 Award	2	2010	2	2010

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>				PROJECT 334: <i>COMMON SOFTWARE</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
334: <i>COMMON SOFTWARE</i>	21.193	16.814	12.735	0.000	12.735	5.944	16.414	8.576	3.224	Continuing	Continuing
Quantity of RDT&E Articles											
Note Not applicable for this item.											
A. Mission Description and Budget Item Justification Project 334 Common Software (CS): Common Software is the program through which the Army procures, develops, integrates and tests common software products and/or components used for communication between Army Battle Command Systems (ABCS), Joint and coalition Command and Control (C2) applications. The CS project provides state-of-the-art software technologies and functionality that is used by numerous Army Battle Command Systems (ABCS) and joint systems to eliminate the need for service independent development and duplication of effort. The CS project also manages and performs technology demonstrations of emerging technologies for future use by Army C2 systems. The CS program is a cornerstone in the Army's digitization efforts. FY11 funding will continue the development, acquisition management, and delivery of ABCS Software in support of Army and Joint Service requirements. Funding will also be used to develop the System of Systems (SOS) architecture for Battle Command systems providing a cohesive development strategy amongst C2 systems.											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #1 Continue the development, acquisition management and delivery of the ABCS common software enterprise infrastructure in support of Army and Joint Services requirements. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010						12.687	10.903	9.110	0.000	9.110	

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Serve as the executive agent and provide software for interoperability, for Joint and Coalition efforts. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		3.860	2.361	1.313	0.000	1.313
Program #3 Develop the System of System (SOS) architecture for Battle Command (BC) systems. <i>FY 2009 Accomplishments:</i> FY 2009		4.527	2.951	2.180	0.000	2.180

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Evaluation through demonstration and continuous testing of RFID for movement of materiel from a Defense Distribution Center (DDC) to an Army designated installation and/or tactical supply activity. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.119	0.129	0.132	0.000	0.132
Program #5 Small Business Innovative Research/Small Business Technology Transfer Programs		0.000	0.470	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army **DATE:** February 2010

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009					
<i>FY 2010 Plans:</i> FY 2010					
<i>FY 2011 Base Plans:</i> FY 2011 Base					
<i>FY 2011 OCO Plans:</i> FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	21.193	16.814	12.735	0.000	12.735

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Ord. #1: <i>Not applicable for Common Software Program</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	0

D. Acquisition Strategy

In accordance with the TRADOC requirements document approved in 2008, entitled Battle Command Essential Capability, software capability will be developed in 2-year increments as capability sets designed to Collaborate, Collapse and Converge Battle Command products. The product development funded under this R-Form is an integral part of the Army Battle Command System (ABCS), a system of systems and will be accomplished primarily under a PM Battle Command (BC) system of systems contract approach which consists of multiple prime contracts awarded from a single solicitation that will require each specific development task be competed among primes whenever possible. This strategy is designed to optimize opportunity for improved interoperability among the systems, to capture the benefits of competition 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. The overall acquisition goal of the Common Software program is the improvement of life cycle costs by providing common products that are used horizontally across programs avoiding duplication of efforts by Army and Joint programs.

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E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Matrix Support of CS Lab, Data Access	C	CECOM Fort Monmouth, NJ	1.853	0.000		0.000		0.000		0.000	0	1.853	0
Engineering/Software Development	C	Various Contractors / Various Locations Location could not be determined.	86.097	10.425		8.045		0.000		8.045	Continuing	Continuing	0
ABCS System Engineering & Integration	C	PEO C3T Fort Monmouth, NJ	0.210	0.000		0.000		0.000		0.000	0	.210	0
ABCS/Army System Engineering & Integration	C	Various Contractors / Various Locations Location could not be determined.	1.448	0.971		0.850		0.000		0.850	Continuing	Continuing	0
Battle Command System of Systems Architecture Development	C	Various Contractors / Various Locations Location could not be determined.	4.270	2.915		1.480		0.000		1.480	Continuing	Continuing	0
Digital System Engineers	C	Mantech Ft. Hood, TX	14.400	0.000		0.000		0.000		0.000	0	14.400	0
3D Display Technology	C	Concurrent Technology Corp. Johnstown, PA	9.083	0.000		0.000		0.000		0.000	Continuing	Continuing	0
IDM-T Engineering Support	C	GSA Contractors Location could not be determined.	2.000	0.000		0.000		0.000		0.000	0	2.000	0

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DISA Support for COE	C	Nothing entered for Activity and Location. Location could not be determined.	1.486	0.000		0.000		0.000		0.000	0	1.486	0
Subtotal			120.847	14.311		10.375		0.000		10.375			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Support	C	PM Battle Command Ft. Monmouth, NJ	5.045	0.589		0.350		0.000		0.350	Continuing	Continuing	0
Technical Support	C	Various Contractors / Various Locations Location could not be determined.	1.379	0.175		0.185		0.000		0.185	Continuing	Continuing	0
Subtotal			6.424	0.764		0.535		0.000		0.535			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Developmental Test	C	Various Contractors/ Various locations Location could not be determined.	2.357	1.048		1.100		0.000		1.100	Continuing	Continuing	0
Subtotal			2.357	1.048		1.100		0.000		1.100			0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Office Management	C	Fort Monmouth NJ	6.148	0.691		0.725		0.000		0.725	Continuing	Continuing	0
Subtotal			6.148	0.691		0.725		0.000		0.725			0.000

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
		Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
	135.776	16.814		12.735		0.000		12.735			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army							DATE: February 2010		
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks									

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT 334: <i>COMMON SOFTWARE</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015							
	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				
Common Software Capbility Set 13-14 Development					#	#	#		#	#	#	#	#																			
Common Software Capbility Set 15-16 Development														#	#	#	#	#	#	#	#											

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT 334: <i>COMMON SOFTWARE</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Common Software Capbility Set 13-14 Development	2	2010	1	2012
Common Software Capbility Set 15-16 Development	2	2012	1	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010			
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost	
C15: <i>MOUNTED BATTLE COMMAND ON-THE-MOVE (MBCOTM)</i>	11.459	0.316	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing	
Quantity of RDT&E Articles												
A. Mission Description and Budget Item Justification												
<p>The Mounted Battle Command On The Move System (MBCOTM) is a Command, Control, Computers, Communications, Intelligence (C4I) mission equipment package (B Kit) integrated onto Bradley, Stryker and Mine Resistant Ambush Protected (MRAP) platforms which allows commanders to move to the decisive point on the battlefield. The focus of MBCOTM is to facilitate commander execution of net centric operations versus command post centric operations. MBCOTM provides the battlefield Commander situational awareness in the form of a digital common operational picture, enabling a Commander to maintain situational understanding while On The Move and when physically separated from the fixed Command Post performing Battlefield circulation. MBCOTM supports the mission area command and control by integrating network and SATCOM enablers to include components resident in the WIN-T Increment 2 architecture, as well as a number of Battelfield Automated Systems including Command Post of the Future (CPoF). Potential future capabilities could include adding Joint Tactical Radio System and Wideband Gapfiller System.</p>												
B. Accomplishments/Planned Program (\$ in Millions)												
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
Program #1						0.000	0.316	0.000	0.000	0.000		
System Development/Tech Upgrades												
<i>FY 2009 Accomplishments:</i>												
FY 2009												
<i>FY 2010 Plans:</i>												
FY 2010												

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2		0.000	0.000	0.000	0.000	0.000
Prototype Build						
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3		0.000	0.000	0.000	0.000	0.000
Program Spt/SSEB						
<i>FY 2009 Accomplishments:</i> FY 2009						

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Test/Evaluation <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		11.459	0.000	0.000	0.000	0.000
Program #5 Small Business Innovative Research/Small Business Technology Transfer Programs.		0.000	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						11.459	0.316	0.000	0.000	0.000	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>Mounted Battle Command on the Move MBCOTM - OPA (BZ9970)</i>	43.793	0.923	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
D. Acquisition Strategy											
The CAMC2 contract was awarded to Lockheed Martin on 08 Feb 08 and subsequently terminated for convenience on 22 Jul 08. The MBCOTM FY09 RDT&E is primarily for MRAP and Stryker A-Kit design/development, complete level III drawing packages, platform test and log product development. The FY10 effort is primarily logistical support.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
C29: <i>CENTRALIZED TECHNICAL SUPPORT FACILITY (CTSF)</i>	12.620	8.781	17.720	0.000	17.720	10.485	9.158	8.783	8.708	Continuing	Continuing
Quantity of RDT&E Articles											
Note FY 10: An \$8 million Congressional reduction for operational test funds requested ahead of need was applied to the wrong project. The database will be corrected in the next budget cycle.											
A. Mission Description and Budget Item Justification Project C29 - Centralized Technical Support Facility: The Central Technical Support Facility (CTSF) located at FT Hood, Texas, is the Army's premier test, integration, and certification facility for interoperability and net-worthiness. It is the Army's strategic facility responsible for conducting system engineering associated with integrating Army Battle Command System (ABCS) Weapon System architectures into a System of Systems, performing Army Interoperability Certification (AIC) testing and configuration management for all operational and tactical level applications (individual systems, System of Systems, and families of systems) prior to fielding. The CTSF provides validated test data to the Department of the Army and Joint agencies to validate interoperability and net-worthiness certifications. The current expansion of the distributed test environment of the CTSF will be accomplished through the Federation of Net-centric Sites (FaNS) construct. This FaNS construct addresses distributed integration development and testing using the core infrastructure of the CTSF to harness AMC, Army, and Joint expertise/resources. Through these federated resources, the CTSF will execute interoperability development and certification testing of the Warfighter and Business mission areas, to include Brigade Combat Team Modernization spin-outs, as they digitize and become part of the Army's LandWarNet. Footnote: Decrement was applied against incorrect projects. The data base will be corrected in the next version.											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #1 Continue certification test planning/procedures/execution/reporting, interoperability baseline testing, simulation/stimulation validation and distributed testing.						2.189	1.865	3.538	0.000	3.538	

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Continue systems engineering of foundation/data products, software validation/verification, network engineering, integration labs, information assurance. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		2.197	1.225	4.702	0.000	4.702
Program #3		2.033	1.036	4.148	0.000	4.148

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Maintained 250,000 square foot facility, with 41,305 sq. ft. dedicated to Army Integration Certification testing and systems engineering. Continue to provide infrastructure.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #4</p> <p>Continue management operations.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>		2.525	1.558	2.599	0.000	2.599

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #5 Continue configuration management. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.304	1.321	0.000	0.000	0.000
Program #6 Provide IT infrastructure networks connections to include DISN, SIPRNET, NIPRNET, GUARDNET. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		2.104	1.107	2.100	0.000	2.100

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #7 Provide logistics support. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.268	0.623	0.633	0.000	0.633
Program #8 Small Business Innovative Research/Small Business Technology Transfer <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.046	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT C29: <i>CENTRALIZED TECHNICAL SUPPORT FACILITY (CTSF)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
	Accomplishments/Planned Programs Subtotals	12.620	8.781	17.720	0.000	17.720
C. Other Program Funding Summary (\$ in Millions) N/A						
D. Acquisition Strategy Execute system of systems interoperability integration and testing through the use of Government and Systems Engineering and Technical Analysis (SETA) contract personnel experienced in product development and interoperability testing. Integration and testing occurs in a cyclical fashion, with an expectation of an annual Software Block/Capability Set test followed with cyclical test events (Tri-Annual Tests) to ensure integrity of software baselines to the Warfighter. System of Systems Integration and Validation engineering provides strategic integration of software into a system of systems/family of systems environment to support interoperability testing. Establish and maintain Configuration Management and version control of the Army's Interoperable Battle Command LandWarNet Baseline. Further expand distributed integration and testing capability using local assets and leveraging other federated test facilities to create synergy and realize efficiencies.						
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.						

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>				PROJECT C29: <i>CENTRALIZED TECHNICAL SUPPORT FACILITY (CTSF)</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
CSC/MANTECH (Direct Labor)	C/CPFF	Fort Hood TX	23.990	0.000		0.000		0.000		0.000	Continuing	Continuing	0
CSC (System Engineering)	C/CPAF	Fort Hood TX/Fort Monmouth, NJ	6.670	0.000		0.000		0.000		0.000	Continuing	Continuing	0
MITRE Corp (System of System Integration & Validation)	C/CPFF	Fort Hood TX/Eatontown, NJ	6.010	1.727		1.755		0.000		1.755	Continuing	Continuing	0
CAMBER (Config Mgmt)	C/CPAF	Fort Hood TX	3.317	0.000		0.000		0.000		0.000	Continuing	Continuing	0
ILEX (Field Engineering)	C/CPAF	Fort Hood TX	2.157	0.000		0.000		0.000		0.000	Continuing	Continuing	0
ROBBINS- GIOIA (Data Base Management)	C/CPAF	Fort Hood TX/Fort Monmouth, NJ	1.715	0.000		0.000		0.000		0.000	Continuing	Continuing	0
CACI (JB Mgt)	C/CPAF	Fort Hood TX	0.000	2.026		2.058		0.000		2.058	Continuing	Continuing	0
Subtotal			43.859	3.753		3.813		0.000		3.813			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>				PROJECT C29: <i>CENTRALIZED TECHNICAL SUPPORT FACILITY (CTS F)</i>					

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
CECOM Matrix	C	Fort Hood TX/Fort Monmouth, NJ	0.290	0.939		0.954		0.000		0.954	Continuing	Continuing	0
In-House Support	C	Fort Hood TX	1.198	0.990		1.006		0.000		1.006	Continuing	Continuing	0
Other Government Support	C	Fort Hood TX	0.455	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			1.943	1.929		1.960		0.000		1.960			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
ELECTRONIC PROVING GROUNDS (EPG)/ ManTech (Test & QM)	C/CPAF	Fort Hood TX	13.496	1.278		2.621		0.000		2.621	Continuing	Continuing	0
CAMBER (Test/Config Mgmt/Operations)	C/CPAF	Fort Hood TX	2.624	2.760		2.804		0.000		2.804	Continuing	Continuing	0
CSC/MANTECH (Direct Labor)	C/CPFF	Fort Hood TX	0.000	3.350		3.854		0.000		3.854	Continuing	Continuing	0
CSC (System Engineering)	C/CPAF	Fort Hood	0.000	2.018		2.050		0.000		2.050	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>				PROJECT C29: <i>CENTRALIZED TECHNICAL SUPPORT FACILITY (CTSF)</i>					

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		TX/Fort Monmouth,NJ											
ILEX (Test/Config Mgmt)	C/CPAF	Fort Hood TX	0.000	0.608		0.618		0.000		0.618	Continuing	Continuing	0
Matrix Support	C	Fort Hood TX	0.000	1.085		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			16.120	11.099		11.947		0.000		11.947			0.000

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
	61.922	16.781		17.720		0.000		17.720			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT C29: <i>CENTRALIZED TECHNICAL SUPPORT FACILITY (CTSF)</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Capability Set 11-12				#	#	#	#	#	#	#	#	#	#	#	#	#	#	#										
Capability Set 13-14												#	#	#	#	#	#	#	#	#	#	#	#	#	#	#		
--FBCB2 JCR 1.1			#	#	#	#																						
--FBCB2 JCR 1.2 (NOC Specific)							#	#	#	#	#	#	#	#	#	#	#	#										
--FBCB2 JCR 1.3									#	#	#	#																
--JBCP 1.0									#	#	#	#	#	#														
--WINT-T Inc 1b					#	#	#																					
--WIN-T Inc 2									#	#																		
--WIN-T Inc 3															#	#	#											
--WIN-T Inc 4																	#	#	#									

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT C29: <i>CENTRALIZED TECHNICAL SUPPORT FACILITY (CTSF)</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Capability Set 11-12	4	2009	2	2013
Capability Set 13-14	4	2011	2	2015
--FBCB2 JCR 1.1	3	2009	2	2010
--FBCB2 JCR 1.2 (NOC Specific)	3	2010	2	2013
--FBCB2 JCR 1.3	2	2011	1	2012
--JBCP 1.0	2	2011	3	2012
--WINT-T Inc 1b	1	2010	3	2010
--WIN-T Inc 2	1	2011	2	2011
--WIN-T Inc 3	3	2012	1	2013
--WIN-T Inc 4	3	2013	1	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>				PROJECT C34: <i>ARMY TAC C2 SYS ENG</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
C34: <i>ARMY TAC C2 SYS ENG</i>	11.214	28.678	12.220	0.000	12.220	12.161	11.266	18.343	16.904	Continuing	Continuing
Quantity of RDT&E Articles											
Note Not applicable for this item.											
A. Mission Description and Budget Item Justification Project DC34 - Army Tactical Command and Control Systems (ATCCS) Engineering, which is also referred to as the Technical Management Division (TMD) (formerly Systems Engineering and Integration (SE&I)): Doctrine requires military leaders to make sound and timely command and control decisions to direct the activities of assigned and supporting units. The umbrella program to exploit automation technology in support of this mission is the ATCCS or TMD program. The effort to achieve horizontal integration of the ATCCS Battlefield Functional Areas (BFAs), although going on independently in each BFA, was not disciplined enough to address all connections and needs within the entire spectra of command, control and communications. Therefore, to ensure this horizontal integration effort is complete and fully automated, a significant management, systems engineering and integration effort is required. In FY 2011, this effort, supporting Army Battle Command Systems (ABCS), includes the development of new capability releases aligned with the TRADOC-defined Commander's Needs and Battle Command Essential Capabilities, and integration of lifecycle processes with the G3 LandWarNet Capability Set construct, engineering efforts towards the Unified Battle Command (UBC) and continuation of "System of Systems" System Engineering/Capability Set Development and Integration. Footnote: Decrement was applied against incorrect projects. The data base will be corrected in the next version.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							0.729	0.720	0.760	0.000	0.760
Continue Army Battle Command System (ABCS) Integrated Logistics Support											
<i>FY 2009 Accomplishments:</i> FY 2009											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT C34: <i>ARMY TAC C2 SYS ENG</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Continue ABCS Testing and Evaluation of all Battlefield Functional Area (BFA) fielded software and performs initial interoperability testing (FY10 includes TSIL) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.764	3.750	0.760	0.000	0.760
Program #3 Manages unit set fielding of ABCS		0.980	1.400	1.050	0.000	1.050

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT C34: <i>ARMY TAC C2 SYS ENG</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Continue ABCS information engineering <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.153	1.300	1.000	0.000	1.000
Program #5		0.325	2.030	0.340	0.000	0.340

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT C34: <i>ARMY TAC C2 SYS ENG</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Conduct and support system interoperability engineering (FY10 includes TSIL) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #6 Continue exploring state of the art technology insertion in support of the ABCS program and Army Networks (FY10 includes VICTORY) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.512	3.000	2.000	0.000	2.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT C34: <i>ARMY TAC C2 SYS ENG</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #7 Continue development and implementation of the ABCS information assurance <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.298	0.500	0.320	0.000	0.320
Program #8 Continue System of Systems Development (FY11 includes UBC) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		2.613	2.983	3.000	0.000	3.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control</i> <i>Hardware & Software</i>	PROJECT C34: <i>ARMY TAC C2 SYS ENG</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #9 Continue ABCS System Engineering <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		2.840	0.000	0.000	0.000	0.000
Program #10 System of Systems Engineering and Integration evolution of the network <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	5.277	2.990	0.000	2.990

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control</i> <i>Hardware & Software</i>	PROJECT C34: <i>ARMY TAC C2 SYS ENG</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #11 Initiate Wireless Network after Next (WNaN)Technology Experimentation <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	6.559	0.000	0.000	0.000
Program #12 Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	1.159	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>		PROJECT C34: <i>ARMY TAC C2 SYS ENG</i>				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Accomplishments/Planned Programs Subtotals				11.214	28.678	12.220	0.000	12.220
C. Other Program Funding Summary (\$ in Millions) N/A								
D. Acquisition Strategy This project provides the technical and programmatic disciplines required for systems engineering and integration, experimentation, acquisition management, testing, interoperability, support to fielding and sustainment to ensure an interoperable and affordable Army Tactical Command and Control Systems (ATCCS). Fiscal Year 2011 will focus on "Systems of Systems" System Engineering and Integration for evolution of the network (Warfighter Information Network-Tactical (WIN-T) and Joint Tactical Radio Systems (JTRS)) and associated services (Unified Battle Command (UBC), Joint Battle Command - Platform (JBC-P), Network Service Center (NSC) with increased emphasis on immediate Warfighter needs as well as leveraging emerging technologies, through the G3 LandWarNet Capability Set Development and Integration.								
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.								

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Northrop Grumman	C/CPIF	Fort Monmouth NJ/Fort Hood, TX	14.548	0.000		0.000		0.000		0.000	Continuing	Continuing	17.162
TBD	C/TBD	Aberdeen Proving Grounds MD/Fort Monmouth, NJ/Fort Hood, TX	0.000	3.102		1.938		0.000		1.938	Continuing	Continuing	0
IDA	C	Fort Monmouth NJ	1.724	0.000		0.000		0.000		0.000	Continuing	Continuing	1.724
CSC	C/CPAF	Fort Monmouth NJ/Fort Hood, TX	42.372	0.000		0.000		0.000		0.000	Continuing	Continuing	45.385
TBD - 2	C/TBD	Aberdeen Proving Grounds MD/Fort Monmouth, NJ/Fort Hood, TX	0.000	6.257		4.012		0.000		4.012	Continuing	Continuing	0
MANTECH (Direct Labor)	C/CPFF	Fort Monmouth NJ/Fort Hood, TX	6.496	0.000		0.000		0.000		0.000	Continuing	Continuing	6.546
SYTEX	C/CPFF	Eatontown NJ	0.330	0.000		0.000		0.000		0.000	Continuing	Continuing	1.020
TBD - 3	C/TBD	Aberdeen Proving Grounds MD/Fort Monmouth, NJ/Fort Hood, TX	0.000	0.970		0.529		0.000		0.529	Continuing	Continuing	0
CAMBER (Config Mgt)	C/CPAF	Fort Hood TX	1.788	0.000		0.000		0.000		0.000	Continuing	Continuing	.855

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>				PROJECT C34: <i>ARMY TAC C2 SYS ENG</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
ATSC	C	Fort Leavenworth KY	1.850	0.000		0.000		0.000		0.000	Continuing	Continuing	1.850
LOCKHEED MARTIN	C/CPAF	Eatontown NJ	6.674	0.000		0.000		0.000		0.000	Continuing	Continuing	7.896
TBD - 4	C/CPAF	Aberdeen Proving Grounds MD/Fort Monmouth, NJ	0.000	3.500		0.000		0.000		0.000	Continuing	Continuing	0
GTE (Labor and Equipment)	C/CPFF	Fort Hood TX	2.281	0.000		0.000		0.000		0.000	Continuing	Continuing	2.281
Misc Contracts	C/CPAF	Fort Monmouth NJ/Fort Hood, TX	5.985	0.000		0.000		0.000		0.000	Continuing	Continuing	6.181
Unixpros	C/CPAF	Eatontown NJ	3.711	0.000		0.000		0.000		0.000	Continuing	Continuing	3.711
ROBBINS-GIOIA	C/CPAF	Fort Monmouth NJ/Fort Hood, TX	9.642	0.179		0.000		0.000		0.000	Continuing	Continuing	9.967
MITRE	C/CPFF	Aberdeen Proving Grounds MD/Ft Monmouth, NJ/Eatontown, NJ	49.976	5.185		4.441		0.000		4.441	Continuing	Continuing	0
ITT	C/CPAF	Eatontown NJ	1.070	0.000		0.000		0.000		0.000	Continuing	Continuing	1.070
MISCELLANEOUS SUPPORT	C/CPAF	Eatontown NJ/Fort Hood, TX	2.551	0.000		0.000		0.000		0.000	Continuing	Continuing	2.851
BOOZ-ALLEN	C/CPAF	Eatontown NJ	1.950	0.000		0.000		0.000		0.000	Continuing	Continuing	1.950

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT C34: <i>ARMY TAC C2 SYS ENG</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			152.948	19.193		10.920		0.000		10.920			110.449

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
IN-HOUSE SUPPORT	C	Aberdeen Proving Grounds MD/Fort Monmouth, NJ/Fort Hood, TX	8.060	2.300		0.500		0.000		0.500	Continuing	Continuing	0
CECOM MATRIX	C	Fort Monmouth NJ/Fort Hood, TX	7.880	0.985		0.650		0.000		0.650	Continuing	Continuing	0
OTHER GOVERNMENT SUPPORT	C	Fort Monmouth NJ/Fort Hood, TX/ Fort Belvoir, VA	3.887	3.500		0.150		0.000		0.150	Continuing	Continuing	0
Subtotal			19.827	6.785		1.300		0.000		1.300			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT C34: <i>ARMY TAC C2 SYS ENG</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
EPG	C	Fort Huachuca AZ	2.881	0.200		0.000		0.000		0.000	Continuing	Continuing	0
TBD	C/TBD	Aberdee Proving Grounds MD/Fort Monmouth, NJ	0.000	2.500		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			2.881	2.700		0.000		0.000		0.000			0.000

Remarks

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	175.656	28.678	12.220	0.000	12.220			110.449

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT C34: <i>ARMY TAC C2 SYS ENG</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Tactical Systems Integration Lab				#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#
Initiate Wireless Network After Next (WNaN) Technology Experimentation				#	#	#	#	#																				

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT C34: <i>ARMY TAC C2 SYS ENG</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Tactical Systems Integration Lab	4	2009	3	2015
Initiate Wireless Network After Next (WNaN) Technology Experimentation	4	2009	1	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>				PROJECT JN1: <i>JOINT NETWORK NODE (JNN) TESTING</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
JN1: <i>JOINT NETWORK NODE (JNN) TESTING</i>	0.000	12.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u>											
<p>As the emerging major component of the Army Bridge to Future Networks, Warfighter Information Network - Tactical (WIN-T) Increment 1, formally the Joint Network Node (JNN) Network is intended to replace legacy Mobile Subscriber Equipment (MSE) while moving the Army to a unified Everything Over Internet Protocol (EOIP) Communications System. Increment 1: Networking at-the-Halt-the network is capable of passing unclassified and classified traffic levels, throughout its entire structure, from Home Station Operations center to the furthest forward Battalion Elements. Designed to meet modularity and rapid deployment mandate, the network is also intended to support Joint Communications Requirements and internet applications from Coalition partners and from approved Federal Agencies such as the Federal Emergency Management Agency and Department of Homeland Security. FY 10: Funding will be used for Operational Test of the 1b technical insertion to Increment 1a for Operational Test that will be conducted 1st quarter FY 11 in conjunction with Inc 2 Initial Operational Test and Evaluation (IOT&E).</p>											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							0.000	12.726	0.000	0.000	0.000
Operational Testing Event											
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604818A: <i>Army Tactical Command & Control Hardware & Software</i>	PROJECT JN1: <i>JOINT NETWORK NODE (JNN) TESTING</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Accomplishments/Planned Programs Subtotals		0.000	12.726	0.000	0.000	0.000
C. Other Program Funding Summary (\$ in Millions)						
N/A						
D. Acquisition Strategy						
N/A						
E. Performance Metrics						
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.						

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604822A: <i>General Fund Enterprise Business System (GFEBS)</i>								
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	50.308	23.777	13.576	0.000	13.576	0.547	0.561	0.571	0.579	Continuing	Continuing
GF5: <i>GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBS)</i>	50.308	23.777	13.576	0.000	0.000	0.547	0.561	0.571	0.579	Continuing	Continuing

A. Mission Description and Budget Item Justification

The General Fund Business Enterprise System (GFEBS) is a Major Automated Information System (MAIS) program and is in the developmental phase. It will follow the DoD Business Enterprise Architecture which is aligned to the mandated Federal Enterprise Architecture. GFEBS was implemented to fulfill the needs and comply with the Federal Financial Management Improvement Act (FFMIA), The Chief Financial Officers Act of 1990, the Government Performance and Results Act of 1993, the Government Management Reform Act of 1994, and the Clinger-Cohen Act of 1996 and to fulfill the stated mission of the Assistant Secretary of the Army for Financial Management and Comptroller (ASA(FM&C)). GFEBS will replace financial systems operating in excess of 30 years like the Standard Finance Systems (STANFINS) and other costly feeder systems which do not allow the Department of Defense (DoD) or the U.S. government to achieve an unqualified opinion on its financial statements. GFEBS will become the Department of the Army's new core financial management system for administering its General Fund. GFEBS will be a commercial off-the-shelf (COTS) Enterprise Resource Planning (ERP) system that is certified by the Chief, Financial Officer Council (CFOC) and provides the six core financial functions. GFEBS will allow tactical commanders to make informed decisions on a virtually real time system. On 1 October 2008, GFEBS Release 1.2 was successfully implemented to the Fort Jackson Garrison, Defense Finance Accounting Service (DFAS) Indianapolis, Indiana and several other organizations. It is a viable and operational system with positive feedback from the field. On 1 April 2009 GFEBS Release 1.3 was successfully implemented to Release 1.2 locations as well as Fort Benning, Fort Stewart, DFAS Rome and several other organizations. In addition, GFEBS has continued development work in FY09 with the completion of the Build and Test of Release 1.3 and the completion of the Build of Release 1.4. Testing for Release 1.4 is currently underway and scheduled to complete this FY. Release 1.4 is scheduled to begin deployment with a Mini-Wave to PEO EIS and Fort Benning on 1 October 2009. In FY2010, \$6.000 Million was moved from OPA to RDTE. This was a zero sum adjustment (no program growth) of funds. The \$6.000 Million in RDTE is required to complete Release 1.4 (SOMARDS) Testing. At the advise of the Assistant Secretary of the Army, Financial Management (ASA FM&C), GFEBS revised its deployment strategy based on lessons learned from Release 1.2 and Release 1.3. This revision extended the final Release 1.4 Testing into the 1st quarter of FY2010.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604822A: <i>General Fund Enterprise Business System (GFEBS)</i>
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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	50.142	6.002	0.000	0.000	0.000
Current President's Budget	50.308	23.777	13.576	0.000	13.576
Total Adjustments	0.166	17.775	13.576	0.000	13.576
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.166	0.000			
• Adjustments to Budget Years	0.000	17.775	13.576	0.000	13.576

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604822A: <i>General Fund Enterprise Business System (GFEBS)</i>	PROJECT GF5: <i>GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBS)</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
GF5: <i>GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBS)</i>	50.308	23.777	13.576	0.000	0.000	0.547	0.561	0.571	0.579	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

The General Fund Business Enterprise System (GFEBS) is a Major Automated Information System (MAIS) program and is in the Production & Deployment/ Operations and Support Phase. It will follow the DoD Business Enterprise Architecture which is aligned to the mandated Federal Enterprise Architecture. GFEBS was implemented to fulfill the needs and comply with the Federal Financial Management Improvement Act (FFMIA), The Chief Financial Officers Act of 1990, the Government Performance and Results Act of 1993, the Government Management Reform Act of 1994, and the Clinger-Cohen Act of 1996 and to fulfill the stated mission of the Assistant Secretary of the Army for Financial Management and Comptroller (ASA(FM&C)). GFEBS will replace financial systems operating in excess of 30 years like the Standard Finance Systems (STANFINS) and other costly feeder systems which do not allow the Department of Defense (DoD) or the U.S. government to achieve an unqualified opinion on its financial statements. GFEBS will become the Department of the Army's new core financial management system for administering its General Fund. GFEBS will be a commercial off-the-shelf (COTS) Enterprise Resource Planning (ERP) system that is certified by the Chief, Financial Officer Council (CFOC) and provides the six core financial functions. GFEBS will allow tactical commanders to make informed decisions on a virtually real time system. On 1 October 2008, GFEBS Release 1.2 was successfully implemented to the Fort Jackson Garrison, Defense Finance Accounting Service (DFAS) Indianapolis, Indiana and several other organizations. It is a viable and operational system with positive feedback from the field. On 1 April 2009 GFEBS Release 1.3 was successfully implemented to Release 1.2 locations as well as Fort Benning, Fort Stewart, DFAS Rome and several other organizations. On 1 October 2009 GFEBS Release 1.4 was successfully implemented encompassing all of Release 1.2/1.3 sites. GFEBS is expected to receive its Full Deployment Decision Review (FDDR) in January 2010 for Release 1.3 deployment. FY11 Base development dollars in the amount of \$13.576 million supports the development and testing of Report, Interfaces, Conversions, and Extensions (RICE) in support of the remaining Release 1.4 releases. Army has made the determination that RDTE was best suited for ongoing software development costs. OSD revalidated and approved GFEBS funding at Milestone B/C and added additional RDTE development and test requirements from the previous President's Budget submission. The GFEBS Full Deployment Decision Review (FDDR) Army Cost Position (ACP), approved in October 2009, supports this request.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	47.029	23.602	13.566	0.000	13.566

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604822A: <i>General Fund Enterprise Business System (GFEBS)</i>	PROJECT GF5: <i>GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBS)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Product Development <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Support Costs: Project Management <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		2.994	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604822A: <i>General Fund Enterprise Business System (GFEBS)</i>	PROJECT GF5: <i>GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBS)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #3		0.285	0.010	0.010	0.000	0.010
Test and Evaluation						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						
Program #4		0.000	0.165	0.000	0.000	0.000
SBIR/STTR						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010							
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604822A: <i>General Fund Enterprise Business System (GFEBS)</i>		PROJECT GF5: <i>GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBS)</i>							
B. Accomplishments/Planned Program (\$ in Millions)											
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total			
Accomplishments/Planned Programs Subtotals				50.308	23.777	13.576	0.000	13.576			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>RDTE, 655013MO5</i>	50.308	23.777	13.576	0.000	13.576	0.547	0.561	0.571	0.579	Continuing	Continuing
• Ord. #2: <i>OPA, BE4168000</i>	36.048	44.759	97.858	0.000	97.858	23.858	4.224	7.510	3.058	Continuing	Continuing
• Ord. #3: <i>OMA, 432612000</i>	46.646	66.245	74.306	0.000	74.306	61.290	56.380	58.317	53.853	Continuing	Continuing
D. Acquisition Strategy											
<p>GFEBs is being procured as a performance-based acquisition to encourage innovative and creative solutions and to avoid hampering, dictating, or prescribing how the work must be performed. Therefore, the focus of the Statement of Objectives (SOO) was on "what" the Army is trying to achieve instead of "how" it must be achieved. The use of an SOO is an emerging method that transforms the acquisition process by requiring each of the competing contractors to develop their unique proposed technical approach, work breakdown schedule, project plan and schedule, schedule of deliverable items, performance metrics, performance measurement plan, and quality assurance plan. To achieve its GFEBS project objectives, the Army used an existing Blanket Purchase Agreement (BPA) to select a System Integrator (SI). The contract period of performance is 1 base year with 9 option years. DoD through the Department of the Navy has established enterprise agreements for ERP System Integration Services with five qualified SI(s) that are General Services Administration (GSA) Federal Supply Service (FSS) Schedule holders under the Enterprise Software Initiative (ESI). The Army has selected the SI; all contractor work will be performed under the selected SI's ESI-SI BPA through the award of one task order with several options. Multiple options are anticipated to support each project objective. The products and services described in task orders will be grouped and referenced as Contract Line Item Numbers (CLIN). All CLINs will be awarded on a Fixed Price basis with performance based incentives and disincentives. The task order and all options exercised will be performance based, containing financial incentive and disincentive provisions. Offerors were provided performance based metrics and were required to propose performance incentive and disincentive provisions by CLIN in their Quality Assurance Surveillance Plan (QASP) submitted in response to the Request for Quote (RFQ). The QASP elements were evaluated as part of the evaluation of the Offerors' proposals.</p>											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604822A: <i>General Fund Enterprise Business System (GFEBS)</i>	PROJECT GF5: <i>GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBS)</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Concept Exploration	C/FFP	Accenture Springfield Va.	24.113	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Development	C/FFP	Accenture Springfield Va. Location could not be determined.	30.670	20.498		13.566		0.000		13.566	Continuing	Continuing	0
Subtotal			54.783	20.498		13.566		0.000		13.566			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management	C/FFP	Accenture Springfield Va. Location could not be determined.	123.608	2.994		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			123.608	2.994		0.000		0.000		0.000			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604822A: <i>General Fund Enterprise Business System (GFEBS)</i>				PROJECT GF5: <i>GENERAL FUND ENTERPRISE BUSINESS SYSTEM (GFEBS)</i>					

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Procurement	C/FFP	Accenture Springfield Va. Location could not be determined.	30.778	0.000		0.000		0.000		0.000	Continuing	Continuing	0
System Maintenance/Item Management	C/FFP	Accenture Springfield Va. Location could not be determined.	15.794	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Hardware Maintenance	C/FFP	Accenture Springfield Va. Location could not be determined.	1.898	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Software Maintenance	C/FFP	Accenture Springfield Va. Location could not be determined.	16.880	0.285		0.010		0.000		0.010	Continuing	Continuing	0
Subtotal			65.350	0.285		0.010		0.000		0.010			0.000

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
	243.741	23.777		13.576		0.000		13.576			0.000

Remarks

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604823A: <i>FIREFINDER</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	64.834	20.227	24.736	0.000	24.736	0.000	0.000	0.000	0.000	0	134.533
L86: <i>LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)</i>	19.278	0.000	5.969	0.000	5.969	0.000	0.000	0.000	0.000	Continuing	Continuing
L88: <i>ENHANCED AN/TPQ 36</i>	45.556	20.227	18.767	0.000	18.767	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program funds design, development and test of primary target acquisition and counterfire radars to automatically detect, locate and classify hostile indirect fire weapons (mortars, artillery, rockets, and missiles). This PE directly supports the prioritization, tracking, and locating of targets, and dissemination of that information for simultaneous attack of multiple threats. It provides the Warfighter with continuous and responsive counterfire target acquisition systems for all types and phases of military operations. Project L86, Lightweight Counter Mortar Radar, Version 3 (LCMR (V)3) provides 360 degree coverage and is used to detect, locate and report hostile locations of enemy indirect firing systems out to a range of 10 kilometers. Project L88, Enhanced AN/TPQ-36 (EQ-36), is a highly mobile radar system that will leverage the latest in technology design to accelerate technology infusion and increase range while improving False Alarm Rate, reducing obsolescence and increasing reliability. EQ-36 will provide 90 degree coverage and extended range, with an incremental development to increase detection capability to 360 degrees. The EQ-36 will be interoperable with future Battle Command Systems.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	47.688	20.333	6.926	0.000	6.926
Current President's Budget	64.834	20.227	24.736	0.000	24.736
Total Adjustments	17.146	-0.106	17.810	0.000	17.810
• Congressional General Reductions		-0.106			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	9.883	0.000			
• SBIR/STTR Transfer	-1.337	0.000			
• Adjustments to Budget Years	0.000	0.000	17.810	0.000	17.810
• OMNIBUS Reprogramming	8.600	0.000	0.000	0.000	0.000

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army		DATE: February 2010
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<p><u>Change Summary Explanation</u> FY11 funding increase supports EQ-36 and LCMR development efforts.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604823A: <i>FIREFINDER</i>				PROJECT L86: <i>LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
L86: <i>LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)</i>	19.278	0.000	5.969	0.000	5.969	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>The AN/TPQ-50 (formerly known as AN/TPQ-48(V)3) Lightweight Counter Mortar Radar (LCMR) is a digitally connected, day/night mortar, cannon, and rocket locating system. It is used to detect, locate, and report enemy indirect firing systems and will also provide observed fires from friendly units. AN/TPQ-50 will also be deployed as part of a System of Systems for Counter-Rockets, Artillery, and Mortars (C-RAM). It will provide data to the Forward Area Air Defense Command and Control (FAADC2) node to provide a sense and warn force protection capability for fixed and semi-fixed sites. It will provide 360 degrees of azimuth coverage and cover a range of 500 meters to 10 kilometers. The AN/TPQ-50 will provide twice the detection range and twice the targeting accuracy of the existing AN/TPQ-48(V)2 Quick Reaction Capability (QRC) currently fielded in support of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). FY11 funds development efforts to include conduct of Initial Operational Test and Evaluation, 107mm rocket detection in low trajectories and radar networking.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							13.709	0.000	0.000	0.000	0.000
Complete development of test articles to include non-recurring engineering and Program Management support <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604823A: <i>FIREFINDER</i>	PROJECT L86: <i>LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Initiate development effort for 107mm rocket detection in low trajectories and radar networking to include associated PMO and support costs. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	4.172	0.000	4.172
Program #3 Test activities to support Limited User Test (LUT), Initial Operational Test & Evaluation (IOT&E) and Development Test (DT) for new initiatives. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		5.569	0.000	1.797	0.000	1.797

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army						DATE: February 2010					
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604823A: <i>FIREFINDER</i>			PROJECT L86: <i>LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						19.278	0.000	5.969	0.000	5.969	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>SSN: B05201 Lightweight Counter Mortar Radar</i>	67.760	90.151	32.980	25.000	57.980	33.867	36.196	21.281	21.227	Continuing	Continuing
D. Acquisition Strategy											
The AN/TPQ-50 Lightweight Counter Mortar Radar (LCMR) is being developed to meet user Capabilities Production Document (CPD) requirements. Acquisition Strategy approval was obtained in May 2006. In September 2006, a sole source development contract was awarded to SRCTec, the developer and producer of the AN/TPQ-48(V)2 QRC LCMR. Government Development Test (DT) and Limited User Test (LUT) are scheduled for FY10 and development for 107mm rocket detection and radar networking capabilities will begin in FY11.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604823A: <i>FIREFINDER</i>				PROJECT L86: <i>LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Primary Hardware Dev	SS/CPFF	SRCTec North Syracuse, NY	25.063	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Systems Engineering Government	C	CERDEC Fort Monmouth, NJ	2.964	0.000		0.000		0.000		0.000	Continuing	Continuing	0
107mm Rockets and Radar Networking	SS/CPFF	SRCTec North Syracuse, NY	0.000	0.000		3.407		0.000		3.407	Continuing	Continuing	0
Radar Environmental Simulators (RES)	C	Oakridge National Labs Oakridge, TN	0.125	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Systems Engineering Contractor	SS	Various Location could not be determined.	4.051	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			32.203	0.000		3.407		0.000		3.407			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
	C	Various	0.470	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Development Support (Government)		Location could not be determined.											
Subtotal			0.470	0.000		0.000		0.000		0.000			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support (Contractor)	C	TBD Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Limited User Test	C	YUMA AZ/WSMR, NM	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Follow-On Test Event (FOTE)	C	YUMA AZ/WSMR, NM	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Initial Operational Test & Evaluation (IOT&E)	C	YUMA AZ/WSMR, NM	0.000	0.000		1.297		0.000		1.297	Continuing	Continuing	0
Developmental Test Operational Test (DT/OT)	C	Yuma AZ/WSMR, NM	0.126	0.000		0.500		0.000		0.500	Continuing	Continuing	0
Test Support (Government)	C	Various	0.250	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Location could not be determined.											
Subtotal			0.376	0.000		1.797		0.000		1.797			0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management (Contractor)	C/FP	Various Location could not be determined.	2.823	0.000		0.350		0.000		0.350	Continuing	Continuing	0
Program Management	C	PM NV/RSTA Fort Monmouth, NJ	0.784	0.000		0.100		0.000		0.100	Continuing	Continuing	0
Program Management (Government Matrix)	C	Various Location could not be determined.	1.009	0.000		0.315		0.000		0.315	Continuing	Continuing	0
Subtotal			4.616	0.000		0.765		0.000		0.765			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604823A: <i>FIREFINDER</i>	PROJECT L86: <i>LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	37.665	0.000	5.969	0.000	5.969			0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604823A: <i>FIREFINDER</i>	PROJECT L86: <i>LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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 Test				#	#																							
Customer Test				#																								
Limited User Test						#																						
Milestone C						#																						
Initial Operational Test and Evaluation (IOT&E)										#																		
Award Urgent Contract Action (UCA) for V3 QRC systems			#																									
First Unit Equipped (FUE) (V3)						#																						
Full Rate Production Decision												#																
Initiate 107mm Rocket Detection and Radar Networking Efforts and Testing									#	#	#	#																

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604823A: <i>FIREFINDER</i>	PROJECT L86: <i>LIGHTWEIGHT COUNTER MORTAR RADAR (LCMR)</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Development Test	4	2009	1	2010
Customer Test	4	2009	4	2009
Limited User Test	2	2010	2	2010
Milestone C	2	2010	2	2010
Initial Operational Test and Evaluation (IOT&E)	2	2011	2	2011
Award Urgent Contract Action (UCA) for V3 QRC systems	3	2009	3	2009
First Unit Equipped (FUE) (V3)	3	2010	3	2010
Full Rate Production Decision	4	2011	4	2011
Initiate 107mm Rocket Detection and Radar Networking Efforts and Testing	4	2010	3	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604823A: <i>FIREFINDER</i>				PROJECT L88: <i>ENHANCED AN/TPQ 36</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
L88: <i>ENHANCED AN/TPQ 36</i>	45.556	20.227	18.767	0.000	18.767	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u>											
<p>The Enhanced AN/TPQ-36 (EQ-36) is a highly mobile radar system designed to classify targets for automatic first-round location of mortar, cannon and rocket enemy fires and to provide observed fires from friendly units. The EQ-36 will provide 90 and 360 degree coverage against the entire threat set. This program will leverage the latest in technology design to provide increased range, reduced crew size, as well as increased reliability, availability, and maintainability. The EQ-36 will provide digital communications and be interoperable with future Battle Command Systems. Increment 2 will provide improved 360 degree capabilities against rocket and artillery with Integrated Fire Protection Capability (IFPC) interoperability and a quick disconnect capability for the 60kw generator. FY2011 funds will complete development, integration, and conduct of Limited User Test (LUT) for Increment 2 capabilities.</p>											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Primary development and test of four (4) Enhanced AN/TPQ-36 NRE Increment 1 systems, and associated Program Management support to meet the Army's counterfire requirements. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base							30.997	7.868	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604823A: <i>FIREFINDER</i>	PROJECT L88: <i>ENHANCED AN/TPQ 36</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Increment 2 development, integration, test and test fixes to include associated PMO and support costs. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		9.868	4.594	11.557	0.000	11.557
Program #3 Test activities to include Limited User Test (LUT). Efforts include cost of range times at YUMA Proving Ground (YPG), gun crews,ammunition, as well as associated PMO and support costs. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		4.691	7.096	7.126	0.000	7.126

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.563	0.000	0.000	0.000
Program #5 Long Range Counterfire Radar <i>FY 2009 Accomplishments:</i> FY 2009		0.000	0.106	0.084	0.000	0.084

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army										DATE: February 2010	
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B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						45.556	20.227	18.767	0.000	18.767	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>B05310 Enhanced AN/TPQ-36</i>	96.145	220.050	275.867	20.000	295.867	398.382	507.066	593.048	608.054	Continuing	Continuing
D. Acquisition Strategy											
<p>The Enhanced AN/TPQ-36 (EQ-36) leverages technology developed in the Multi-Mission Radar Advanced Technology Objective (ATO) program incorporating the latest antenna technology into the EQ-36. In order to field the EQ-36 capability to the Warfighter in the most expeditious manner with the least amount of risk, the EQ-36 will be produced in two increments based on two tiers of technical threshold requirements. Increment 1 capabilities are planned to be fielded as a replacement to the AN/TPQ-36 and AN/TPQ-37 radar systems. Increment 2 capabilities will provide increased performance over Increment 1 and will meet all of the user's threshold requirements. A contract was awarded in 4QFY06 based on full and open competition. A Limited Procurement Milestone C approval was received in July 2008 which supported use of OCO and Base budget funds to meet urgent operational requirements. An option for initial production units was exercised in July 08 in order to support an Operational Needs Statement (ONS). Additional systems are being procured in FY10 to support additional theater requirements. An update to the Milestone C approval will be conducted and a follow-on production contract will be competitively awarded in FY11. The system will eventually replace all of the AN/TPQ-36 and AN/TPQ-37 legacy systems in the fleet.</p>											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604823A: <i>FIREFINDER</i>	PROJECT L88: <i>ENHANCED AN/TPQ 36</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Primary Hardware Development	C/CPIF	Lockheed Martin Syracuse, NY	120.363	9.697		8.907		0.000		8.907	Continuing	Continuing	0
Ancillary Equipment	C	Various Location could not be determined.	3.571	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Radar Environmental Simulators (RES)	C	Oakridge National Labs Oak Ridge, TN	4.500	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Systems Engineering (Contractor)	C/FP	Various Location could not be determined.	3.798	0.550		0.550		0.000		0.550	Continuing	Continuing	0
Systems Engineering (Government)	C	Various Location could not be determined.	0.726	0.630		0.630		0.000		0.630	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.563		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			132.958	11.440		10.087		0.000		10.087			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604823A: <i>FIREFINDER</i>				PROJECT L88: <i>ENHANCED AN/TPQ 36</i>					

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Development Support (Government)	C	Various Location could not be determined.	2.303	1.000		0.950		0.000		0.950	Continuing	Continuing	0
Development Support (Contractor)	C	Various Location could not be determined.	1.636	0.350		0.250		0.000		0.250	Continuing	Continuing	0
Subtotal			3.939	1.350		1.200		0.000		1.200			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support (Government)	C	Various Location could not be determined.	0.325	7.096		7.126		0.000		7.126	Continuing	Continuing	0
Subtotal			0.325	7.096		7.126		0.000		7.126			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604823A: <i>FIREFINDER</i>				PROJECT L88: <i>ENHANCED AN/TPQ 36</i>					

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management (Contractor)	C/FP	Various Location could not be determined.	1.982	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Program Management (Government)	C	Various Location could not be determined.	0.702	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Program Management	C	PM NV/RSTA Fort Monmouth, NJ	2.116	0.235		0.270		0.000		0.270	Continuing	Continuing	0
Subtotal			4.800	0.235		0.270		0.000		0.270			0.000

Remarks

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	142.022	20.121	18.683	0.000	18.683			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604823A: <i>FIREFINDER</i>	PROJECT L88: <i>ENHANCED AN/TPQ 36</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Dev Test/Operational Test (DT/OT) /Limited User Test (LUT) Increment 1				#	#	#	#																					
DT Increment 2					#	#																						
Limited User Test (LUT) #2												#																
First Unit Equipped (FUE) - IP Systems					#																							
FY09/FY10 QRC Production					#	#	#	#	#	#	#	#	#	#	#													
Milestone C Update									#																			
Competitive Production Efforts									#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604823A: <i>FIREFINDER</i>	PROJECT L88: <i>ENHANCED AN/TPQ 36</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Dev Test/Operational Test (DT/OT) /Limited User Test (LUT) Increment 1	4	2009	3	2010
DT Increment 2	1	2010	2	2010
Limited User Test (LUT) #2	3	2011	3	2011
First Unit Equipped (FUE) - IP Systems	1	2010	1	2010
FY09/FY10 QRC Production	1	2010	3	2012
Milestone C Update	1	2011	1	2011
Competitive Production Efforts	1	2011	3	2015

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604827A: <i>Soldier Systems - Warrior Dem/Val</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	20.086	19.683	20.886	0.000	20.886	22.905	15.421	10.738	15.771	Continuing	Continuing
S56: <i>MOUNTED SOLDIER</i>	15.297	19.683	20.886	0.000	20.886	22.905	15.421	10.738	15.771	Continuing	Continuing
S65: <i>SOLDIER POWER</i>	4.789	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element contains Project S56 for Mounted Warrior Soldier System (MWSS). MWSS provides combat crewmembers and vehicle commanders in the Current and Future force with increased mission effectiveness on the network centric battlefield in the areas of lethality, command and control, communications, survivability, mobility, and sustainability. MWSS provides the dismounted and mounted combat crewmembers increased capabilities to conduct offensive and defensive operations by providing uninterrupted viewing of their platform and dismounted Soldiers. MWSS Helmet Mounted Display extends fire control information to vehicle crewmembers while they are standing up in, or viewing out of the hatch allowing them to maintain immediate situational awareness of their direct battle space, while simultaneously controlling inter-netted fires, vehicle, or dismounted Soldiers.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	17.730	19.786	21.036	0.000	21.036
Current President's Budget	20.086	19.683	20.886	0.000	20.886
Total Adjustments	2.356	-0.103	-0.150	0.000	-0.150
• Congressional General Reductions		-0.103			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	2.356	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Adjustments to Budget Years	0.000	0.000	-0.150	0.000	-0.150

Change Summary Explanation

FY2009-Reprogramming to properly align Congressional Add for Acid Alkaline Direct Methanol Fuel Technology in project S56.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604827A: <i>Soldier Systems - Warrior Dem/Val</i>				PROJECT S56: <i>MOUNTED SOLDIER</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S56: <i>MOUNTED SOLDIER</i>	15.297	19.683	20.886	0.000	20.886	22.905	15.421	10.738	15.771	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>Mounted Soldier System (MSS) provides an integrated suite of enhancements to the combat vehicle crew member and commander to address identified capability gaps in their ability to fight, communicate, and maneuver across the full spectrum of operations. The MSS consists of lightweight, modular, and mission tailorable equipment and Command, Control, Communications and Computer (C4) devices worn, carried, or used by mounted crew members in performance of their missions. Major components include an improved Combat Vehicle Crewmember Helmet (CVCH) with heads up display, an untethered (wireless) communications system, and a microclimate cooling system. Other integral components include a Mounted Soldier over-garment and cold weather gloves, Chemical/Biological/Radiological/Nuclear (CBRN) protection, multi-threat eye protection, ballistic protection, flash/flame protection, and individual weapon holster. The MSS increases mission effectiveness by improving Command and Control and Situational Awareness while increasing crewmember survivability, endurance, and comfort.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 FY09: Began developmental engineering, prototyping, manufacturing, and systems engineering, assessment, contractor testing and program management support for Mounted Soldier System (MSS) use in Heavy Brigades. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base							14.934	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604827A: <i>Soldier Systems - Warrior Dem/Val</i>	PROJECT S56: <i>MOUNTED SOLDIER</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 FY10 and FY11: Continue developmental engineering, prototyping, manufacturing, and systems engineering, assessment, contractor testing and program management support for MSS for use in Heavy and Stryker Brigade Combat Teams. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	16.529	17.443	0.000	17.443
Program #3 FY09: Began Governmental Test and Evaluation (T&E) activities <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		0.363	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604827A: <i>Soldier Systems - Warrior Dem/Val</i>	PROJECT S56: <i>MOUNTED SOLDIER</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 FY10 and FY11: Continue Governmental Test and Evaluation (T&E)activities including Developmental Tests, Limited User Tests, and Operational Tests. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	2.500	3.443	0.000	3.443
Program #5 Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009		0.000	0.654	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604827A: <i>Soldier Systems - Warrior Dem/Val</i>			PROJECT S56: <i>MOUNTED SOLDIER</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						15.297	19.683	20.886	0.000	20.886	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>MS OPA3 M80600000</i>	0.000	1.082	38.872	0.000	38.872	58.505	124.797	16.717	0.000	0	239.973
D. Acquisition Strategy											
<p>The MSS acquisition roadmap is comprised of two increments. Increment I is documented in the Mounted Warrior Soldier System (MWSS) Capability Production Document (CPD) and was equipped to the 4/9 IN BN of the 4th SBCT during FY07/08 to maintain tethered voice communications, tethered access to host platform displays, sensors, and sights via a tethered helmet mounted display (HMD). Increment II is documented in the Mounted Soldier System (MSS) Capability Development Document (CDD). Increment II (MSS) implements a strategy of time-phased development driven by technology maturity, vehicle availability, and user prioritization. Increment II adds wireless voice communications and Micro-Climate cooling. The acquisition approach is centered around vehicle kit development and integration since the planned MSS subsystems are using relatively mature technology. The MSS program takes advantage of components available from other Government agencies, and Commercial-Off-the-Shelf (COTS) components and technologies as available.</p>											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604827A: <i>Soldier Systems - Warrior Dem/Val</i>	PROJECT S56: <i>MOUNTED SOLDIER</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Develop and Engineer Mounted Soldier System Wireless Comms	C/FFP	Thales Communications Inc., Clarksburg, MD	0.000	0.100		0.000		0.000		0.000	Continuing	Continuing	0
Develop and Engineer Mounted Soldier System Microclimate Cooling	C/FFP	Carleton Technologies Inc.	0.000	0.100		0.000		0.000		0.000	Continuing	Continuing	0
Develop and Engineer Mounted Soldier System Display	C/FFP	Rockwell Collins Carlsbad, CA	0.000	0.100		0.000		0.000		0.000	Continuing	Continuing	0
Develop and Engineer Mounted Soldier System	C/Various	Various Location could not be determined.	23.409	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			23.409	0.300		0.000		0.000		0.000			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Mounted Soldier Support	C	Various Location could not be determined.	0.601	11.547		10.005		0.000		10.005	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604827A: <i>Soldier Systems - Warrior Dem/Val</i>				PROJECT S56: <i>MOUNTED SOLDIER</i>					

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.601	11.547		10.005		0.000		10.005			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Various Testing Organizations	C	ATEC TTC/YPG/DTC/ EPG/ARL-SLAD, etc.	2.000	2.500		3.443		0.000		3.443	Continuing	Continuing	0
Subtotal			2.000	2.500		3.443		0.000		3.443			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604827A: <i>Soldier Systems - Warrior Dem/Val</i>				PROJECT S56: <i>MOUNTED SOLDIER</i>					

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PM Soldier Warrior Management/Support of MSSprogram	C	PM Soldier Warrior Ft. Belvoir, VA	0.000	4.682		7.438		0.000		7.438	Continuing	Continuing	0
SBIR/SBTRR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.654		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.000	5.336		7.438		0.000		7.438			0.000

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	26.010	19.683		20.886		0.000		20.886			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604827A: <i>Soldier Systems - Warrior Dem/Val</i>	PROJECT S56: <i>MOUNTED SOLDIER</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
MSS Increment II - Milestone C									#																			
MSS Increment II - LRIP										#	#	#	#															
Independent Operational Test and Evaluation (IOTE)										#	#	#																
MSS Increment II - Production													#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#
MSS Increment II - EMD Improvements																	#	#	#	#	#	#	#	#	#	#	#	#

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604827A: <i>Soldier Systems - Warrior Dem/Val</i>	PROJECT S56: <i>MOUNTED SOLDIER</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
MSS Increment II - Milestone C	2	2011	2	2011
MSS Increment II - LRIP	3	2011	2	2012
Independent Operational Test and Evaluation (IOTE)	4	2011	2	2012
MSS Increment II - Production	3	2012	3	2015
MSS Increment II - EMD Improvements	1	2013	3	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604827A: <i>Soldier Systems - Warrior Dem/Val</i>				PROJECT S65: <i>SOLDIER POWER</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S65: <i>SOLDIER POWER</i>	4.789	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
Congressional add FY09 support the M-25 Defense Acquisition Challenge Program Fuel Cell by focusing on solutions that reduce the M-25 system weight and complexity, and increase energy density to accomplish the most lightweight and compact power source possible. Soldier Fuel Cells will provide more power in a smaller, lighter weight package compared to batteries thereby lightening the Soldiers' carried load.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Congressional adds are combined to provide developmental and system improvement efforts to the M-25 and Acid Alkaline Soldier Fuel Cell Systems. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO							4.789	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604827A: <i>Soldier Systems - Warrior Dem/Val</i>		PROJECT S65: <i>SOLDIER POWER</i>				
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Accomplishments/Planned Programs Subtotals				4.789	0.000	0.000	0.000	0.000
<u>C. Other Program Funding Summary (\$ in Millions)</u> N/A								
<u>D. Acquisition Strategy</u> N/A								
<u>E. Performance Metrics</u> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.								

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604827A: <i>Soldier Systems - Warrior Dem/Val</i>				PROJECT S65: <i>SOLDIER POWER</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Development and System Improvements to M-25 and Acid Alkaline	C	Wilmington DE	1.545	4.282		0.000		0.000		0.000	0	3.485	0
Subtotal			1.545	4.282		0.000		0.000		0.000	0.000	3.485	0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PM Ground Soldier and Power support	C	Various Location could not be determined.	0.000	0.374		0.000		0.000		0.000	0	0	0
Subtotal			0.000	0.374		0.000		0.000		0.000	0.000	0.000	0.000

Remarks

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		1.545	4.656	0.000	0.000	0.000	3.485	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army							DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604827A: <i>Soldier Systems - Warrior Dem/Val</i>			PROJECT S65: <i>SOLDIER POWER</i>			
	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	
Remarks									

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	32.261	115.811	53.624	0.000	53.624	5.362	5.144	5.235	5.316	Continuing	Continuing
509: <i>LIGHTWEIGHT 155M HOWITZER</i>	5.396	5.615	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
516: <i>PALADIN/FAASV</i>	26.865	110.196	53.624	0.000	53.624	5.362	5.144	5.235	5.316	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element supports the Joint Light Weight 155mm Howitzer (LW155) and the Paladin/FAASV Improvement programs. The LW155, a joint program with the Marine Corps, provides the replacement for the current 1970's vintage M198, 155mm Towed Howitzer. The LW155 provides significant improvement in strategic and tactical mobility over the M198. Project 509 supports Towed Artillery Digitization (TAD) Block II, a software upgrade to the digital fire control system for the M777A2(LW155). The Paladin Integrated Management (PIM) Program which began in FY08 is incorporating a fleet management strategy that addresses obsolescence, reliability, maintainability, and supportability faced on the current fleet platforms (M109A6 and M992A2). The focus is on the following obsolescence areas: power train, suspension, power management, and electronic sub-systems. This allows the opportunity to touch the following areas: next generation fire control system, navigation system, communication/data transfer, Vehicle Health Management System (VHMS), and improved gun drive system. These system level improvements enhance the Paladin mission effectiveness, increase reliability as well as reduce life cycle costs and address electronic obsolescence with the obsolete components and provide the Army with a more viable platform which meets the needs of the maneuver commander out till 2050.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	33.190	23.318	5.712	0.000	5.712
Current President's Budget	32.261	115.811	53.624	0.000	53.624
Total Adjustments	-0.929	92.493	47.912	0.000	47.912
• Congressional General Reductions		-0.607			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		93.100			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.929	0.000			
• Adjustments to Budget Years	0.000	0.000	47.912	0.000	47.912

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>	
<u>Change Summary Explanation</u> Change Summary Explanation: Funding - FY 2011: Funding increase to support the Paladin/FAASV program.		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>				PROJECT 509: <i>LIGHTWEIGHT 155M HOWITZER</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
509: <i>LIGHTWEIGHT 155M HOWITZER</i>	5.396	5.615	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u>											
The Lightweight 155mm (LW155) Towed Howitzer, a jointly managed program with the Marine Corps, replaces the M198, 155mm Towed Howitzer. LW155 provides significant strategic and tactical mobility improvements. Project 509 supports Towed Artillery Digitization (TAD) Block II, an upgrade to the digital fire control system for the M777A2 (LW155).											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							5.241	5.458	0.000	0.000	0.000
Funds Matrix Support Software Engineers for TAD Block II Software Development											
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Program #2							0.155	0.157	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>	PROJECT 509: <i>LIGHTWEIGHT 155M HOWITZER</i>

B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR)					
<i>FY 2009 Accomplishments:</i> FY 2009					
<i>FY 2010 Plans:</i> FY 2010					
<i>FY 2011 Base Plans:</i> FY 2011 Base					
<i>FY 2011 OCO Plans:</i> FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	5.396	5.615	0.000	0.000	0.000

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>Procurement, Marine Corps LW155 Towed Howitzer with TAD Prod, BLIN 218500</i>	188.536	61.420	10.413	103.600	114.013	5.600	5.600	0.000	0.000	0	375.169
• Ord. #2: <i>Procurement, WTCV, Army, LW155 with TAD G01700</i>	120.871	157.415	0.000	62.000	62.000	0.000	0.000	0.000	0.000	0	340.286

D. Acquisition Strategy
Towed Artillery Digitization (TAD) is an evolutionary acquisition strategy for the Lightweight 155mm Towed Howitzer (LW155). Block 0 consisted of "glass and iron" optical sights as the weapon's fire control. Block 1 TAD incorporated digitized aiming and pointing which increased accuracy and enabled a battery of howitzers to emplace and engage the enemy within 2 to 3 minutes as opposed to 15 to 20 minutes. Block 1a added the ability for the LW155 Howitzer to fire the XM982 Excalibur Precision Munition. Funding identified above

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>	PROJECT 509: <i>LIGHTWEIGHT 155M HOWITZER</i>
<p>will be used to upgrade to Block 2, which is the objective TAD configuration. The primary benefit of TAD Block 2 will be the addition of mission processing capability at the platform, enabling enhanced responsiveness and flexibility to the battlefield commander. It will also integrate a Muzzle Velocimeter for increased accuracy.</p> <p><u>E. Performance Metrics</u> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>				PROJECT 509: <i>LIGHTWEIGHT 155M HOWITZER</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Funds Matrix Support Software Engineers for TAD Software Development	C	ARDEC Picatinny Arsenal, NJ	0.000	5.458		0.000		0.000		0.000	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.157		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.000	5.615		0.000		0.000		0.000			0.000

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
		0.000	5.615	0.000	0.000	0.000		

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>	PROJECT 509: <i>LIGHTWEIGHT 155M HOWITZER</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Component Qualification Testing				#	#																							
Coding and Unit Test					#	#																						
Coding Complete						#																						
Integration and Engineering Evaluation Test						#	#																					
Software Formal Qualification Test							#																					

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>	PROJECT 509: <i>LIGHTWEIGHT 155M HOWITZER</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Component Qualification Testing	4	2009	1	2010
Coding and Unit Test	1	2010	2	2010
Coding Complete	2	2010	2	2010
Integration and Engineering Evaluation Test	2	2010	3	2010
Software Formal Qualification Test	3	2010	3	2010

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>				PROJECT 516: <i>PALADIN/FAASV</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
516: <i>PALADIN/FAASV</i>	26.865	110.196	53.624	0.000	53.624	5.362	5.144	5.235	5.316	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>The Paladin Integrated Management (PIM) process is incorporating a fleet management strategy that addresses obsolescence, reliability, maintainability, and supportability faced on the current fleet platforms (M109A6 and M992A2). The PIM process focuses on the following obsolescence areas: power train, suspension, power management, and electronic sub-systems. These system level changes address obsolescence and sustainment issues on the current fleet, increase reliability and maneuverability as well as reduce life cycle costs. The PIM process provides the Army with a more viable platform which meets the needs of the maneuver commander out till 2050.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1							25.309	76.945	30.223	0.000	30.223
Paladin Integrated Management (PIM) Development											
<i>FY 2009 Accomplishments:</i>											
FY 2009											
<i>FY 2010 Plans:</i>											
FY 2010											
<i>FY 2011 Base Plans:</i>											
FY 2011 Base											
<i>FY 2011 OCO Plans:</i>											
FY 2011 OCO											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>	PROJECT 516: <i>PALADIN/FAASV</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #2		1.152	18.492	11.674	0.000	11.674
Test and Evaluation						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						
Program #3		0.404	14.379	11.727	0.000	11.727
Program management						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #4	0.000	0.380	0.000	0.000	0.000
Small Business Innovative Research/Small Business Technology Transfer Program					
<i>FY 2009 Accomplishments:</i>					
FY 2009					
<i>FY 2010 Plans:</i>					
FY 2010					
<i>FY 2011 Base Plans:</i>					
FY 2011 Base					
<i>FY 2011 OCO Plans:</i>					
FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	26.865	110.196	53.624	0.000	53.624

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>PA, WTCV, Paladin/FAASV</i>	48.728	42.608	105.277	0.000	105.277	151.335	239.731	449.773	448.999	1,621.243	3,107.694

D. Acquisition Strategy

The PIM process is part of the overall HBCT fleet management strategy for the Paladin/Field Artillery Ammunition Support Vehicle (FAASV) to address ongoing obsolescence issues and ensure long term sustainment of these systems. The PIM process leverages both Government and Contractor capabilities in developing a system's level approach to address the obsolescence issues through the integration of proven Bradley and Future Combat Systems(FCS) common components (power train, suspension and electronics) into a new chassis. To obtain the best value for the Army, PM Fire Support Platform (FSP) is using the Original Equipment Manufacturer (OEM) as the system integrator for developing and producing these Paladin/FAASV Integrated Management (PIM) vehicles. The PIM process development/integration effort began in FY08 utilizing a System Technical Support (STS) work directive that covered System Functional Review (SFR), Preliminary Design Review (PDR) and Critical Design Review (CDR) system engineering activities and early procurement of key

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>	PROJECT 516: <i>PALADIN/FAASV</i>
<p>components to support the building of 5 Howitzers/2 FAASVs that will undergo Government Testing in FY10-11. In FY09, the PM FSP awarded a cost reimbursable R&D contract for the completion of PIM process development efforts and the fabrication, assembly and delivery of 7 prototypes (5 howitzers/2 FAASV) for Government testing (Development Testing, Limited User Ttest, and Live Fire). In FY11 the PM FSP will award a contract for the fabrication and delivery of 18 PIM process sets (18 Paladins and 18 FAASV's) as part of Low Rate Initial Production (LRIP) of which 4 sets will be used for Initial Operational Test (IOT) testing.</p> <p>E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>				PROJECT 516: <i>PALADIN/FAASV</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Component Design and Software Development	C/CPFF	Northrop Grumman Carson, CA	5.027	0.000		0.000		0.000		0.000	0	5.027	6.250
System Integration	C/CPFF	BAE Systems York, Pa	4.834	0.000		0.000		0.000		0.000	0	4.569	7.304
TDP Development	C	Other Gov't Agencies Location could not be determined.	0.452	0.000		0.000		0.000		0.000	Continuing	Continuing	.452
Software Development & System Integration	C	TACOM-ARDEC Picatinny, NJ	10.990	0.000		0.000		0.000		0.000	Continuing	Continuing	4.136
PIM Development	C/CPFF	BAE Location could not be determined.	0.000	77.325		30.223		0.000		30.223	Continuing	Continuing	0
Initiate PIM IPT Structure	C/CPFF	BAE/Northrop Grumman Location could not be determined.	1.688	0.000		0.000		0.000		0.000	0	1.327	.966
Subtotal			22.991	77.325		30.223		0.000		30.223			19.108

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>				PROJECT 516: <i>PALADIN/FAASV</i>					

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Logistics	C	TACOM-ACALA Moline, IL	0.229	0.000		0.000		0.000		0.000	0	.229	.370
TARDEC	C	Nothing entered for Activity and Location. Location could not be determined.	0.367	0.000		0.000		0.000		0.000	0	.367	0
Engineering	C	Various Location could not be determined.	0.000	0.000		0.000		0.000		0.000	0	.820	0
Subtotal			0.596	0.000		0.000		0.000		0.000	0.000	1.416	0.370

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Component Level Testing	C	TACOM-ARDEC Picatinny, NJ	0.953	0.000		0.000		0.000		0.000	Continuing	Continuing	1.158
System Level Testing	C	Various OGAs Location could not be determined.	0.930	18.492		11.674		0.000		11.674	Continuing	Continuing	4.022

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>				PROJECT 516: <i>PALADIN/FAASV</i>					
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			1.883	18.492		11.674		0.000		11.674			5.180
Remarks													
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO Support	C	PM Paladin/ FAASV Picatinny, NJ/ TACOM	1.213	14.379		11.727		0.000		11.727	Continuing	Continuing	.995
Subtotal			1.213	14.379		11.727		0.000		11.727			0.995
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			26.683	110.196		53.624		0.000		53.624			25.653
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>	PROJECT 516: <i>PALADIN/FAASV</i>
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Contractor Testing		#	#	#	#	#																						
Government Development Test			#	#	#	#	#	#	#																			
Milestone C (Dec 10 Objective - Jun 11 Threshold)								#	#	#																		
Low Rate Initial Production Contract									#	#	#	#	#	#	#	#												
Low Rate Initial Production Deliveries													#	#	#	#	#	#	#	#								

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604854A: <i>Artillery Systems - EMD</i>	PROJECT 516: <i>PALADIN/FAASV</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Contractor Testing	2	2009	2	2010
Government Development Test	3	2009	1	2011
Milestone C (Dec 10 Objective - Jun 11 Threshold)	4	2010	2	2011
Low Rate Initial Production Contract	2	2011	4	2012
Low Rate Initial Production Deliveries	2	2012	4	2013

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604869A: <i>Patriot/MEADS Combined Aggregate Program (CAP)</i>							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	454.665	566.215	467.139	0.000	467.139	408.012	325.184	240.018	75.585	Continuing	Continuing
M06: <i>PATRIOT/MEADS COMBINED AGGREGATE PROGRAM (CAP)</i>	454.665	566.215	467.139	0.000	467.139	408.012	325.184	240.018	75.585	Continuing	Continuing

A. Mission Description and Budget Item Justification

Medium Extended Air Defense System (MEADS) is a tri-national co-development program among the United States, Germany, and Italy to replace the U.S. PATRIOT air defense systems, PATRIOT and HAWK systems in Germany, and NIKE Hercules systems in Italy. Participating countries will sign a Memorandum Of Understanding (MOU) for each successive program phase. The NATO MEADS Management Agency (NAMEADSMA) is the North Atlantic Treaty Organization (NATO) contracting authority providing management of the MEADS program on behalf of the participating nations and is responsible for managing the system acquisition. The U.S. and Italy signed the Design and Development (D&D) MOU on September 24, 2004, and September 27, 2004, respectively. The NAMEADSMA awarded the MEADS D&D letter contract to MEADS International Inc. on September 28, 2004, initiating the MEADS D&D phase. The MOU was amended in March 2005 by the U.S. and Italy to allow the German Parliament additional time for their signature decision and on April 22, 2005 Germany signed the MOU. NAMEADSMA awarded a \$3.4 billion D&D definitized contract to MEADS International Inc. on May 31, 2005. Within the PATRIOT/MEADS Combined Aggregate Program (CAP) there are two synergistic efforts: an international MEADS development effort managed by NAMEADSMA, and a U.S. effort to inject U.S.-specific capability requirements into the MEADS Major End Items (MEIs). MEADS will provide joint and coalition forces, critical asset and defended area protection against multiple and simultaneous attacks by short to medium range ballistic missiles, cruise missiles, unmanned aerial vehicles and tactical air-to-surface missiles. MEADS will have a netted and distributed architecture with modular components to increase survivability and flexibility of employment in a number of operational configurations. The objective MEADS Fire Unit, which will be scalable and tailorable to operational requirements, will consist of: two Battle Management Command, Control, Communication, Computers and Intelligence (BMC4I) tactical operations center (TOC), enabling distributed system operations and Beyond-Line-of-Site (BLOS) engagements for maximum protection of supported forces by engaging at longer ranges; six near-vertical launchers capable of transporting and launching up to eight missiles; three launcher reloaders; the PAC-3 Missile Segment Enhancement (MSE); an ultra-high frequency (UHF) Surveillance Radar (SR) that provides 360-degree coverage and near-range to long-range detection of low radar cross-section targets; and two X-band Multifunction Fire Control Radars (MFCR) that provide 360-degree coverage and are designed for high-precision handover to the in-flight missile, discrimination capabilities, and short-range target detection and horizon search. In addition, MEADS will provide significant improvements in strategic deployability, transportability, mobility and maneuverability. Its substantially reduced lift requirements enable MEADS to be deployed rapidly with essential combat loads via inter/intra-theater land, sea, and airlift anywhere in the world. MEADS will provide Combatant Commanders with an Air Missile Defense (AMD) system that is fully transportable by C-130 aircraft, thus increasing strategic and tactical mobility. Further, its decreased size/weight and ability to conduct rapid march order and system emplacement will enhance maneuverability, thereby providing better AMD protection to maneuvering forces. The PAC-3 system is continuously being improved via hardware and software changes. The latest missile improvement is the MSE and has been accepted as the baseline missile for MEADS. It is being developed by the U.S. for PATRIOT to meet U.S. operational requirements. The MSE will provide a more agile and lethal

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604869A: <i>Patriot/MEADS Combined Aggregate Program (CAP)</i>
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interceptor that increases the engagement envelope/defended area of PATRIOT and the MEADS systems. The MSE improves upon the current PAC-3 missile capability with a higher performance solid rocket motor, modified lethality enhancer, more responsive control surfaces, upgraded guidance software, and insensitive munitions improvements.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	429.846	569.182	522.789	0.000	522.789
Current President's Budget	454.665	566.215	467.139	0.000	467.139
Total Adjustments	24.819	-2.967	-55.650	0.000	-55.650
• Congressional General Reductions		-2.967			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	36.857	0.000			
• SBIR/STTR Transfer	-12.038	0.000			
• Adjustments to Budget Years	0.000	0.000	-55.650	0.000	-55.650

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604869A: <i>Patriot/MEADS Combined</i> <i>Aggregate Program (CAP)</i>				PROJECT M06: <i>PATRIOT/MEADS COMBINED</i> <i>AGGREGATE PROGRAM (CAP)</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
M06: <i>PATRIOT/MEADS COMBINED</i> <i>AGGREGATE PROGRAM (CAP)</i>	454.665	566.215	467.139	0.000	467.139	408.012	325.184	240.018	75.585	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Medium Extended Air Defense System (MEADS) is a tri-national co-development program among the United States, Germany, and Italy to replace the U.S. PATRIOT air defense systems, PATRIOT and HAWK systems in Germany, and NIKE Hercules systems in Italy. Participating countries will sign a Memorandum Of Understanding (MOU) for each successive program phase. The NATO MEADS Management Agency (NAMEADSMA) is the North Atlantic Treaty Organization (NATO) contracting authority providing management of the MEADS program on behalf of the participating nations and is responsible for managing the system acquisition. The U.S. and Italy signed the Design and Development (D&D) MOU on September 24, 2004, and September 27, 2004, respectively. The NAMEADSMA awarded the MEADS D&D letter contract to MEADS International Inc. on September 28, 2004, initiating the MEADS D&D phase. The MOU was amended in March 2005 by the U.S. and Italy to allow the German Parliament additional time for their signature decision and on April 22, 2005 Germany signed the MOU. NAMEADSMA awarded a \$3.4 billion D&D definitized contract to MEADS International Inc. on May 31, 2005. Within the MEADS program there are two synergistic efforts: an international MEADS development effort managed by NAMEADSMA, and a U.S. effort to inject U.S.-specific capability into the MEADS Major End Items (MEIs). MEADS will provide joint and coalition forces, critical asset and defended area protection against multiple and simultaneous attacks by short to medium range ballistic missiles, cruise missiles, unmanned aerial vehicles and tactical air-to-surface missiles. MEADS will have a netted and distributed architecture with modular components to increase survivability and flexibility of employment in a number of operational configurations. The objective MEADS Fire Unit, which will be scalable and tailorable to operational requirements, will consist of: two Battle Management Command, Control, Communication, Computers and Intelligence (BMC4I) tactical operations center (TOC), enabling distributed system operations and Beyond-Line-of-Site (BLOS) engagements for maximum protection of supported forces by engaging at longer ranges; six near-vertical launchers capable of transporting and launching up to eight missiles; three launcher reloaders; the PAC-3 Missile Segment Enhancement (MSE); an ultra-high frequency (UHF) Surveillance Radar (SR) that provides 360-degree coverage and near-range to long-range detection of low radar cross-section targets; and two X-band Multifunction Fire Control Radars (MFCR) that provide 360-degree coverage and are designed for high-precision handover to the in-flight missile, discrimination capabilities, and short-range target detection and horizon search. In addition, MEADS will provide significant improvements in strategic deployability, transportability, mobility and maneuverability. Its substantially reduced lift requirements enable MEADS to be deployed rapidly with essential combat loads via inter/intra-theater land, sea, and airlift anywhere in the world. MEADS will provide Combatant Commanders with an Air Missile Defense (AMD) system that is fully transportable by C-130 aircraft, thus increasing strategic and tactical mobility. Further, its decreased size/weight and ability to conduct rapid march order and system emplacement will enhance maneuverability, thereby providing better AMD protection to maneuvering forces. The PAC-3 system is continuously being improved via hardware and software changes. The latest missile improvement is the Missile Segment Enhancement (MSE) and has been accepted as the baseline missile for MEADS. It is being developed by the U.S. for PATRIOT to meet U.S. operational requirements. The MSE will provide a more agile and lethal interceptor that increases the engagement envelope/defended area of PATRIOT and the MEADS systems. The MSE improves upon the current PAC-3 missile capability with a higher performance solid rocket

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604869A: <i>Patriot/MEADS Combined Aggregate Program (CAP)</i>	PROJECT M06: <i>PATRIOT/MEADS COMBINED AGGREGATE PROGRAM (CAP)</i>				
motor, modified lethality enhancer, more responsive control surfaces, upgraded software, and insensitive munitions improvements. In 2011 PAC-3 will be reported under Program Element 0605456A.						
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Continue the U.S. contribution to the North Atlantic Treaty Organization (NATO) MEADS Management Agency (NAMEADSMA) International Program Office operational (prime contract) and administrative (support contracts/personnel/travel) budgets to manage the Design and Development (D&D) Phase contract to design, build, test and evaluate the production representative MEADS hardware. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		380.121	421.828	393.542	0.000	393.542
Program #2 Implement program integration efforts to support transition from PATRIOT to development and fielding of US MEADS capability. This includes assessment of performance against US Threat and to identify gaps / shortfalls; development and management of US MEADS programs to address unique US requirements; MEADS-IBCS compatibility; development of a US MEADS testbed, US MEADS sensor performance upgrades; PAC-3 CRI Compatibility; and US MEADS Production and Fielding efforts (required materiel release certifications, planning for US MEADS IOT&E , and required US logistics facilitization and training efforts).		19.178	52.576	47.509	0.000	47.509

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604869A: <i>Patriot/MEADS Combined</i> <i>Aggregate Program (CAP)</i>	PROJECT M06: <i>PATRIOT/MEADS COMBINED</i> <i>AGGREGATE PROGRAM (CAP)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3 Continue management, support and salaries for the national and international program offices.		3.611	8.236	8.588	0.000	8.588
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4		51.755	67.721	17.500	0.000	17.500

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604869A: <i>Patriot/MEADS Combined</i> <i>Aggregate Program (CAP)</i>	PROJECT M06: <i>PATRIOT/MEADS COMBINED</i> <i>AGGREGATE PROGRAM (CAP)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Includes US only efforts to support Exciter & Exportable Missile Model. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #5 Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	15.854	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army										DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604869A: <i>Patriot/MEADS Combined</i> <i>Aggregate Program (CAP)</i>				PROJECT M06: <i>PATRIOT/MEADS COMBINED</i> <i>AGGREGATE PROGRAM (CAP)</i>					
B. Accomplishments/Planned Program (\$ in Millions)												
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
Accomplishments/Planned Programs Subtotals						454.665	566.215	467.139	0.000	467.139		
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost	
• Ord. #1: <i>SSN C53101, MSE Missile</i>	0.000	0.000	0.000	0.000	0.000	607.796	534.022	516.479	503.786	Continuing	Continuing	
• Ord. #2: <i>SSN C53201, PATRIOT/MEADS GSE</i>	0.000	0.000	0.000	0.000	0.000	0.000	126.589	217.639	528.435	Continuing	Continuing	
• Ord. #3: <i>PE 0102419A, Proj E55, JLENS</i>	344.850	328.356	372.493	0.000	372.493	176.198	118.448	0.000	0.000	Continuing	Continuing	
• Ord. #4: <i>SSN BZ0525, JLENS Production</i>	0.000	0.000	0.000	0.000	0.000	470.661	419.801	427.731	394.325	Continuing	Continuing	
• Ord. #5: <i>PE 0604802A, Proj S23, SLAMRAAM</i>	31.306	56.441	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing	
• Ord. #6: <i>PE 0605450A, Proj S35 SLAMRAAM</i>	0.000	0.000	23.700	0.000	23.700	17.800	53.500	7.500	7.600	Continuing	Continuing	
• Ord. #7: <i>SSN C81002, SLAMRAAM Missile</i>	0.000	0.000	0.000	0.000	0.000	0.000	39.542	39.426	15.416	Continuing	Continuing	
• Ord. #8: <i>SSN C81004, SLAMRAAM Missile</i>	0.000	0.000	0.000	0.000	0.000	0.000	39.542	39.426	15.416	Continuing	Continuing	
• Ord. #9: <i>PE 0603305A, Proj TR7, Protection Capability II - Intercept</i>	0.000	0.000	4.296	0.000	4.296	21.303	74.197	93.679	94.006	Continuing	Continuing	
• Ord. #10: <i>SSN WK5053, FAAD GBS</i>	0.000	0.000	91.467	0.000	91.467	7.948	7.935	0.000	0.000	Continuing	Continuing	
• Ord. #11: <i>PE 0603327A, Proj S34, AMD System of System Engineering and Integration</i>	111.496	166.061	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing	
	0.000	0.000	251.124	0.000	251.124	271.543	251.646	228.639	129.043	Continuing	Continuing	

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604869A: <i>Patriot/MEADS Combined</i> <i>Aggregate Program (CAP)</i>	PROJECT M06: <i>PATRIOT/MEADS COMBINED</i> <i>AGGREGATE PROGRAM (CAP)</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Ord. #12: <i>PE 0605457A, Proj S40, Army Integrated Air and Missile Defense (AIAMD)</i>											
• Ord. #13: <i>SSN BZ5075, Army IAMD Battle Command System (IBCS)</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	24.045	99.102	Continuing	Continuing
• Ord. #14: <i>PE 0208053, Proj 635, JOINT TACT GRD STATION-P31 (MIP)</i>	1.949	36.005	12.403	0.000	12.403	12.630	13.038	7.982	7.947	Continuing	Continuing
• Ord. #15: <i>SSN BZ8401, Joint Tactical Ground Station (JTAGS)</i>	0.000	6.682	9.279	0.000	9.279	0.000	0.000	9.415	4.658	Continuing	Continuing

D. Acquisition Strategy

On 1 July 2004, the Defense Acquisition Board approved the Acquisition Strategy (AS) for the PATRIOT/MEADS CAP Milestone B. On 6 April 2006, the Lower Tier Project Manager submitted a Program Deviation Report (PDR) to notify the Under Secretary of Defense for Acquisition, Technology, and Logistics, of changes affecting the 6 August 2004, approved PATRIOT/MEADS CAP Acquisition Program Baseline (APB). On 9 February 2006, the Army System Acquisition Review Council (ASARC) approved establishment of the Integrated Air and Missile Defense (IAMD) Project Office (PO) to lead development efforts for the Army IAMD. On 8 May 2006, the Army established the IAMD PO which will manage the U.S. Army's initiatives to implement the user's operational concept from a System-Centric focus to a Network-Centric, Component-Based (Plug and Fight) architecture. The PATRIOT/MEADS CAP Acquisition Program Baseline and Acquisition Strategy will be modified to reflect these changes.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604869A: <i>Patriot/MEADS Combined</i> <i>Aggregate Program (CAP)</i>				PROJECT M06: <i>PATRIOT/MEADS COMBINED</i> <i>AGGREGATE PROGRAM (CAP)</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Design and Development	C/CPIF	NAMEADSMA Huntsville, AL	365.600	413.800		388.700		0.000		388.700	Continuing	Continuing	0
Missile Segment Enhancement - Lockheed Martin Missiles and Fire Control (LMMFC)	SS/CPIF	LMMFC Dallas, TX	73.000	26.500		0.000		0.000		0.000	Continuing	Continuing	0
Missile Segment Enhancement (MSE) / PAC-3- Raytheon	SS/FP	Raytheon Boston, MA	31.800	11.211		0.000		0.000		0.000	Continuing	Continuing	0
Program Integration	C	Various Huntsville, AL	94.921	28.302		19.914		0.000		19.914	Continuing	Continuing	0
U.S. Only Security / Exciter	C	Lockheed Martin Syracuse, NY; Dallas, TX & Orlando, FL	35.900	16.410		17.500		0.000		17.500	Continuing	Continuing	0
U. S. Other Government Agencies (OGA's)	C	Various Huntsville, AL	23.914	13.874		6.187		0.000		6.187	Continuing	Continuing	0
In-House	C	PO Huntsville, AL	29.940	12.071		8.318		0.000		8.318	Continuing	Continuing	0
International Program Office	C	NAMEADSMA Huntsville, AL	8.256	5.723		4.842		0.000		4.842	Continuing	Continuing	0
Systems Engineering	C	MRDEC Huntsville, AL	20.641	4.000		4.100		0.000		4.100	Continuing	Continuing	0
U.S. Contracts	C/CPIF	Various Huntsville, AL	36.380	9.831		8.990		0.000		8.990	Continuing	Continuing	0
	C	Various	67.150	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
U.S. Only Combined Aggregate Program (CAP)		Huntsville, AL & Dallas, TX											
Design and Development Government Furnished Equipment (GFE) Procurement Efforts	C	TACOM Warren, MI	14.087	2.305		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			801.589	544.027		458.551		0.000		458.551			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Range Support/Facilities	C	WSMR White Sands, NM/ Ft Wingate, White Sands NM	8.400	3.000		0.000		0.000		0.000	Continuing	Continuing	0
Targets/Threat Simulators	C	Various Location could not be determined.	35.400	6.500		0.000		0.000		0.000	Continuing	Continuing	0
Contractor Test & Evaluation	C	Various Location could not be determined.	0.000	2.600		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604869A: <i>Patriot/MEADS Combined</i> <i>Aggregate Program (CAP)</i>				PROJECT M06: <i>PATRIOT/MEADS COMBINED</i> <i>AGGREGATE PROGRAM (CAP)</i>					
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
OGA Test and Evaluation	C	AMRDEC Huntsville, AL	8.000	1.500		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			51.800	13.600		0.000		0.000		0.000			0.000
Remarks													
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Internal Operating	C	NAMEADSMA Huntsville, AL	18.204	8.588		8.588		0.000		8.588	Continuing	Continuing	0
Subtotal			18.204	8.588		8.588		0.000		8.588			0.000
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			871.593	566.215		467.139		0.000		467.139			0.000
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604869A: <i>Patriot/MEADS Combined</i> Aggregate Program (CAP)	PROJECT M06: <i>PATRIOT/MEADS COMBINED</i> AGGREGATE PROGRAM (CAP)
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
PDB 6.5 Fielding						#																						
MEADS System CDR: Critical Design Review						#																						

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604869A: <i>Patriot/MEADS Combined</i> <i>Aggregate Program (CAP)</i>	PROJECT M06: <i>PATRIOT/MEADS COMBINED</i> <i>AGGREGATE PROGRAM (CAP)</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
PDB 6.5 Fielding	2	2010	2	2010
MEADS System CDR: Critical Design Review	3	2010	3	2010

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Exhibit R-5, RDT&E Termination Liability: PB 2011 Army							DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604869A: <i>Patriot/MEADS Combined</i> <i>Aggregate Program (CAP)</i>				PROJECT M06: <i>PATRIOT/MEADS COMBINED</i> <i>AGGREGATE PROGRAM (CAP)</i>	
Cost (\$ in Millions)	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015		
Program Termination Liability	0.000	0.000	0.000	0.000	0.000	0.000	0.000		

Notes

The Patriot/Meads CAP Prime Contract incorporates the "Limitation Of Funds" Clause (DFARS 52.232-22) to limit the Government's liability. For the Patriot Meads CAP Program, the "Limitation Of Funds" clause limits the Government's financial liability per the contract to those funds placed on contract plus costs associated with the orderly termination of contractual actions.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604870A: <i>Nuclear Arms Control Monitoring Sensor Network</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	6.064	7.103	7.276	0.000	7.276	7.424	7.861	7.939	7.999	Continuing	Continuing
SE1: <i>NACT SENSOR ENGINEERING</i>	6.064	7.103	7.276	0.000	7.276	7.424	7.861	7.939	7.999	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project provides Research, Development, Testing & Evaluation (RDTE) to meet technology requirements in support of implementation, compliance, monitoring and inspection for existing and emerging nuclear arms control activities and dual use technology for missile defense integration activities. The project addresses requirements validated by the Office of the Under Secretary of Defense, Acquisition, Technology & Logistics (OUSD AT&L). This project conforms to the administration's research and development priorities as related to Weapons of Mass Destruction (WMD) arms control and disarmament. Technical assessments are made to provide the basis for sound project development, evaluate existing programs and provide the data required to make compliance judgments and support US policy, decision-makers and negotiating teams. Technology developments and system improvement projects are conducted to ensure that capabilities for monitoring systems are available when required. Primary emphasis is on improved sensor capabilities and improved detection and assessment capabilities against a wide range of threat origins. The program includes development of equipment and procedures for data exchanges, inspections and monitoring capability and analysis. The technologies and procedures developed in the arms control technology program provide an invaluable source of information on equipment and procedures that is extensively used by US and international agencies. This project also supports the warfighting capability area of combating Weapons of Mass Destruction (WMD).

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	6.240	7.140	7.314	0.000	7.314
Current President's Budget	6.064	7.103	7.276	0.000	7.276
Total Adjustments	-0.176	-0.037	-0.038	0.000	-0.038
• Congressional General Reductions		-0.037			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.176	0.000			
• Adjustments to Budget Years	0.000	0.000	-0.038	0.000	-0.038

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604870A: <i>Nuclear Arms Control Monitoring Sensor Network</i>	PROJECT SE1: <i>NACT SENSOR ENGINEERING</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
SE1: <i>NACT SENSOR ENGINEERING</i>	6.064	7.103	7.276	0.000	7.276	7.424	7.861	7.939	7.999	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project provides Research, Development, Testing & Evaluation (RDTE) to meet technology requirements in support of implementation, compliance, monitoring and inspection for existing and emerging nuclear arms control activities and dual use technology for missile defense integration activities. The project addresses requirements validated by the Office of the Under Secretary of Defense, Acquisition, Technology & Logistics (OUSD AT&L). This project conforms to the administration's research and development priorities as related to Weapons of Mass Destruction (WMD) arms control and disarmament. Technical assessments are made to provide the basis for sound project development, evaluate existing programs and provide the data required to make compliance judgments and support US policy, decision-makers and negotiating teams. Technology developments and system improvement projects are conducted to ensure that capabilities for monitoring systems are available when required. Primary emphasis is on improved sensor capabilities and improved detection and assessment capabilities against a wide range of threat origins. The program includes development of equipment and procedures for data exchanges, inspections and monitoring capability and analysis. The technologies and procedures developed in the arms control technology program provide an invaluable source of information on equipment and procedures that is extensively used by US and international agencies. This project also supports the warfighting capability area of combating Weapons of Mass Destruction (WMD).

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Conduct analyses as required to support the OSD treaty manager. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010	0.304	0.304	0.476	0.000	0.476

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604870A: <i>Nuclear Arms Control Monitoring Sensor Network</i>		PROJECT SE1: <i>NACT SENSOR ENGINEERING</i>				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO								
Program #2 Continue development of a prototype sensor. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO				1.200	1.300	1.400	0.000	1.400
Program #3 Continue development of radionuclide particle and noble gas detectors <i>FY 2009 Accomplishments:</i> FY 2009				0.400	0.400	0.400	0.000	0.400

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604870A: <i>Nuclear Arms Control Monitoring Sensor Network</i>		PROJECT SE1: <i>NACT SENSOR ENGINEERING</i>		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Continue Information management systems enhancements <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.200	1.400	1.500	0.000	1.500
Program #5 Continue the R&D support system		0.660	0.900	0.900	0.000	0.900

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604870A: <i>Nuclear Arms Control Monitoring Sensor Network</i>	PROJECT SE1: <i>NACT SENSOR ENGINEERING</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #6 Continue on-location research of calibration for infrasound events <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.400	0.500	0.500	0.000	0.500
Program #7		1.000	1.300	1.300	0.000	1.300

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604870A: <i>Nuclear Arms Control Monitoring Sensor Network</i>	PROJECT SE1: <i>NACT SENSOR ENGINEERING</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Continue development of techniques to identify signals from sensor systems <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #8 Continue development of nuclear detection and measurement systems <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.900	0.800	0.800	0.000	0.800

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604870A: <i>Nuclear Arms Control Monitoring Sensor Network</i>	PROJECT SE1: <i>NACT SENSOR ENGINEERING</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #9 Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.199	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals		6.064	7.103	7.276	0.000	7.276
C. Other Program Funding Summary (\$ in Millions) N/A						
D. Acquisition Strategy Not applicable for this item.						
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.						

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604870A: <i>Nuclear Arms Control Monitoring Sensor Network</i>				PROJECT SE1: <i>NACT SENSOR ENGINEERING</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Product Development	C/Various	MS VA	1.731	2.300		2.600		0.000		2.600	Continuing	Continuing	0
Subtotal			1.731	2.300		2.600		0.000		2.600			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Monitoring Sensor Systems, Program Data Analysis, Verification Systems Concept Demo	C/Various	SAIC General Dynamics, VA	2.615	1.600		1.600		0.000		1.600	Continuing	Continuing	0
Support Contracts & Government Support	C/Various	FL NM, VA, AL	1.347	1.200		1.100		0.000		1.100	Continuing	Continuing	0
SMDC Support	C/Various	Huntsville AL	0.500	1.200		1.200		0.000		1.200	Continuing	Continuing	0
Subtotal			4.462	4.000		3.900		0.000		3.900			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604870A: <i>Nuclear Arms Control Monitoring Sensor Network</i>				PROJECT SE1: <i>NACT SENSOR ENGINEERING</i>					
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	C/Various	Huntsville AL	0.500	0.303		0.276		0.000		0.276	Continuing	Continuing	0
Subtotal			0.500	0.303		0.276		0.000		0.276			0.000
Remarks													
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SMDC Support	C/Various	Huntsville AL	0.500	0.500		0.500		0.000		0.500	Continuing	Continuing	0
Subtotal			0.500	0.500		0.500		0.000		0.500			0.000
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			7.193	7.103		7.276		0.000		7.276			0.000
Remarks													

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				PE 0605013A: Information Technology Development							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	68.194	66.561	23.957	0.000	23.957	35.833	30.666	32.088	32.528	Continuing	Continuing
087: Distributed Learning System (DLS)	0.441	0.561	0.346	0.000	0.346	0.702	0.669	0.587	0.596	Continuing	Continuing
099: Army Human Resource System (AHR)	10.357	34.172	1.272	0.000	1.272	2.530	2.361	2.037	2.027	Continuing	Continuing
137: TRANS COORDINATORS' AUTO INFO FOR MOVEMENT SYS II	0.141	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
184: INSTALLATION SUPPORT MODULES (ISM)	0.713	1.513	2.300	0.000	2.300	2.309	2.318	2.329	2.342	Continuing	Continuing
193: MEDICAL COMMUNICATIONS FOR COMBAT CASUALTY CARE	7.423	6.954	4.358	0.000	4.358	8.834	8.412	7.412	7.546	Continuing	Continuing
474: ENTERPRISE TRANSMISSION SYSTEMS	1.924	2.942	2.718	0.000	2.718	5.521	5.271	9.335	9.496	Continuing	Continuing
738: AcqBiz	26.780	10.672	5.530	0.000	5.530	11.049	10.533	9.287	9.424	Continuing	Continuing
AE5: HEADQUARTERS ARMY ENVIRONMENTAL SYSTEM (HQAES)	5.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
M05: Enterprise Army Workload & Performance Sys (eAWPS)	1.001	0.515	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
T04: USMEPCOM TRANSFORMATION - IT MODERNIZATION	14.414	1.025	0.584	0.000	0.584	0.786	0.000	0.000	0.000	Continuing	Continuing

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>							
T05: <i>ARMY BUSINESS SYSTEM MODERNIZATION INITIATIVES</i>	0.000	8.214	6.849	0.000	6.849	4.102	1.102	1.101	1.097	Continuing	Continuing

A. Mission Description and Budget Item Justification

Supports efforts to plan, design, develop, and test information technology solutions to fulfill the Army's Warfighter Support Mission and accommodate changing Army requirements while fulfilling future Army needs. Provides for development and acquisition of Combat Service Support (CSS) and business information technology solutions to help arm, sustain, fix, move, train and man the force. Completed development/acquisition efforts will also enhance sustaining base functions and power projection capabilities and facilitate global messaging and electronic data interchange (EDI). Ongoing development efforts support multiple functional areas including logistics, personnel, transportation, training, medical/health protection, and sustaining base.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	67.815	35.309	32.307	0.000	32.307
Current President's Budget	68.194	66.561	23.957	0.000	23.957
Total Adjustments	0.379	31.252	-8.350	0.000	-8.350
• Congressional General Reductions		-0.348			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		31.600			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Adjustments to Budget Years	0.379	0.000	-8.350	0.000	-8.350

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT 087: <i>Distributed Learning System (DLS)</i>				
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
087: <i>Distributed Learning System (DLS)</i>	0.441	0.561	0.346	0.000	0.346	0.702	0.669	0.587	0.596	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

The Distributed Learning System (DLS) is an Army Acquisition Category III Army Component (ACAT III AC) automated information system that modernizes training delivery in the Army training and education system by leveraging information technology (IT). DLS is an integral component of the Department of Defense Advanced Distributed Learning Initiative (ADLI), and Strategy Plan for Transforming DoD Training, which calls for the full exploitation of technologies to support quality education and training. DLS supports the E-Government Strategy by using the Web to provide training materials, by enabling the intra-agency sharing of training data, and by adopting commercial practices and products to reduce operating costs. DLS supports the President's Management Agenda by making use of e-Learning to leverage scarce training funds and provide greater agency access to training materials. DLS provides standard automation and supporting infrastructure to improve Army's ability to train service members and supporting civilian workforce in all Army components by introducing proven distance learning enhancements into the Army training inventory. FY2011 Core dollars of \$346 thousand procures operational test & evaluation (OT&E) of DLS Increment 3, Army Learning Management System (ALMS) engineering change proposals (ECPs). The ALMS is the Army-approved, centrally-managed and funded, system for training management that supports transformation of Army training through the use of information technology (IT). The ALMS streamlines, consolidates, and provides overall direction to the Army's training processes. When fully operational, the ALMS will manage a student's training activities from initial entry and continue throughout his/her service. The ALMS provides courses and training resource management, scheduling and registration functions, courseware distribution and storage, and learning collaboration.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	0.287	0.000	0.000	0.000	0.000
Accomplishment: Increment 4 (DDTC) - Engineering & Manufacturing Development (E&MD) [FY2009 Core]					
<i>FY 2009 Accomplishments:</i>					
FY 2009					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 087: <i>Distributed Learning System (DLS)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Accomplishment: Increment 4 (DDTC) - System Developmental Test & Evaluation (DT&E) [FY2009 Core] <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.154	0.000	0.000	0.000	0.000
Program #3 Planned Program: Increment 4 (DDTC) Engineering & Manufacturing Development (E&MD) [FY2010 Core]		0.000	0.081	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 087: <i>Distributed Learning System (DLS)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Planned Program: Increment 4 (DDTC) - System Operational Test & Evaluation (OT&E) [FY2010 Core]		0.000	0.480	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #5		0.000	0.000	0.346	0.000	0.346

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 087: <i>Distributed Learning System (DLS)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Planned Program: Increment 3 (ALMS) - Engineering Change Proposals (ECP) Operational Test & Evaluation (OT&E) [FY2011 Core] <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #6 Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT 087: <i>Distributed Learning System (DLS)</i>			
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Accomplishments/Planned Programs Subtotals						0.441	0.561	0.346	0.000	0.346	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>OMA APEs</i> <i>324631/432612/432615</i>	52.490	49.656	48.673	0.000	48.673	44.989	42.308	44.314	43.207	Continuing	Continuing
• Ord. #2: <i>OPA SSN BE4173 THE</i> <i>ARMY DISTANCE LEARNING</i> <i>PROGRAM</i>	9.071	7.980	9.856	0.000	9.856	10.056	11.860	10.963	11.630	Continuing	Continuing
D. Acquisition Strategy											
<p>Distributed Learning System (DLS) follows an evolutionary acquisition strategy using a spiral development process based on the following rationale: (1) cost savings can be realized immediately upon implementation of even a limited set of digital training facilities, courseware, and media types; (2) requirements for future increments are dependent upon technology maturation. DLS will be executed using four discrete increments narrow in scope and as brief in duration as practical to deliver a measurable net benefit independent of future segments. Each increment satisfies a set of requirements identified in the Army's Training and Doctrine Command (TRADOC) requirements document and provides a militarily useful and operationally supportable function, which permits additional increments to be added over time without having to completely re-design and redevelop those portions of the system already fielded. New capabilities requirements will be integrated with the existing functional baseline system as technologies and capabilities mature using system releases where feasible. A rigid configuration management program is established to maintain the integrity of each functional and technical baseline. The approved DLS acquisition strategy identifies four increments for implementation. Two previously identified capability requirements (Video-to-Desktop and Simulations) are best satisfied by changes to the existing Increment 2 (Networked DLS) platform as future system releases.</p>											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT 099: <i>Army Human Resource System (AHR)</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
099: <i>Army Human Resource System (AHR)</i>	10.357	34.172	1.272	0.000	1.272	2.530	2.361	2.037	2.027	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u>											
<p>Army Human Resource System (AHR) is the Army's system of systems that provides commanders the necessary personnel information to make informed decisions on mobilized military personnel resources (both Active Duty and Reserve Component). The implementation of AHR requires the development of an authoritative Army Corporate database to support the eventual migration to the Defense Integrated Military Human Resource System (DIMHR). However, major elements of AHR are not planned to be subsumed into DIMHR. AHR consists of three major components: - Electronic Military Personnel Office (eMILPO) is a web-based, multi-tiered application, accessed via the AKO portal. eMILPO provides the U.S. Army with a reliable, timely, and efficient mechanism for performing personnel actions and managing strength accountability. The application is vital in determining the strength and capability of the Army and subordinate commands. It delivers enhanced performance to the Soldier, providing superior data accuracy, and a more intuitive web-based approach resulting in increased productivity, quality, timeliness, security, and user satisfaction. It re-hosted the USC Title 10 functionality, formerly resident in the Standard Installation Division Personnel System-3 (SIDPERS-3) application, for the migration to DIMHR. Select elements of eMILPO will need to be operated in parallel with DIMHR until/unless DIMHR is able to absorb all eMILPO functionality. - Deployed Theater Accountability System (DTAS) is a web-enabled system residing on the Secret Internet Protocol Router Network (SIPRNet) that accounts for military and civilian personnel in a deployed theater by unit, day and location supporting force tracking and deployed Operations Tempo (OPTEMPO) tracking. DTAS will continue to exist after DIMHR migration and will be interfaced to DIMHR in order to provide this accountability function, which is not present within DIMHR. - The Tactical Personnel System (TPS) is a stand-alone application for task organization/manifests and jump manifests used by tactical units. The system interfaces with DTAS, allowing soldiers to be loaded into DTAS en mass upon arrival in theater. TPS will need to operate for some time after DIMHR migration, and will eventually be subsumed into DIMHR. Personnel Transformation (PT)- Enterprise Service Bus (ESB)- The Army's Enterprise Service Bus (ESB) provides a data integration service in which data can be extracted from the legacy human resource systems and transferred to DIMHR. The ESB will be a middleware application which will provide a single interface to and from DIMHR from the Army Legacy Systems. The ESB will provide the infrastructure for the integration of new and existing applications by allowing systems and applications to easily exchange information across different environments and platforms. It will also form the information bridge between DIMHR, the Army Legacy Systems, and external systems to create more streamlined systems in support of the military mission and personnel transformation goals. FY 2011 Core funding procures configuration management software, test and evaluation software, life cycle replacement of legacy equipment and Continuity of Operations (COOP) equipment and software to support persistent system functions.</p>											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 099: <i>Army Human Resource System (AHRS)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 AHRS - Post Deployment Software Support (PDSS) - Engineering Change Packages (ECPs)/System Change Packages (SCPs) Interim Change Packages (ICPs) in support of eMILPO and DTAS <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		2.875	11.722	0.598	0.000	0.598
Program #2 AHRS - Development <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base		3.153	11.106	0.674	0.000	0.674

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 099: <i>Army Human Resource System (AHR)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3 Army Continuing Education System <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.354	11.344	0.000	0.000	0.000
Program #4 Personnel Transformation - Enterprise Service Bus (ESB) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		0.000	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #5 DIMHRS - Army Defense Integrated Military Human Resource System <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		3.975	0.000	0.000	0.000	0.000
Program #6 Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009		0.000	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT 099: <i>Army Human Resource System (AHRS)</i>				
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						10.357	34.172	1.272	0.000	1.272	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>AHRS, OPA, SSN W00800, STACOMP</i>	10.579	10.781	0.000	0.000	10.987	0.000	0.000	0.000	0.000	Continuing	Continuing
• Ord. #2: <i>AHRS, OMA, 432612/432615</i>	5.586	5.736	0.000	0.000	5.888	0.000	0.000	0.000	0.000	Continuing	Continuing
• Ord. #3: <i>Personnel Transformation-ESB, OPA, BE4164000</i>	3.243	3.305	0.000	0.000	3.368	0.000	0.000	0.000	0.000	Continuing	Continuing
• Ord. #4: <i>Personnel Transformation-ESB OPA, SSN W00800</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• Ord. #5: <i>Personnel Transformation-eHRS, OMA, 432612</i>	22.320	22.870	0.000	0.000	23.433	0.000	0.000	0.000	0.000	Continuing	Continuing
D. Acquisition Strategy											
Army Human Resource System (AHRS)- The program manager makes extensive use of Integrated Product Teams (IPTs). Sub-elements of the acquisition (engineering and design, logistics planning, testing, etc.) are intensively managed by integrated teams of government and contractor personnel. Task performance is tracked against the Work Breakdown Structure (WBS) and resources allocated to each task are adjusted based on performance against the WBS. AHRS contractual efforts are acquired on a time and materials basis through											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
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<p>GSA schedule and existing contractual vehicles. The Title 10 functionality has transferred to AHR. Additionally, as the Personnel community manages their migration to the Defense Integrated Military Human Resource System (DIMHRS), the functionality resident in the 320+ external interface current systems will migrate to AHR. This migration began in FY03, and will ensure the personnel community retains functionality necessary to meet operational requirements while addressing Transformation requirements. Personnel Transformation - The Enterprise Service Bus (ESB) program management approach is a middleware application which will provide a single interface to and from DIMHRS from the Army Legacy Systems. The ESB will provide the infrastructure for the integration of new and existing applications by allowing systems and applications to easily exchange information across different environments and platforms. It will also form the information bridge between DIMHRS, the Army Legacy Systems, and external systems. Contractor selection will be accomplished through open competition, administered by a federal certified contracting agency. Program Management is accomplished by combining a "best practices" approach coupled with standard tools.</p> <p><u>E. Performance Metrics</u> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.</p>		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT 099: <i>Army Human Resource System (AHR)</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
AHR - PDSS ECPs/SCPs/ICPs	C/FP	Electronic Data Systems Herndon, VA	21.330	3.447		1.272		0.000		1.272	Continuing	Continuing	0
Personnel Transformation ESB - Research/Development PT Impacts on Objective Force	C/FP	Science Applications International Corp (SAIC) San Diego, CA	25.652	0.000		0.000		0.000		0.000	Continuing	Continuing	0
DIMHRS	C	Northrup Grumman Location could not be determined.	0.000	4.902		0.000		0.000		0.000	0	58.602	0
AHR - Software Development	C	Electronic Data Systems Herndon, VA	39.901	4.299		1.427		0.000		1.427	Continuing	Continuing	0
Army Continuing Education System	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.699		0.000		0.699	.699	1.398	0
Subtotal			86.883	12.648		3.398		0.000		3.398			0.000

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT 137: <i>TRANS COORDINATORS' AUTO INFO FOR MOVEMENT SYS II</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
137: <i>TRANS COORDINATORS' AUTO INFO FOR MOVEMENT SYS II</i>	0.141	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>Transportation Information Systems (TIS) Product Office funding supports design, development, testing, and program management functions for Transportation Coordinators' - Automated Information for Movement System II (TC-AIMS II).TC-AIMS II:- Provides an integrated information transportation system capability for deployment, sustainment, and redeployment operations during both war and peacetime operations for the U.S. Army U.S Air Force and U.S. Navy.- Consolidates the management of unit/installation-level transportation functions of Unit Movement, Load Planning, and Installation Transportation Office/Traffic Management Office (ITO/TMO) operations, and facilitates the movement and support of personnel and cargo during all phases of military operations in all environments, including sustainment, reception, staging, onward movement and integration (RSO&I); and battlefield operations.- Supports routine and surge requirements and automates shipping/receiving, and deployment; sustainment and redeployment processes; produces movement documentation, unit move data; and furnishes timely transportation information to major commands, transportation component commands, and United States Transportation Command.- Supports Pre-Planned Product Improvements (P3I), a post Block 3 development capabilities.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #1 Pre-Planned Product Improvements (P3I)- Life cycle refresh Accomplishments: Efforts completed in FY 2009 Planned Program: There are currently no further planned program development activities past FY 2009. <i>FY 2009 Accomplishments:</i> FY 2009						0.141	0.000	0.000	0.000	0.000	

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 137: <i>TRANS COORDINATORS' AUTO INFO FOR MOVEMENT SYS II</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals		0.141	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 137: <i>TRANS COORDINATORS' AUTO INFO FOR MOVEMENT SYS II</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Ord. #1: <i>OPA - SSN: BZ8900 TC AIMS II</i>	22.774	11.089	10.457	0.000	10.457	11.422	14.686	12.470	15.489	Continuing	Continuing
• Ord. #2: <i>OMA - APE: 432612</i>	22.604	40.472	22.979	0.000	22.979	33.826	24.516	28.718	36.152	Continuing	Continuing

D. Acquisition Strategy

Transportation Information Systems (TIS) Product Office for the Transportation Coordinators' - Automated Information for Movement System II (TC-AIMS II) used Integrated Support Memorandum of Agreement (MOA) to develop and maintain the software. A separate contract provided program management support, fielding of the system, and training to the software. TC-AIMS II system development followed a multi-block, phased development and fielding strategy to reduce technical, program, and user acceptance risks. TC-AIMS II system capability is broken into three separate, software blocks including: Block 1 - Unit Move, Block 2 - Enhanced Unit Move (Web), and Block 3 - Reception, Staging, Onward Movement and Integration (RSO&I), Movement Control and Planning, and Map Graphics. Infrastructure requirements are satisfied by the establishment of an Enterprise Architecture composed of a Central Management Facility supporting Multiple Regional Access Nodes. Additional infrastructure requirements included the acquisition and deployment of Commercial-Off-The-Shelf (COTS) hardware that provided a breakaway client-server capability which functions in isolated workgroups or in stand-alone modes.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT 184: <i>INSTALLATION SUPPORT MODULES (ISM)</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
184: <i>INSTALLATION SUPPORT MODULES (ISM)</i>	0.713	1.513	2.300	0.000	2.300	2.309	2.318	2.329	2.342	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Continues migration of the fielded Installation Support Modules (ISM) software (Disk Operating System character based) applications to a more modern graphical user interface in a web based environment allowing the combat soldier as well as the field commander access to records impacting soldier readiness. Additional functionality will be fielded in FY09 and FY10. ISM, deployed to Army sites worldwide, is software applications that have been developed and standardized to perform business functions at the Installation level. These modules are based upon functional processes used by the combatant command staff as well as installation staff. The ISM system is a web environment that utilizes a single, centralized, replicated database to store data for the entire Army. The web server architecture supports a graphical user interface, web-based user access, and a consolidated infrastructure in accordance with the Army Knowledge Management (AKM) Strategic Plan. This modernized system enables the Army Installation Management community to provide simple web-enabled software applications for soldier processing; ready and relevant information to the commander; while transparently integrating multiple complex processes for soldiers, commanders, and Army executives. ISM consists of five discrete modules focusing on Army Force Generation activities including in/out processing of soldiers, personnel locator services, soldier transition processing, management of soldier educational records, and management of Organizational Clothing and Individual Equipment (OCIE). The Theater Network Operations and Security Center, Ft. Huachuca, AZ manages the ISM network, provides general system configuration control, operates a 24/7 Helpdesk, provides user account management, and performs automated backups for ISM devices located at Army sites worldwide. Coalition Warfighter Interoperability Demonstration (CWID) is a mandated Joint program that requires participation by the US Army to explore near-term technologies that support Joint and Coalition Warfare Interoperability. Funding is to facilitate Coalition Force interoperability research and development and to comply with CJCSI 6230.2 date 30 April 05. Army Behavioral Health Integrated Data Environment (ABHIDE) will be the U.S. Army Center for Health Promotion and Preventive Medicine (CHPPM) Suicide Registry. Data relating to suicides and suicides attempts are collected and stored in a in disparate, non-related databases that cross the domains of medical, personnel and law enforcement. ABHIDE will provide the capability of integrating the non-related and dispersed data from the separate sources into a single comprehensive database to support both retrospective and predictive analysis. The information obtained will be used to conduct epidemiological surveillance, identify trends in behavior patterns and identify potential indicators for suicidal tendencies supporting the mitigation of future suicide attempts across all phases of Army service.FY11 Core funding is essential for supporting demands for improved systems to provide for soldier safety and combat equipment in compliance with Dept of Defense Instruction 8320.4 Serialized Item Management as well as support research and development to comply with Chairman, Joint Chiefs of Staff Initiative 6230.2. Applications to use bar code devices in Central Issue Facilities will insure that excess stocks can be moved to units with emerging needs to satisfy deployment requirements without having unnecessary procurement. Funding for CWID will continue to facilitate Coalition Force interoperability research and development. Funding for ABHIDE will continue development of the system.FY11 OCO funding is not required.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 184: <i>INSTALLATION SUPPORT MODULES (ISM)</i>				
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Independent Verification and Validation (IV&V) Testing <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.060	0.062	0.062	0.000	0.062
Program #2 Post-Deployment Software Support (PDSS) - Engineering Change Packages (ECPs)/System Change Packages (SCPs) ; Accomplished: addition of Ad Hoc Query capability, e-signature capability in the CIF module; Planned: COTS application of bar coding solution to CIF module to insure soldiers get the equipment they need to execute their assigned mission as they progress through ARFORGEN cycles. Bar coding stocks insures Army will achieve an "equipping balance" based on CSA guidance to build enduring readiness while providing the soldier with the safest equipment possible. <i>FY 2009 Accomplishments:</i> FY 2009		0.337	0.348	0.356	0.000	0.356

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 184: <i>INSTALLATION SUPPORT MODULES (ISM)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3 Coalition Warfighter Interoperability Demonstration (CWID) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.316	0.303	0.294	0.000	0.294
Program #4 Army Behavioral Health Integrated Data Environment		0.000	0.000	1.588	0.000	1.588

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #5 Small Business Innovative Research/Small Business Technology Transfer Programs		0.000	0.000	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #6		0.000	0.800	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
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B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Congressional Add											
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals							0.713	1.513	2.300	0.000	2.300
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>OMA APE: 432612/432100</i>	12.219	12.546	0.000	0.000	12.861	13.144	13.433	0.000	0.000	Continuing	Continuing
• Ord. #2: <i>BE4162 MACOM</i>	0.509	0.521	0.000	0.000	0.532	0.544	0.556	0.000	0.000	Continuing	Continuing
<i>AUTOMATION SYSTEMS</i>											
D. Acquisition Strategy											
This system is in Post Deployment Software Support (PDSS). The present concept calls for the use of full and open competition to implement enhancements as defined by the Functional Proponent, Army Chief Information Officer (CIO)/G-6.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT 184: <i>INSTALLATION SUPPORT MODULES (ISM)</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PDSS ECPs/SCPs/ICPs	C/FP	Systems Research & Applications Fairfax, VA	9.762	0.350		0.348		0.000		0.348	Continuing	Continuing	0
JWID Development - Army	C	OSD Location could not be determined.	3.937	0.323		0.303		0.000		0.303	Continuing	Continuing	0
Rock Island Ops Center486	C/FP	Intergraph Huntsville, AL	0.949	0.000		0.000		0.000		0.000	0	.949	0
Army Behavioral Health Integrated Data Environment	C/TBD	TBD Location could not be determined.	0.000	0.000		0.000		0.000		0.000	0	0	0
Subtotal			14.648	0.673		0.651		0.000		0.651			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PM Support	C	AMRDEC Redstone Arsenal, AL	0.000	0.000		0.000		0.000		0.000	0	0	0
Subtotal			0.000	0.000		0.000		0.000		0.000	0.000	0.000	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT 184: <i>INSTALLATION SUPPORT MODULES (ISM)</i>					
Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Remarks AMRDEC - Aviation and Missile Research, Development and Engineering Center (US Army Aviation and Missile Command)													
Test and Evaluation (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Independent Verification and Validation (IVV) Testing	C/FP	ANTEON Corp Fairfax, VA	1.740	0.060		0.062		0.000		0.062	Continuing	Continuing	0
Subtotal			1.740	0.060		0.062		0.000		0.062			0.000
Remarks													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			16.388	0.733		0.713		0.000		0.713			0.000
Remarks													

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT 193: <i>MEDICAL COMMUNICATIONS FOR COMBAT CASUALTY CARE</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
193: <i>MEDICAL COMMUNICATIONS FOR COMBAT CASUALTY CARE</i>	7.423	6.954	4.358	0.000	4.358	8.834	8.412	7.412	7.546	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

The Medical Communications for Combat Casualty Care (MC4) System provides multipliers to the medical force structure through the acquisition of digital communications and information technology solutions for the deployable medical forces. The MC4 System will also fulfill the requirements highlighted in United States Code: Title 10, Subtitle A, Part II, Chapter 55, Section 1074f, mandating the proper documentation of deployed service members' medical treatment to include pre- and post-deployment screening and its associated medical surveillance. The MC4 System will interface Force Health Protection and medical surveillance information with Army Battle Command and Combat Service Support information technology systems as they evolve to support the Army Transformation. The MC4 System also indirectly supports other soldier protection initiatives as analysis of injury data collected from the MC4 systems is used to support the identification and development of other critical soldier support systems such as body armor, improved helmets, traumatic brain injury protection and trauma reduction. Current MC4 Program efforts are focused on system engineering, testing and integration, and fielding automation infrastructure for Army users of the Joint Theater Medical Information Program (TMIP-J) suite of software. Funding provides support system engineering, integration and developmental testing of information management/information technology to better support Force Health Protection in the Army Campaign Plan and Global War On Terrorism units. FY11 Core funding will be used for the engineering effort required to provide the Defense Health Information Management System (DHIMS) TMIP-J software on the Army platform, as well as the engineering effort for other Army unique capability. Activities include:--Test augmentation to include development testing of TMIP (all releases until final objective), and other Army unique software capabilities--Integration testing of software systems on the MC4 baseline system--Future engineering in architecture development for better efficiency and effectiveness--Evaluation of technology obsolescence and solutions--Evaluation and testing of technology upgrades to include capabilities identification through market surveys and demonstrations--Evaluation of new health care capabilities not provided by DHIMS/TMIP, e.g. teleradiology--Test and evaluation of new capabilities and how well they work in the combat theater--Lab site studies with technology and scenarios--Interfaces with other systems, e.g. Army Brigade Combat Team Modernization

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Program Management	0.210	0.225	0.240	0.000	0.240

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 193: <i>MEDICAL COMMUNICATIONS FOR COMBAT CASUALTY CARE</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Logistics Support Planning for P3I and System Upgrades <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.179	0.192	0.205	0.000	0.205
Program #3		1.654	1.748	0.827	0.000	0.827

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Engineering and Technical Support for P3I and System Upgrades <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 MC4 Testing for P3I and System Upgrades <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		1.225	1.261	0.974	0.000	0.974

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology</i> <i>Development</i>	PROJECT 193: <i>MEDICAL COMMUNICATIONS FOR</i> <i>COMBAT CASUALTY CARE</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #5 Integration and testing for Army Unique Solutions <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.389	0.416	0.305	0.000	0.305
Program #6 MC4/TMIP Integration and Testing for P3I and System Upgrades <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		2.966	2.935	1.630	0.000	1.630

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #7 Electronic Commodity (Congressional requirement) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.800	0.000	0.000	0.000	0.000
Program #8 Small Business Innovative Research/Small Business Technology Transfer Programs (estimate) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.177	0.177	0.000	0.177

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army							DATE: February 2010				
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B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Accomplishments/Planned Programs Subtotals							7.423	6.954	4.358	0.000	4.358
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>OPA SSN MA8046 (MC4)</i>	50.929	18.542	23.606	15.000	38.606	24.175	66.601	8.550	4.724	Continuing	Continuing
• Ord. #2: <i>OMA APE 432612</i>	9.037	9.149	9.393	0.000	9.393	9.683	2.533	3.265	3.521	Continuing	Continuing
D. Acquisition Strategy											
<p>The MC4 Program supports a number of Army Medical Information Technology/Communications initiatives. The near and mid-term focus of the MC4 program is to engineer, design, test, acquire and field the Army automation/communications infrastructure capabilities supporting fielding of the Joint Theater Medical Information Program (TMIP) integrated software application suite and other Army requirements. The MC4 hardware is procured as Commercial-off-the-Shelf (COTS) components. Since TMIP software is a major component of the MC4 System, the MC4 Program will deliver capabilities in increments, recognizing the need for future system upgrades and Preplanned Product Improvements (P3Is). The MC4 Program continues to work with the user community to continually define and refine additional requirements and match them with available technologies to provide the user enhanced capabilities. These enhanced capabilities will be provided to the user at the earliest possible date. This approach yields the most operationally useful and supportable capability in the shortest time possible with Cost As an Independent Variable. Moreover, this approach provides an initial capability with the explicit intent of delivering improved and updated capability in subsequent upgrades and Pre-Planned Product Improvements. This evolutionary development approach will be accomplished through a rapid prototyping process that will progress the system from its current functional capabilities to fully integrated objective capabilities. Appropriate commercial technology enhancements (e.g. advances in operating systems, voice activated technology, etc) will be incorporated into MC4 products and systems as they become available. Each MC4 System component will undergo a full range of developmental testing to include software unit testing, integration testing, interoperability testing and software qualification testing. The MC4 system upgrades and improvements will continue to undergo follow-on operational testing.</p>											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
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Support (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Electronic Commodity	C	GOV WORKS Location could not be determined.	1.900	0.000		0.000		0.000		0.000	Continuing	Continuing	0
PMO Support	C/CPFF	CACI Inc-Federal Arlington, VA	2.275	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Logistics Planning	C	PMO Ft. Detrick, MD	2.629	0.179		0.180		0.000		0.180	Continuing	Continuing	0
Logistics Planning Spt	C/CPFF	CACI Inc-Federal Arlington, VA	1.481	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Engineering & Technical Spt	C	PMO Ft. Detrick, MD	3.336	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Engineering & Tech Spt	C/CPFF	L3 (was Titan) Reston, VA	4.341	0.390		0.500		0.000		0.500	Continuing	Continuing	0
PMO Support - 2	C/CPFF	General Dynamics (was Anteon Inc.) Fairfax, VA	0.708	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Information Assurance	C	ISEC Support Location could not be determined.	0.000	0.650		0.650		0.000		0.650	Continuing	Continuing	0
SBIR/STTR	C	GOVWORKS Location could not be determined.	0.000	0.025		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			16.670	1.244		1.330		0.000		1.330			0.000

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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks

Electronic Commodity is a pass-through to Department of Interior, an initiative of SEN Byrd of West Virginia, from Congressional MARKS. SBIR/STTR reductions taken from program.PMO SUPPORT with GDIT moved to another appropriation to better align activities with program life cycle

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MC4 Integration and Testing	C/CPFF	L3 (was Titan) Reston, VA	7.958	1.905		0.849		0.000		0.849	Continuing	Continuing	0
PMO Testing Spt	C	ATEC/AMEDD Board Location could not be determined.	3.467	0.425		0.325		0.000		0.325	Continuing	Continuing	0
MC4/TMIP System Engineering	C/CPFF	John Hopkins University (JHU) Applied Physics Lab Laurel, MD	22.477	3.170		1.629		0.000		1.629	Continuing	Continuing	0
Subtotal			33.902	5.500		2.803		0.000		2.803			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT 193: <i>MEDICAL COMMUNICATIONS FOR COMBAT CASUALTY CARE</i>					
Management Services (\$ in Millions)													
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Prog Mgmt Operations	C	PMO Ft Detrick, MD	7.810	0.210		0.225		0.000		0.225	Continuing	Continuing	0
funding not received	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			7.810	0.210		0.225		0.000		0.225			0.000
Remarks Funding in Program Management Operations includes direct pay of PMO government employees, TDY, training, supplies, etc. in direct support of RDTE effort													
			Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			58.382	6.954		4.358		0.000		4.358			0.000
Remarks													

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT 474: <i>ENTERPRISE TRANSMISSION SYSTEMS</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
474: <i>ENTERPRISE TRANSMISSION SYSTEMS</i>	1.924	2.942	2.718	0.000	2.718	5.521	5.271	9.335	9.496	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>Combat Service Support (CSS) Automated Information System Interface (CAISI) is a high-data-rate wireless system that provides sensitive information (SI) and is the backbone for logistics connectivity down to individual Combat Service Support (CSS) computer systems located within the sustainment area. The CAISI design effort focuses on integrating Commercial Off-The-Shelf (COTS) equipment from various manufacturers to create a standard deployable set of communications equipment. Current CAISI equipment is being fielded with new equipment training to logistics units Army-wide. Maintenance support is provided at depot-level with additional support at forward repair activities. Computer based training, on-line refresher training and technical support is also provided for CAISI users. CAISI employs a deployable wireless LAN infrastructure linking STAMIS computers in a 7 square-kilometer area using wireless bridging. CAISI design incorporates full lifecycle sustainability features to ensure reliability and supportability in full spectrum operations.</p>											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Accomplishments: The FY2009 Core funding provided follow-on testing, product improvement, integration and IA compliance. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base							1.924	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 474: <i>ENTERPRISE TRANSMISSION SYSTEMS</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Planned Program: FY2010 Core Funding and beyond provide additional testing, product improvement, integration and IA compliance to ensure CAISI connectivity, reliability, accessibility and maintainability (RAM). <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	2.942	2.718	0.000	2.718
Program #3 Small Business Innovative Research/Small Business Technology Transfer Programs <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		0.000	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army						DATE: February 2010					
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>			PROJECT 474: <i>ENTERPRISE TRANSMISSION SYSTEMS</i>					
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						1.924	2.942	2.718	0.000	2.718	
C. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2011</u>	<u>FY 2011</u>	<u>FY 2011</u>						
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Ord. #1: <i>OPA, BD3512</i>	28.138	17.573	21.691	0.000	21.691	16.405	24.312	16.880	24.176	Continuing	Continuing
• Ord. #2: <i>OMA, 423612</i>	5.687	5.750	5.725	0.000	5.725	3.464	5.685	5.810	5.928	Continuing	Continuing
D. Acquisition Strategy											
Acquisition strategy will be to obtain engineering support, as well as applicable hardware and software to enhance current CAISI capabilities. Funding provides functional assesment, technical support and integration of IA requirements. Integral to this strategy is the imperative of developing the capability for inserting and integrating emerging technologies into the new CAISI.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 474: <i>ENTERPRISE TRANSMISSION SYSTEMS</i>
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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Research, modification/ integration and testing of CAISI 2.0.	C/FFP	ISEC Ft Huachuca, AZ	17.913	2.942		2.718		0.000		2.718	Continuing	Continuing	0
Subtotal			17.913	2.942		2.718		0.000		2.718			0.000

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	
		Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost				
Project Cost Totals		17.913	2.942			2.718		0.000		2.718		0.000

Remarks

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 738: <i>AcqBiz</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
738: <i>AcqBiz</i>	26.780	10.672	5.530	0.000	5.530	11.049	10.533	9.287	9.424	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

PM AcqBusiness establishes and sustains the family of IT business systems that support the business of Army acquisition. The AcqBusiness Program will consist of a family of IT solutions, COTS products, decision support tools and web services that are integrated through a common architecture. Whenever possible, PM AcqBusiness will provide access to external enterprise tools and services from other business domains, Army, OSD and DISA and will not duplicate those capabilities. PM AcqBusiness establishes the enterprise level investment control, portfolio management and requirements visibility which is the heart of IT business system transformation in Army Acquisition. PM AcqBusiness will provide Army Acquisition practitioners with a consistent set of unique business tools, web services, and decision support tools which will provide visibility of authoritative data, consistency in business process, more timely support to acquisition decisions and enterprise control over IT investments. The enterprise tools provided via PM AcqBusiness will also enable the reduction and eventual elimination of stovepipe and redundant tools that exist in the domain today. PM AcqBusiness will provide an environment that will enable a standard capability to allow access to disparate Acquisition Domain data sources. PM AcqBusiness will provide role-based access to authoritative data sources and services. In addition, PM AcqBusiness will provide a framework for information providers to publish their data and expose their services to authorized users.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Analysis and Design, Development, Test and Integration of AcqBusiness. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010	17.158	9.632	4.438	0.000	4.438

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 738: <i>AcqBiz</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Program Management <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.802	1.040	1.092	0.000	1.092
Program #3 Army Business Systems Modernization Initiatives. <i>FY 2009 Accomplishments:</i> FY 2009		8.820	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 738: <i>AcqBiz</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Small Business Innovative Research/Small Business Technology Transfer Programs (SBIR/STTR) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals		26.780	10.672	5.530	0.000	5.530

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 738: <i>AcqBiz</i>

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Ord. #1: <i>OMA APE 432612</i>	13.157	11.586	0.000	0.000	9.544	10.249	10.378	10.592	10.802	Continuing	Continuing

D. Acquisition Strategy

Product Manager AcqBusiness was established to acquire a centrally managed and funded suite of standard net-centric business capabilities in order to provide Army acquisition practitioners the data visibility necessary to optimize the acquisition of supplies, services, and materiel for the Warfighter. PM AcqBusiness is using an evolutionary acquisition strategy to acquire the capabilities specified in the PM AcqBusiness requirements document in order to realize benefits early and reduce risk. The full range of PM AcqBusiness Service Oriented Architecture (SOA) services will be achieved through an evolutionary implementation of individual components, each delivered within 180 day increments of time. Each service is designed to federate cleanly with and leverage the capabilities provided by other SOA environments by leveraging an open-standards based approach to design. Each PM AcqBusiness SOA service will implement new functionality, and may or may not utilize other already published SOA services. Each service capability will be tested and then made available to consumers throughout the acquisition community and the Army. This approach minimizes the cost incurred for testing the system, as well as minimizes release transition impacts on users. Functionality to be incorporated into each future increment of PM AcqBusiness will be approved by the Acquisition Business Enterprise Governance Board. PM AcqBusiness is using an evolutionary acquisition approach, incorporating the use of commercial-off-the-shelf (COTS) hardware and software, and custom developed software to meet Army requirements. In this approach, the maintenance release will be streamlined to expedite the fielding of a particular PM AcqBusiness software fix or upgrade. Maintenance releases will be installed on an "as needed" basis after testing and approval by PM AcqBusiness. This approach minimizes the time required to deliver new capabilities to users. The PM AcqBusiness acquisition approach embraces the tenets of Subtitle III of Title 40, U.S.C. (Formerly the Clinger-Cohen Act of 1996). As such, the PM AcqBusiness is: (1) performing Business Process Reengineering (BPR) in advance of development of AcqBusiness capabilities. AcqBusiness is primarily about changing how the acquisition business functions are done in the Army; (2) encouraging the purchase of commercial products and innovations from private industry; (3) involving potential suppliers of SOA technology early in the requirements generation process; (4) employing outsourcing wherever possible; and (5) acquiring the AcqBusiness capabilities in interoperable modules, leveraging the evolutionary acquisition approach.

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT 738: <i>AcqBiz</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Army Business Systems Modernization Initiatives.	C/Various	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Analysis and Design, Development , Integration and Testing	C	Northrup Grumman McLean, VA	20.468	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Application Licenses	SS/FP	Mythics Virginia Beach, VA	8.840	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Analysis and Design, Development, Integration	C	Various Agencies Location could not be determined.	0.000	9.688		7.932		0.000		7.932	Continuing	Continuing	0
System Development and Integration	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Requirements, Equipment and Software	C	Various Agencies Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			29.308	9.688		7.932		0.000		7.932			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 738: <i>AcqBiz</i>
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Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Support Costs	C	Bearing Point Inc McLean, VA	0.174	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.174	0.000		0.000		0.000		0.000			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test and Evaluation	C	Various Agencies Location could not be determined.	1.350	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Test and Evaluation and Quality Assurance Support	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			1.350	0.000		0.000		0.000		0.000			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 738: <i>AcqBiz</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Support	C	Various Agencies Location could not be determined.	4.015	1.040		1.092		0.000		1.092	Continuing	Continuing	0
Subtotal			4.015	1.040		1.092		0.000		1.092			0.000

Remarks

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	34.847	10.728	9.024	0.000	9.024			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>		PROJECT 738: <i>AcqBiz</i>	

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Increment One IOC		#																										
Increment Two IOC			#																									
Increment Three IOC				#																								
Increment Four IOC							#																					
Increment Five IOC								#																				
Increment Six IOC											#																	
Increment Seven IOC												#																
Increment Eight IOC															#													
Increment Nine IOC																#												
Increment Ten IOC																			#									
Increment Eleven IOC																				#								
Increment Twelve IOC																							#					
Increment Thirteen IOC																								#				
Increment Fourteen IOC																											#	

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT 738: <i>AcqBiz</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Increment One IOC	2	2009	2	2009
Increment Two IOC	3	2009	3	2009
Increment Three IOC	1	2010	1	2010
Increment Four IOC	3	2010	3	2010
Increment Five IOC	1	2011	1	2011
Increment Six IOC	3	2011	3	2011
Increment Seven IOC	1	2012	1	2012
Increment Eight IOC	3	2012	3	2012
Increment Nine IOC	1	2013	1	2013
Increment Ten IOC	3	2013	3	2013
Increment Eleven IOC	1	2014	1	2014
Increment Twelve IOC	3	2014	3	2014
Increment Thirteen IOC	1	2015	1	2015
Increment Fourteen IOC	3	2015	3	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT AE5: <i>HEADQUARTERS ARMY ENVIRONMENTAL SYSTEM (HQAES)</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
AE5: <i>HEADQUARTERS ARMY ENVIRONMENTAL SYSTEM (HQAES)</i>	5.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u>											
Mission Description and Budget Item Justification is not defined.											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Empty Accomplishment. No Accomplishments/Planned Programs returned for this item. <i>FY 2009 Accomplishments:</i> FY 2009							0.000	0.000	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals							0.000	0.000	0.000	0.000	0.000
<u>C. Other Program Funding Summary (\$ in Millions)</u>											
N/A											
<u>D. Acquisition Strategy</u>											
N/A											
<u>E. Performance Metrics</u>											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT M05: <i>Enterprise Army Workload & Performance Sys (eAWPS)</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
M05: <i>Enterprise Army Workload & Performance Sys (eAWPS)</i>	1.001	0.515	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u>											
<p>The Enterprise Army Workload and Performance System (eAWPS) is a capstone Human Resource based system that combines information from multiple Army business operations into an integrated data environment to support senior decision making. Additionally, it provides scenario planning to identify program alternatives and risks linked to the transformation of the Army business enterprise. eAWPS operates on the principle of building information from workload and performance data derived from authoritative Army systems (existing and future) to create an enterprise view. The system is comprised of five major modules integrating data on operational requirements, current performance information, resource management, time and attendance, and output to facilitate the linkage between manpower and budget programming, planning, and execution. eAWPS provides strategic and operational decision makers the ability to view information at user-specified levels of aggregation providing unique customization capabilities. eAWPS was originally designed for the Army Material Command maintenance community and is now being extended to non-maintenance activities commencing with the Office of the Administrative Assistant, Army Reserve, Human Resources and Army Medical Command, as well as maintenance expansion into Army Reserve and Army National Guard maintenance sites.</p>											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #1						0.786	0.500	0.000	0.000	0.000	
Software and architecture development <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT M05: <i>Enterprise Army Workload & Performance Sys (eAWPS)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Program Management <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.215	0.000	0.000	0.000	0.000
Program #3 Small Business Innovative Research/Small Business Technology Transfer Program <i>FY 2009 Accomplishments:</i> FY 2009		0.000	0.015	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT M05: <i>Enterprise Army Workload & Performance Sys (eAWPS)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Accomplishments/Planned Programs Subtotals		1.001	0.515	0.000	0.000	0.000
C. Other Program Funding Summary (\$ in Millions) N/A						
D. Acquisition Strategy N/A						
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT T04: <i>USMEPCOM TRANSFORMTION - IT MODERNIZATION</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
T04: <i>USMEPCOM TRANSFORMTION - IT MODERNIZATION</i>	14.414	1.025	0.584	0.000	0.584	0.786	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

The Virtual Interactive Processing System (VIPS) will modernize and automate the Information Technology (IT) capabilities for qualifying Applicants into the Military Service during wartime, peacetime, and mobilization. VIPS will enable a responsive, flexible and efficient means to qualify Applicants to meet manpower resource requirements for the uniformed Services, Coast Guard, and National Guard routine and contingency operations. VIPS will be the future accessioning system to be used by the US Military Entrance Processing Command (USMEPCOM) which serves as the single entry point for determining the physical, aptitude, and conduct qualifications of candidates for enlistment. VIPS will provide the capability to electronically acquire, process, store, secure, and seamlessly share personnel data across the Accessions Community of Interest (ACOI). When fully implemented, VIPS will reduce the cycle time required to induct enlistees to meet the needs of Homeland Defense, reduce the number of visits to the Military Entrance Processing Stations (MEPS), reduce manual data entry errors, and reduce attrition through better pre-screening practices. The implementation of a Service Oriented Architecture (SOA) approach will enable accession data to be securely available to applicants and ACOI partners such as Recruiting and Training Commands, Defense Manpower Data Center (DMDC), Military Health System, Human Resource Management (HRM), and Defense Travel Management Office (DTMO). VIPS will support compliance with DoD direction for a net-centric environment and take advantage of automated data capture technology, e.g., medical equipment with the capability to capture and electronically transmit exam results. The accessioning system of the future will be location independent, virtually paper-free, and automated to assist with bringing the right people at the right time to operational commanders. On November 1, 2008, the DoD Business Transformation Agency (BTA) assumed program lead. Funds transferred to BTA in the Fiscal Year 2010 (FY10) Program Objective Memorandum (POM). This remaining RDT&E will be used by USMEPCOM for continued project transformation support of VIPS.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Product Development - Research and Prototype Development	13.413	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT T04: <i>USMEPCOM TRANSFORMTION - IT MODERNIZATION</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Test and Evaluation		0.000	0.000	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3		1.001	1.001	0.584	0.000	0.584

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT T04: <i>USMEPCOM TRANSFORMTION - IT MODERNIZATION</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Project Support <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Program Management <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT T04: <i>USMEPCOM TRANSFORMTION - IT MODERNIZATION</i>
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B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #5	0.000	0.024	0.000	0.000	0.000
Small Business Innovative Research/Small Business Technology Transfer Program					
<i>FY 2009 Accomplishments:</i>					
FY 2009					
<i>FY 2010 Plans:</i>					
FY 2010					
<i>FY 2011 Base Plans:</i>					
FY 2011 Base					
<i>FY 2011 OCO Plans:</i>					
FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	14.414	1.025	0.584	0.000	0.584

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Ord. #1: <i>OMA APE 33271600</i>	9.171	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	9.171

D. Acquisition Strategy

VIPS will be acquired using an incremental acquisition strategy to develop and field the system in multiple increments. Increments will be developed to meet user requirements and place a capability in the hands of the stakeholders as early as possible. The incremental development strategy will allow for opportunities to align VIPS engineering and development with the ongoing deployment of other Service modernization projects such as Defense Travel System (DTS), Armed Forces Health Longitudinal Technology Application (AHLTA), Internet Computerized Adaptive Testing (ICAT), and Defense Integrated Military Human Resources System (DIMHRS), promoting incorporation of existing systems into the VIPS solution and mitigate program costs. Requirements will be based on the industry's capabilities discovered through market sampling and review of technology and systems conducted by PEO-EIS (IMS-A/USMEPCOM), Business Transformation Agency (BTA) and the ACOI. In accordance with the incremental acquisition strategy, the program will complete

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT T04: <i>USMEPCOM TRANSFORMTION - IT MODERNIZATION</i>
<p>Milestones B and C in stages that correspond to three major increments. Milestone B for Increment 1.0 will be completed by the end of FY 2010. Completion of Milestone B for Increment 1.0 will ensure start of Engineering and Manufacturing Development Phase in FY 2011. The Milestone C for Increment 1.0 will be completed in FY 2011. Following the successful acceptance of the Increment 1.0 Initial Operational Test & Evaluation (OT&E) in FY 2011, the system deployment will provide a functional baseline and Initial Operational Capability (IOC) early in the program life cycle. Subsequent to deployment of Increment 1.0, Increment 2.0 will be developed. Milestone B for Increment 2.0 will be completed in FY 2012 and Milestone C for Increment 2.0 will be completed in FY 2012. Increment 2.0 will be deployed in FY 2012/2013. Increment 3.0 development and deployment will occur in FY 2013. Final Full Operational Capability (FOC) scheduled for the end of FY 2013 following completion of a Final Operational Test & Evaluation(FOT&E) to verify that functional capability requirements have been fulfilled and that the system is operationally effective. VIPS will be acquired using a full and open competitive contracting strategy using performance based contracting and will include Earned Value Management (EVM). BTA's VIPS Program Office will employ rigorous cost controls using a comprehensive risk management program to ensure development and deployment of a managed solution that meets USMEPCOM and ACOI requirements and fulfills identified capability gaps.</p> <p>E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.</p>		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>				PROJECT T05: <i>ARMY BUSINESS SYSTEM MODERNIZATION INITIATIVES</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
T05: <i>ARMY BUSINESS SYSTEM MODERNIZATION INITIATIVES</i>	0.000	8.214	6.849	0.000	6.849	4.102	1.102	1.101	1.097	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u>											
<p>Adapt/improve/install/field government of the shelf (GOTS), commercial off the shelf (COTS), and new software to perform various tasks in a networked environment such as data warehousing, force management, personnel, installation and environmental data bases and applications to support Business System Transformation and Installation Management. The Army Human Resources Data Repository (AHDR) will be a consolidated database containing Army HR data from Army persistent systems and the Defense Integrated Human Resource System (DIHMRS). The AHDR can provide translated data to the five (5) DIHMRS Confirmed Capability Gaps (CCG) that are currently known: the Wounded Warrior Accountability System (WWAS), the Chief Army Reserve Decision Support System (CARDSS) Portal, Soldier Management System-WEB (SMS-WEB), Career Acquisition Personnel & Position Management System (CAPPMS), and Pretrained Individual Manpower Stratification Model (PIM). Due to delay in DIMHRS implementation, funds for ADHR will be decertified and the project is placed on hold until further guidance relating to DIMHRS is received. The Wounded Warrior Accountability System (WWAS) is an integrated, technical/business, application solution that uses Enterprise Service Bus (BUS) interfaces and direct data base access to provide users real-time authoritative information. This application provides a single source datum retrieval point using various authoritative data sources for non-clinical case management. The integrated applications and the associated automation infrastructure support injured Soldiers as they process through the Wounded Warrior life cycle management system e.g. medical treatment/rehabilitation, medical evaluation, physical disability evaluation, physical disability compensation determination, and transition and beyond, until the soldier/veteran is no longer qualified for the program. The Army Mapper (AM) is the Army Geospatial data base of record and the HQDA repository for all Installation & Environment (I&E) related geo-spatial data systems. Its capabilities based, fully integrated, geospatially focused framework is supporting installation management, mission assurance, protection of Army critical assets, readiness and mission execution. At full operating capability (FY11), AM will improve installation management capabilities, achieve reductions in Army-wide operating costs for GIS, improve access to information, allow the I&E domain to deliver standardized geospatial capabilities more effectively and efficiently and replace 35 disparate systems. AM is reported to Congress as a component of the DoD Enterprise Transition Plan. The Program Planning Budget (PPB)- Business Operating System (BOS) will standardize and better integrate the transactional automated information systems used in the HQDA level programming and budgeting processes. These systems are core to the PPBE business processes of the HQ for gathering programmatic requirements, balancing resources and delivering the Army's program budget to OSD. This project is streamlining programming and budgeting processes and significantly improving strategic analysis capabilities. The project is architecting, reengineering, streamlining and consolidating HQDA systems, feeder data base systems, and streamlining the associated processes. These improvements will improve capability eliminate redundancies and reduce overall cost of operations. The PPB BOS project is complementary to the Army's GFEBs program. The Headquarters Installation Information System (HQIIS) will support the statutory and regulatory reporting requirements for real property for the Army enterprise.</p>											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>		PROJECT T05: <i>ARMY BUSINESS SYSTEM MODERNIZATION INITIATIVES</i>				
B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Program #1</p> <p>The Army Human Resources Data Repository (AHDR) will automate the extraction and translation of HR data from DIHMRS and other data sources for all persistent Army systems to support G-1 and non-G-1 data analysis. The AHDR will allow the Army to meet quick-response data requirements for the Global War on Terrorism GWOT) as well as meet data needs for emerging Army HR requirements. The WWAS FY11 efforts will fund modernization focused on functionality gaps and integrating the Warrior Transition Unit (WTU) users within the infrastructure. Specific interface development will include Traumatic Serviceman's Group Life Insurance, Physical Disability Case Processing, Combat Injury Pay, Combat Related Special Compensation, Dept of Labor, Defense Enrollment Eligibility Reporting System (DEERS), Medical Operational Data System, Medical Evaluation Board Internal Tracking, DFAS Wounded In Action Cell, and the VA. It will include design and development of gap solutions for post DIHMRS support. The Army Mapper will be enhanced to support real property business practices - asset tracking and real property accountability. It will be enhanced to support reconciliation of environmental liabilities with real property assets, to manage specialized environmental liabilities data, define requirements for and implement specialized workflow process and management support functions, visualization, and reporting. Over the past year, the PPB BOS program has removed duplicative data, functionality, and business process. PPB BOS has also improved data visibility, accuracy, and access through deployment of the Enterprise Army PPBE Data Warehouse. In FY10, PPB BOS will deploy an enterprise-level application to improve operations, reduce workload, expand data visibility, and transfer budget data to GFEBs.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p>				0.000	8.214	6.849	0.000	6.849

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605013A: <i>Information Technology Development</i>	PROJECT T05: <i>ARMY BUSINESS SYSTEM MODERNIZATION INITIATIVES</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Accomplishments/Planned Programs Subtotals		0.000	8.214	6.849	0.000	6.849
C. Other Program Funding Summary (\$ in Millions)						
N/A						
D. Acquisition Strategy						
Modernize IT legacy systems across Army IT domains by adapting/improving government off the shelf (GOTS), commercial off the shelf (COTS), and new software to perform various tasks in a networked environment. These efforts include the Army Human Resources Data Repository (AHDR), the Wounded Warrior Accountability System (WWAS), the Army Mapper, the Program Planning Budget Execution (PPBE) - Business Operating System (BOS), and the Headquarters Installation Information System.						
E. Performance Metrics						
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.						

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0605018A: <i>Army Integ Military Human Resources Sys (A-IMRS)</i>								
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	100.500	0.000	100.500	68.600	53.800	65.000	65.000	Continuing	Continuing
HR5: <i>ARMY INTEG MILITARY HUMAN RESOURCES SYS (A-IMRS)</i>	0.000	0.000	100.500	0.000	100.500	68.600	53.800	65.000	65.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Army Integrated Military Human Resources System (A-IMHRS) will provide the Army with an integrated, multi-component, personnel and pay system. The system will streamline Army Human Resources (HR), enhancing the efficiency and accuracy of Army personnel and pay procedures. A-IMHRS will provide each Service member with a single, comprehensive record of service that will feature a self-service capability that allows the Service member to update selected personal information. HR Specialists, Commanders and others will have access to Soldiers' personnel and pay information as required to support their decisions and responsibilities across the Army. This web-based HR tool will be available 24 hours a day.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	100.500	0.000	100.500
Total Adjustments	0.000	0.000	100.500	0.000	100.500
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Adjustments to Budget Years	0.000	0.000	100.500	0.000	100.500

Change Summary Explanation

Change Summary Explanation: Funding - FY 11: Funding provided to support the development of the The Army Integrated Military Human Resources System (A-IMHRS), which is the Army component of the Defense Integrated Military Human Resources System (DIMHRS).

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605018A: <i>Army Integ Military Human Resources Sys (A-IMRS)</i>				PROJECT HR5: <i>ARMY INTEG MILITARY HUMAN RESOURCES SYS (A-IMRS)</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
HR5: <i>ARMY INTEG MILITARY HUMAN RESOURCES SYS (A-IMRS)</i>	0.000	0.000	100.500	0.000	100.500	68.600	53.800	65.000	65.000	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u>											
<p>The Army Integrated Military Human Resources System (A-IMHRS) will provide the Army with an integrated, multi-component, personnel and pay system. The system will streamline Army Human Resources (HR), enhancing the efficiency and accuracy of Army personnel and pay procedures. A-IMHRS will provide each Service member with a single, comprehensive record of service that will feature a self-service capability that allows the Service member to update selected personal information. HR Specialists, Commanders and others will have access to Soldiers' personnel and pay information as required to support their decisions and responsibilities across the Army. This web-based HR tool will be available 24 hours a day.</p>											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 A-IMHRS - Army Defense Integrated Military Human Resource System <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base							0.000	0.000	100.500	0.000	100.500

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605018A: <i>Army Integ Military Human Resources Sys (A-IMRS)</i>	PROJECT HR5: <i>ARMY INTEG MILITARY HUMAN RESOURCES SYS (A-IMRS)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Accomplishments/Planned Programs Subtotals		0.000	0.000	100.500	0.000	100.500
C. Other Program Funding Summary (\$ in Millions) N/A						
D. Acquisition Strategy N/A						
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.						

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	114.817	126.775	130.340	0.000	130.340	127.534	136.692	109.476	57.084	Continuing	Continuing
JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>	114.817	126.775	130.340	0.000	130.340	127.534	136.692	109.476	57.084	Continuing	Continuing
<u>A. Mission Description and Budget Item Justification</u>											
<p>The Joint Air-to-Ground Missile (JAGM) is an air-launched missile system that provides advanced line-of-sight (LOS) and beyond-line-of-sight (BLOS) capabilities, including precision point and fire-and-forget (active and passive) seeker targeting technologies; increased range; and increased lethality against soft and hardened moving and stationary targets. The system will be used with fixed-wing aircraft, rotary-wing aircraft, and unmanned aircraft systems (UAS). The JAGM System will replace aviation-launched TOW, the HELLFIRE family of missiles, and the Navy's Maverick family of missiles. JAGM is a joint program with the Army, Navy and USMC that addresses rotary/fixed wing and UAS requirements. The Army is funding missile development and integration to Army unique platforms with the Navy funding their platform integration requirements. The Super Hornet (F/A 18E/F), the Apache (AH-64D), and the Super Cobra (AH-1Z) are Milestone C threshold platforms with integration occurring no later than (NLT) the end of FY13 and Initial Operational Capability (IOC) beginning NLT the end of FY16. Other threshold platforms are the Seahawk (MH-60R) and Extended Range Multi Purpose (ERMP) UAS, and an Army Light Armed Scout Helicopter. MH-60R integration occurs NLT FY14. Integration timelines for ERMP and the Light Armed Scout Helicopter are notional and will be updated prior to Milestone B as those programs mature. JAGM will increase the Warfighter's operational flexibility by effectively engaging a variety of stationary and mobile targets on the battlefield, including advanced heavy/light armored vehicles, bunkers, buildings, patrol craft, command and control vehicles, transporter/erector (e.g., SCUD) launchers, artillery systems, and radar/air defense systems. Its multi-mode seeker will provide robust capability in adverse weather, day or night, and in an obscured/countermeasure environment, against both stationary and moving targets. JAGM supports more efficient logistics for expeditionary force tailoring by replacing several missile variants with a single, interoperable weapon. The warhead is designed for high performance against both armored and non-armored targets. It also allows flexibility in the location of resupply on the battlefield, thereby minimizing the logistics burden of the combat force. The JAGM System includes missile, trainers, containers, support equipment, and launcher MODS. Six prototype missiles per contractor will be procured to support Technology Development.</p>											

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>
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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	118.125	127.439	130.454	0.000	130.454
Current President's Budget	114.817	126.775	130.340	0.000	130.340
Total Adjustments	-3.308	-0.664	-0.114	0.000	-0.114
• Congressional General Reductions		-0.664			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-3.308	0.000			
• Adjustments to Budget Years	0.000	0.000	-0.114	0.000	-0.114

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>	PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
<i>JA6: JOINT AIR-TO-GROUND MISSILE (JAGM)</i>	114.817	126.775	130.340	0.000	130.340	127.534	136.692	109.476	57.084	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

The Joint Air-to-Ground Missile (JAGM) is an air-launched missile system that provides advanced line-of-sight (LOS) and beyond-line-of-sight (BLOS) capabilities, including precision point and fire-and-forget (active and passive) seeker targeting technologies; increased range; and increased lethality against soft and hardened moving and stationary targets. The system will be used with fixed-wing aircraft, rotary-wing aircraft, and unmanned aircraft systems (UAS). The JAGM System will replace aviation-launched TOW, the HELLFIRE family of missiles, and the Navy's Maverick family of missiles. JAGM is a joint program with the Army, Navy and USMC that addresses rotary/fixed wing and UAS requirements. The Army is funding missile development and integration to Army unique platforms with the Navy funding their platform integration requirements. The Super Hornet (F/A 18E/F), the Apache (AH-64D), and the Super Cobra (AH-1Z) are Milestone C threshold platforms with integration occurring no later than (NLT) the end of FY13 and Initial Operational Capability (IOC) beginning NLT the end of FY16. Other threshold platforms are the Seahawk (MH-60R) and Extended Range Multi Purpose (ERMP) UAS, and an Army Light Armed Scout Helicopter. MH-60R integration occurs NLT FY14. Integration timelines for ERMP and the Light Armed Scout Helicopter are notional and will be updated prior to Milestone B as those programs mature. JAGM will increase the Warfighter's operational flexibility by effectively engaging a variety of stationary and mobile targets on the battlefield, including advanced heavy/light armored vehicles, bunkers, buildings, patrol craft, command and control vehicles, transporter/erector (e.g., SCUD) launchers, artillery systems, and radar/air defense systems. Its multi-mode seeker will provide robust capability in adverse weather, day or night, and in an obscured/countermeasure environment, against both stationary and moving targets. JAGM supports more efficient logistics for expeditionary force tailoring by replacing several missile variants with a single, interoperable weapon. The warhead is designed for high performance against both armored and non-armored targets. It also allows flexibility in the location of resupply on the battlefield, thereby minimizing the logistics burden of the combat force. The JAGM System includes missile, trainers, containers, support equipment, and launcher MODS. Six prototype missiles per contractor will be procured to support Technology Development.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Software Simulation Algorithm Maturity	8.232	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>	PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Integrated Baseline Review (IBR)		11.174	0.000	0.000	0.000	0.000
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3		50.713	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>	PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Design Verification Test/Engineering Development Test (EDT)						
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4		44.698	0.000	0.000	0.000	0.000
System Requirement Review (SRR)						
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>	PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #5		0.000	6.000	0.000	0.000	0.000
Source Selection Evaluation Board (SSEB)						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						
Program #6		0.000	23.075	0.000	0.000	0.000
Preliminary Design Review (PDR)						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>	PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #7		0.000	35.205	0.000	0.000	0.000
Prototype Flights						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						
Program #8		0.000	5.210	0.000	0.000	0.000
Apache Integration						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>	PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #9 Milestone B <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	7.572	0.000	0.000	0.000
Program #10 Software Simulation Algorithm Maturity <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	7.180	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>	PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #11		0.000	38.984	0.000	0.000	0.000
Design Verification Test/Engineering Development Test (EDT)						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						
Program #12		0.000	3.549	0.000	0.000	0.000
Small Business Innovative Research (SBIR)/Small Business Technology Transfer Program (STTR)						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>	PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #13 Software Simulation Algorithm Maturity <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	6.297	0.000	6.297
Program #14 Design Verification Test/Engineering Development Test (EDT) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	45.286	0.000	45.286

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>	PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #15		0.000	0.000	10.187	0.000	10.187
Apache Integration						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						
Program #16		0.000	0.000	5.047	0.000	5.047
Milestone B						
<i>FY 2009 Accomplishments:</i>						
FY 2009						
<i>FY 2010 Plans:</i>						
FY 2010						
<i>FY 2011 Base Plans:</i>						
FY 2011 Base						
<i>FY 2011 OCO Plans:</i>						
FY 2011 OCO						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>	PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #17 Development Activities to Support Critical Design Review (CDR) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	38.518	0.000	38.518
Program #18 Enter Engineering Manufacturing, and Development (EMD) Phase <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	25.005	0.000	25.005

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>				PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>				
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Accomplishments/Planned Programs Subtotals						114.817	126.775	130.340	0.000	130.340	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>Joint Air-to-Ground Missile (JAGM) SSN: C70302</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.508	96.442	Continuing	Continuing
• Ord. #2: <i>Navy (RDTE) Joint Air-to-Ground Missile (JAGM)</i>	54.568	77.412	100.846	0.000	100.846	120.044	126.481	131.679	63.622	Continuing	Continuing
• Ord. #3: <i>Navy (Procurement) Joint Air-to-Ground Missile (JAGM)</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	32.878	143.865	Continuing	Continuing
D. Acquisition Strategy											
<p>The JAGM System is an ACAT 1D Joint Army/Navy/USMC program with the Army designated as lead service. The JAGM system is a common air-to-ground precision guided missile for use by Joint Service manned and unmanned aircraft to destroy high-value stationary, moving, and relocateable land and naval targets. JAGM provides current and future aviation platforms a common, multi-mode weapon, with reactive targeting capability, which satisfies the sum of needs across the joint platforms and eliminates the requirement for separate upgrades to multiple existing missile systems. The JAGM program has four phases: a TD phase including system integration and preliminary design review (PDR), an Engineering Manufacturing, and Development (EMD) phase, a Production & Deployment (PD) phase, and an Operations & Support phase. Following solicitation and formal source selection, the government competitively awarded Fixed Price Incentive (FPI) contracts (with full cost reporting) to two contractors for the 27-month TD phase. The TD phase culminates with PDR and competitive fly-off of the contractor's prototype missiles. Approximately 22-months after TD phase contract award, TD contractors will be asked to submit proposals for the EMD and Low Rate Initial Production (LRIP) phases. A second source selection process will evaluate the contractor's TD performance and proposals for the EMD and PD phases. Offeror's plans to facilitate competition during the PD phase will be considered during the evaluation process for the EMD contract. The government plans to award a single contract for the 48-month EMD phase, including provisions for procurement of long lead-time items to support the follow-on PD phase. Fixed Price Type contracts are planned for the PD phase (LRIP and full rate production (FRP)).</p>											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>				PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Lockheed Martin	C/FPI	Orlando Florida	0.000	47.173		0.000		0.000		0.000	Continuing	Continuing	0
Raytheon	C/FPI	Tucson Arizona	0.000	47.173		0.000		0.000		0.000	Continuing	Continuing	0
EMD Prime Contract	C/FP	NA Location could not be determined.	0.000	0.000		103.654		0.000		103.654	Continuing	Continuing	0
Support Contracts	C/Various	Various Location could not be determined.	0.000	11.475		10.290		0.000		10.290	Continuing	Continuing	0
Development Engineering	C/Various	Various Location could not be determined.	0.000	5.859		2.963		0.000		2.963	Continuing	Continuing	0
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	3.549		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.000	115.229		116.907		0.000		116.907			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>				PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>					

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Contractor Support	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.000		0.000		0.000	0	0	0
Cost Category Item is empty.	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.000		0.000		0.000	0	0	0
Subtotal			0.000	0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Other Gov Agencies	C/Variou	Various Location could not be determined.	0.000	3.069		5.640		0.000		5.640	Continuing	Continuing	0
Cost Category Item is empty.	C	Nothing entered for Activity and Location.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>				PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>					

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		Location could not be determined.											
Cost Category Item is empty. - 2	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.000	3.069		5.640		0.000		5.640			0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
System Eng/ Project Management	C/Various	Various Location could not be determined.	0.000	8.477		7.793		0.000		7.793	Continuing	Continuing	0
Subtotal			0.000	8.477		7.793		0.000		7.793			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>	PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	126.775	130.340	0.000	130.340			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>	PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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)						#																						
Milestone B								#																				
Critical Design Review												#																
Advance Procurement 1																				#								
Milestone C																								#				
Low Rate Initial Production 1																										#		
Advance Procurement 2																											#	

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>	PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Preliminary Design Review (PDR)	2	2010	2	2010
Milestone B	4	2010	4	2010
Critical Design Review	1	2012	1	2012
Advance Procurement 1	2	2014	2	2014
Milestone C	4	2014	4	2014
Low Rate Initial Production 1	1	2015	1	2015
Advance Procurement 2	2	2015	2	2015

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Exhibit R-5, RDT&E Termination Liability: PB 2011 Army							DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605450A: <i>Joint Air-to-Ground Missile (JAGM)</i>			PROJECT JA6: <i>JOINT AIR-TO-GROUND MISSILE (JAGM)</i>
Cost (\$ in Millions)	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
Program Termination Liability	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Notes

The JAGM Prime Contract incorporates the "Limitation of Government's Obligation" (DFARS 252.232-7007) to limit the Government's liability. For the JAGM program, the "Limitation of Government's Obligation" clause limits the Government's financial liability per the contract to those funds placed on contract plus costs associated with the orderly termination of contractual actions.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605455A: <i>SLAMRAAM</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	23.700	0.000	23.700	17.800	53.500	7.500	7.600	Continuing	Continuing
S35: <i>SLAMRAAM</i>	0.000	0.000	23.700	0.000	23.700	17.800	53.500	7.500	7.600	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Surface Launched Advanced Medium Range Air-To-Air Missile (SLAMRAAM) is a critical component of the Army's future Integrated Air & Missile Defense (IAMD) system. SLAMRAAM consists of launcher platforms employing the proven AIM-120-C7 Advanced Medium Range Air-to-Air Missile; Integrated Fire Control Station (IFCS) command, control, and communications platforms; and Improved Sentinel Radars. SLAMRAAM is a day or night, adverse weather, non-line-of-sight system that counters cruise missiles (CM), unmanned aerial vehicle (UAV), fixed wing, and rotary wing threats. SLAMRAAM is mobile and able to operate in a variety of combat situations to protect maneuver forces and strategic-level critical assets. SLAMRAAM represents a substantial increase in performance over current short range air defense systems. SLAMRAAM was directed by the Department of the Army in August 2009 to restructure and move to a more survivable platform for crew protection. The Department of the Army is considering moving the SLAMRAAM to either the High Mobility Artillery Rocket System (HIMARS) Carrier or the Family of Medium Tactical Vehicles (FMTV) platform. A HIMARS platform decision will require the schedule and funding profile to be revisited in the POM.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	23.700	0.000	23.700
Total Adjustments	0.000	0.000	23.700	0.000	23.700
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments 1	0.000	0.000	23.700	0.000	23.700

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605455A: <i>SLAMRAAM</i>	PROJECT S35: <i>SLAMRAAM</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S35: <i>SLAMRAAM</i>	0.000	0.000	23.700	0.000	23.700	17.800	53.500	7.500	7.600	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

The Surface Launched Advanced Medium Range Air-To-Air Missile (SLAMRAAM) is a critical component of the Army's future Integrated Air & Missile Defense (IAMD) system. SLAMRAAM consists of launcher platforms employing the proven AIM-120-C7 Advanced Medium Range Air-to-Air Missile; Integrated Fire Control Station (IFCS) command, control, and communications platforms; and Improved Sentinel Radars. SLAMRAAM is a day or night, adverse weather, non-line-of-sight system that counters cruise missiles (CM), unmanned aerial vehicle (UAV), fixed wing, and rotary wing threats. SLAMRAAM is mobile and able to operate in a variety of combat situations to protect maneuver forces and strategic-level critical assets. SLAMRAAM represents a substantial increase in performance over current short range air defense systems. SLAMRAAM was directed by the Department of the Army in August 2009 to restructure and move to a more survivable platform for crew protection. The Department of the Army is considering moving the SLAMRAAM to either the High Mobility Artillery Rocket System (HIMARS) Carrier or the Family of Medium Tactical Vehicles (FMTV) platform. A HIMARS platform decision will require the schedule and funding profile to be revisited in the POM.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	0.000	0.000	6.300	0.000	6.300
Product Development					
<i>FY 2009 Accomplishments:</i>					
FY 2009					
<i>FY 2010 Plans:</i>					
FY 2010					
<i>FY 2011 Base Plans:</i>					
FY 2011 Base					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605455A: <i>SLAMRAAM</i>	PROJECT S35: <i>SLAMRAAM</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Test and Evaluation <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	12.400	0.000	12.400
Program #3 System Engineering/Program Management (SE/PM) <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		0.000	0.000	5.000	0.000	5.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010							
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0605455A: <i>SLAMRAAM</i>		PROJECT S35: <i>SLAMRAAM</i>							
B. Accomplishments/Planned Program (\$ in Millions)											
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total			
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Program #4 Small Business Innovative Research/Small Business Technology Transfer Program				0.000	0.000	0.000	0.000	0.000			
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals				0.000	0.000	23.700	0.000	23.700			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>PE 0604869A, Proj MO6, Patriot/MEADS Combined Aggregate Program (CAP)</i>	454.565	566.215	467.139	0.000	467.139	408.012	325.184	240.018	75.585	0	2,536.718

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE				PROJECT				
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)			PE 0605455A: SLAMRAAM				S35: SLAMRAAM				
C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Ord. #2: SSN C53101, MSE Missile	0.000	0.000	0.000	0.000	0.000	607.796	534.022	516.479	503.786	0	2,162.083
• Ord. #3: SSN C53201, PATRIOT/ MEADS GSE	0.000	0.000	0.000	0.000	0.000	0.000	126.589	217.639	528.435	0	872.663
• Ord. #4: PE 0102419A, Proj E55, JLENS	344.850	328.356	372.493	0.000	372.493	176.198	118.448	0.000	0.000	0	1,340.345
• Ord. #5: SSN BZ0525, JLENS Production	0.000	0.000	0.000	0.000	0.000	470.661	419.801	427.731	394.325	0	1,712.518
• Ord. #6: PE 0604802A, Proj S23, SLAMRAAM	31.306	56.441	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	87.747
• Ord. #7: PE 0605450A, Proj S35 SLAMRAAM	0.000	0.000	23.700	0.000	23.700	17.800	53.500	7.500	7.600	0	110.100
• Ord. #8: SSN C81002, SLAMRAAM Launcher	40.349	0.000	116.732	0.000	116.732	83.302	233.762	241.691	248.895	0	964.731
• Ord. #9: SSN C81004, SLAMRAAM Missile	0.000	0.000	0.000	0.000	0.000	0.000	39.542	39.428	15.416	0	94.386
• Ord. #10: PE 0603305A, Proj TR7, Protection Capability II - Intercept	0.000	0.000	4.296	0.000	4.296	21.303	74.197	93.679	94.006	0	287.481
• Ord. #11: SSN WK 5053, FAAD GBS	0.000	0.000	91.467	169.260	260.727	7.948	7.935	0.000	0.000	0	276.610
• Ord. #12: PE 0603327A, Proj S34, AMD System of System Engineering and Integration	111.496	166.061	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	277.557
• Ord. #13: PE 0605457A, Proj, S40, Army Integrated Air and Missile Defense (AIAMD)	0.000	0.000	251.124	0.000	251.124	271.543	251.646	228.639	129.043	0	1,131.995
• Ord. #14: SSN BZ5075, Army IAMD Battle Command System (IBCS)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	24.045	99.102	0	123.147
• Ord. #15: PE 0208053, Proj 635, JOINT TACT GRD STATION-P3I (MIP)	1.949	36.005	12.403	0.000	12.403	12.630	13.038	7.982	7.947	0	91.954

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0605455A: <i>SLAMRAAM</i>				PROJECT S35: <i>SLAMRAAM</i>				
<u>C. Other Program Funding Summary (\$ in Millions)</u>											
<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Ord. #16: <i>SSN BZ8401, Joint Tactical Ground Station (JTAGS)</i>	0.000	6.682	9.279	0.000	9.279	0.000	0.000	9.415	4.658	0	30.034
• Ord. #17: <i>PE 0605456A, Project PA3, PAC-3/MSE Missile</i>	0.000	0.000	62.500	0.000	62.500	62.100	3.500	62.000	64.500	Continuing	Continuing
<u>D. Acquisition Strategy</u>											
System Development and Demonstration (SDD) contract award in 2nd Quarter FY04 and completed in Oct 09. The program will be restructured pending decision on a platform, but the Army does not anticipate shifting the Milestone C. Milestone C is scheduled for FY11.											
<u>E. Performance Metrics</u>											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605455A: <i>SLAMRAAM</i>				PROJECT S35: <i>SLAMRAAM</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Contractor Hardware/ Software Development	SS	Raytheon Tewksbury, MA	0.000	0.000		1.300		0.000		1.300	Continuing	Continuing	0
Government Prototype Manufacturing (Government Furnished Equipment)	C	Multiple Location could not be determined.	0.000	0.000		5.000		0.000		5.000	Continuing	Continuing	0
Training Aids Devices Simulator and Simulation	C	PEO STRI Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			0.000	0.000		6.300		0.000		6.300			0.000

Remarks

*SS/CPIF/CPFF - Sole Source/Cost Plus Incentive Fee/Cost Plus Fixed Fee

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government System Test And Evaluation	C	Multiple Location could not be determined.	0.000	0.000		12.400		0.000		12.400	Continuing	Continuing	0
Subtotal			0.000	0.000		12.400		0.000		12.400			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605455A: <i>SLAMRAAM</i>				PROJECT S35: <i>SLAMRAAM</i>					

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government SE/PM*	C	Multiple Location could not be determined.	0.000	0.000		5.000		0.000		5.000	Continuing	Continuing	0
SBIR/STTR**	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.000		0.000		0.000	0	0	0
Subtotal			0.000	0.000		5.000		0.000		5.000			0.000

Remarks
*SE/PM - Systems Engineering/Program Management**SBIR/STTR - Small Business Innovative Research/Small Business Technology Transfer Program

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
	0.000	0.000		23.700		0.000		23.700			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0605455A: <i>SLAMRAAM</i>		PROJECT S35: <i>SLAMRAAM</i>	

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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 Decision										#																		
Limited User Test									#																			
Low Rate Initial Production									#	#	#	#	#	#	#	#	#	#	#	#								
Low Rate Initial Production - 2													#	#	#	#	#	#	#	#	#	#	#	#				
Low Rate Initial Production - 3																	#	#	#	#	#	#	#	#	#	#	#	#
Testing																	#	#	#									

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605455A: <i>SLAMRAAM</i>	PROJECT S35: <i>SLAMRAAM</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Milestone C Decision	2	2011	2	2011
Limited User Test	1	2011	1	2011
Low Rate Initial Production	1	2011	3	2013
Low Rate Initial Production - 2	1	2012	3	2014
Low Rate Initial Production - 3	1	2013	3	2015
Testing	1	2013	3	2013

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605456A: <i>PAC-3/MSE MISSILE</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	62.500	0.000	62.500	62.100	3.500	62.000	64.500	Continuing	Continuing
PA3: <i>PAC-3/MSE MISSILE</i>	0.000	0.000	62.500	0.000	62.500	62.100	3.500	62.000	64.500	Continuing	Continuing

Note

From 2006 thru 2010, this system was funded under the PATRIOT/MEADS Combined Aggregate Program (CAP) program element: 0604869A

A. Mission Description and Budget Item Justification

The PATRIOT Advanced Capability 3 (PAC-3) is the evolution of the phased material change improvement to PATRIOT. It is continuously being improved via hardware and software changes to provide enhanced performance across the spectrum for system and threat intercept performance. The latest missile improvement is the Missile Segment Enhancement (MSE) and has been accepted as the baseline missile for the Medium Extended Air Defense System (MEADS). It is being developed by the U.S. for PATRIOT to meet the U.S. operational requirements. The MSE will provide a more agile and lethal interceptor that increases the engagement envelope/defended area of PATRIOT and the MEADS systems. The MSE improves upon the current PAC-3 missile capability with a higher performance solid rocket motor, modified lethality enhancer, more responsive control surfaces, upgraded software, and insensitive munitions improvements.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	62.500	0.000	62.500
Total Adjustments	0.000	0.000	62.500	0.000	62.500
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments 1	0.000	0.000	62.500	0.000	62.500

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605456A: <i>PAC-3/MSE MISSILE</i>				PROJECT PA3: <i>PAC-3/MSE MISSILE</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
PA3: <i>PAC-3/MSE MISSILE</i>	0.000	0.000	62.500	0.000	62.500	62.100	3.500	62.000	64.500	Continuing	Continuing
Quantity of RDT&E Articles											
Note From 2006 thru 2010, this system was funded under the PATRIOT/MEADS Combined Aggregate Program (CAP) program element: 0604869A											
A. Mission Description and Budget Item Justification The PATRIOT Advanced Capability 3 (PAC-3) is the evolution of the phased material change improvement to PATRIOT. It is continuously being improved via hardware and software changes to provide enhanced performance across the spectrum for system and threat intercept performance. The latest missile improvement is the Missile Segment Enhancement (MSE) and has been accepted as the baseline missile for the Medium Extended Air Defense System (MEADS). It is being developed by the U.S. for PATRIOT to meet the U.S. operational requirements. The MSE will provide a more agile and lethal interceptor that increases the engagement envelope/defended area of PATRIOT and the MEADS systems. The MSE improves upon the current PAC-3 missile capability with a higher performance solid rocket motor, modified lethality enhancer, more responsive control surfaces, upgraded software, and insensitive munitions improvements.											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #1						0.000	0.000	18.940	0.000	18.940	
Continue MSE program with upgrades with LMMFC and Raytheon											
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Implementation of common redesign program integration efforts to support PAC-3/MSE improvements and to meet US operational requirements. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	31.960	0.000	31.960
Program #3 Provides for range support for testing, targets, and modeling and simulation <i>FY 2009 Accomplishments:</i> FY 2009		0.000	0.000	11.600	0.000	11.600

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army										DATE: February 2010	
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B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2010 Plans:</i> FY 2010											
<i>FY 2011 Base Plans:</i> FY 2011 Base											
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						0.000	0.000	62.500	0.000	62.500	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>PE 0604869A, Proj M06, PATRIOT/MEADS Combined Aggregate Program (CAP)</i>	454.565	566.215	468.139	0.000	468.139	408.012	325.184	240.018	75.585	Continuing	Continuing
• Ord. #2: <i>SSN C53101, MSE Missile</i>	0.000	0.000	0.000	0.000	0.000	607.796	534.022	516.479	503.786	Continuing	Continuing
• Ord. #3: <i>SSN C53201, PATRIOT/MEADS GSE</i>	0.000	0.000	0.000	0.000	0.000	0.000	126.589	217.639	528.435	Continuing	Continuing
• Ord. #4: <i>PE 0102419A, Proj E55, JLENS</i>	344.850	328.356	372.493	0.000	372.493	176.198	118.448	0.000	0.000	Continuing	Continuing
• Ord. #5: <i>SSN BZ0525, JLENS Production</i>	0.000	0.000	0.000	0.000	0.000	470.661	419.801	427.731	394.325	Continuing	Continuing
• Ord. #6: <i>PE 0604802A, Prpj S23, SLAMRAAM</i>	31.306	56.441	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• Ord. #7: <i>PE 0605450A, Proj S345 SLAMRAAM</i>	0.000	0.000	23.700	0.000	23.700	17.800	53.500	7.500	7.600	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605456A: <i>PAC-3/MSE MISSILE</i>				PROJECT PA3: <i>PAC-3/MSE MISSILE</i>			

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Ord. #8: <i>SSN C81002, SLAMRAAM Launcher</i>	40.349	0.000	116.732	0.000	116.732	83.302	233.762	241.691	249.895	Continuing	Continuing
• Ord. #9: <i>SSN C81004, SLAMRAAM Missile</i>	0.000	0.000	0.000	0.000	0.000	0.000	39.542	39.426	15.416	Continuing	Continuing
• Ord. #10: <i>PE 0603305A, Proj TR7, Protection Capability II - Intercept</i>	0.000	0.000	4.296	0.000	4.296	21.303	74.197	93.679	94.006	Continuing	Continuing
• Ord. #11: <i>SSN WK5053, FAAD GBS</i>	0.000	0.000	91.467	0.000	91.467	7.948	7.935	0.000	0.000	Continuing	Continuing
• Ord. #12: <i>PE 0603327A, Proj S34, AMD System of System Engineering and Integration</i>	111.496	166.061	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• Ord. #13: <i>PE 0605457A, Proj S40 Army Integrated Air and Missile Defense (AIAMD)</i>	0.000	0.000	251.124	0.000	251.124	271.543	251.646	228.639	129.043	Continuing	Continuing
• Ord. #14: <i>SSN BZ5075, Army IAMD Battle Command System (IBCS)</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	24.045	99.102	Continuing	Continuing
• Ord. #15: <i>PE 0208053m Proj 635, Joint Tact Grd Station-P3I (MIP)</i>	1.949	36.005	12.403	0.000	12.403	12.630	13.038	7.982	7.947	Continuing	Continuing
• Ord. #16: <i>SSN BZ8401, Joint Tactical Ground Station (JTAGS)</i>	0.000	6.682	9.279	0.000	9.279	0.000	0.000	9.415	4.658	0	30.034

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 latest missile improvement is the PAC-3 Missile Segment Enhancement (MSE) program which provides extended ranges, insensitive munitions enhancements, and greater logistical flexibility. The PAC-3 MSE will be fielded to PATRIOT units and is the baseline missile for the Medium Extended Air Defense System (MEADS).

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
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E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605456A: <i>PAC-3/MSE MISSILE</i>	PROJECT PA3: <i>PAC-3/MSE MISSILE</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Missile Segment Enhancement (MSE) - Lockheed Martin Missiles and Fire Control (LMMFC)	SS/CPIF	LMMFC Dallas, TX	0.000	0.000		15.940		0.000		15.940	Continuing	Continuing	0
MSE/PAC-3 Raytheon	SS/FP	Raytheon Boston, MA	0.000	0.000		3.000		0.000		3.000	Continuing	Continuing	0
Program Integration	C	Various Huntsville, AL	0.000	0.000		19.832		0.000		19.832	Continuing	Continuing	0
U.S. Other Government Agencies (OGAs)	C	Various Huntsville, AL	0.000	0.000		3.748		0.000		3.748	Continuing	Continuing	0
In-House	C	PO Huntsville, AL	0.000	0.000		6.000		0.000		6.000	Continuing	Continuing	0
U.S. Contracts	C/CPIF	Various Huntsville, AL	0.000	0.000		2.380		0.000		2.380	Continuing	Continuing	0
Subtotal			0.000	0.000		50.900		0.000		50.900			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605456A: <i>PAC-3/MSE MISSILE</i>				PROJECT PA3: <i>PAC-3/MSE MISSILE</i>					

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Range Support/Facilities	C	WSMR White Sands, NM/ Ft Wingate, White Sands, NM	0.000	0.000		5.100		0.000		5.100	Continuing	Continuing	0
Targets/Threat Simulators	C	Various Location could not be determined.	0.000	0.000		4.600		0.000		4.600	Continuing	Continuing	0
Modeling and Simulation	C	Various Location could not be determined.	0.000	0.000		1.900		0.000		1.900	Continuing	Continuing	0
Subtotal			0.000	0.000		11.600		0.000		11.600			0.000

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract	
		Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost				
Project Cost Totals		0.000		0.000		62.500		0.000		62.500		0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
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	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
PAC 3 Software Build									#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#
PDB 7 Fielding													#															
Missile Segment Enhancement (MSE) Development									#	#	#	#	#	#	#	#												
MSE Production Decision																#												
MSE Production Contract Award																#												
MSE Production																	#	#	#	#	#	#	#	#	#	#	#	#
PAC-3 Missile Segment Testing and Evaluation									#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
PAC 3 Software Build	4	2010	4	2015
PDB 7 Fielding	2	2012	2	2012
Missile Segment Enhancement (MSE) Development	4	2010	4	2012
MSE Production Decision	4	2012	4	2012
MSE Production Contract Award	3	2012	3	2012
MSE Production	1	2013	3	2015
PAC-3 Missile Segment Testing and Evaluation	4	2010	4	2015

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605457A: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	251.124	0.000	251.124	271.543	251.646	228.639	129.043	Continuing	Continuing
S40: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>	0.000	0.000	251.124	0.000	251.124	271.543	251.646	228.639	129.043	Continuing	Continuing

Note

On 23 December 2009 the Army Integrated Air & Missile Defense (AIAMD) program was approved for entry into the Engineering and Manufacturing Development phase as ACAT 1D program. The approved program baseline represents a substantially lower risk approach from the initial program and resulted in a FY 2016 Initial Operational Capability (IOC). As a result of certification required by section 2366b of title 10, United States Code, the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) waived three certification elements (Affordability, Full Funding, and Preliminary Design Review (PDR) Completion) for the Army IAMD program. With submission of the FY 2011 budget, and the associated FY 2011 FYDP, two of these waivers (Affordability & Full Funding) will no longer be necessary. The third (PDR Completion) will require additional work and is expected to be satisfied before the end of FY 2010. Details on the waivers were provided in letters to Congress in January 2010 and will be included in the December 2009 Selected Acquisition Report due to the Congress in April 2010.

A. Mission Description and Budget Item Justification

Funding in this program element provides for the overarching Army Integrated Air and Missile Defense (AIAMD) Architecture and Army IAMD Battle Command System (IBCS) components necessary to produce an AIAMD capability. The AIAMD Program represents a shift from a traditional system-centric weapon systems acquisition to a component-based acquisition. This component-based acquisition will provide the most efficient way to acquire and integrate the components of the incremental AIAMD architecture. Unlike traditional acquisition programs that focus primarily on the development of a single system or platform, the AIAMD Program is structured to enable the development of an overarching system-of-systems capability with participating Air and Missile Defense (AMD) components functioning interdependently to provide total operational capabilities not achievable by the individual element systems. The AIAMD Program achieves this objective by establishing the incremental AIAMD architecture and developing the following products: the IBCS, the Integrated Fire Control (IFC) Network, and the Plug & Fight (P&F) Interface kits. The IBCS provides common Army IAMD Battle Command System (IBCS) Command Post (CP) that replaces seven weapon system unique Battle Management Command, Control, Communications, Computers and Intelligence (BMC4I) components in an AMD Composite BN. The IFC Network provides fire control connectivity and enabling distributed operations. The P&F Interface kit enables the multiple sensor and weapon components for netted operations. AIAMD has been designated as the Army's Pathfinder for the development of a Joint Track Management capability. As part of the new DoD 5000.02 initiative for competitive prototyping, the AIAMD program awarded two competitive contracts to teams lead by Northrop Grumman and Raytheon for the development of the Army IAMD Battle Command System (IBCS) in September 2008. During FY 2009, the two competing contractors developed prototypes of their respective designs and conducted an initial Preliminary Design Review (PDR). Competitive proposals were then submitted for the Engineering and Manufacturing Development (EMD) Phase of the program in May 2009. The down select to one contractor occurred after the Milestone B decision in 1Q FY2010. FY 2010 is the first full year of the EMD phase of the program. The FY 2011 funding represents continuation

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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of the EMD Phase of the program. During this phase, the IBCS contractor will be furthering their design efforts with respect to the command post, the common side of the Plug and Fight Kit, and the Integrated Fire Control Network. AIAMD funding also includes the contributing acquisition programs (Phased Array Tracking to Intercept of Target (PATRIOT), Surface Launched Advanced Medium Range Air-To-Air Missile (SLAMRAAM), Improved Sentinel, and Joint Land Attack Cruise Missile Defense Elevated Netted Sensor Systems (JLENS)) to place their respective contractors under contract for the development of the unique side of the Plug and Fight Kit which enables the weapons and sensors to be placed on the Integrated Fire Control Network. An IBCS Critical Design Review (CDR) is planned for third quarter FY 2011 with the contributing programs CDRs and the AIAMD CDR in fourth quarter FY 2011. This funding was transferred from the Army IAMD PE 0603327A, Project Code S34, for FY 2011 and beyond.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	251.124	0.000	251.124
Total Adjustments	0.000	0.000	251.124	0.000	251.124
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Adjustments to Budget Years	0.000	0.000	251.124	0.000	251.124

Change Summary Explanation

This funding was transferred from the Army IAMD PE 0603327A, Project Code S34, FY 2011 and beyond, to continue funding the Engineering and Manufacturing Development (EMD) phase of the program.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
S40: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>	0.000	0.000	251.124	0.000	251.124	271.543	251.646	228.639	129.043	Continuing	Continuing
Quantity of RDT&E Articles											

Note

On 23 December 2009 the Army Integrated Air & Missile Defense (AIAMD) program was approved for entry into the Engineering and Manufacturing Development phase as ACAT ID program. The approved program baseline represents a substantially lower risk approach from the initial program and resulted in a FY 2016 Initial Operational Capability (IOC). As a result of certification required by section 2366b of title 10, United States Code, the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) waived three certification elements (Affordability, Full Funding, and Preliminary Design Review (PDR) Completion) for the Army IAMD program. With submission of the FY 2011 budget, and the associated FY 2011 FYDP, two of these waivers (Affordability & Full Funding) will no longer be necessary. The third (PDR Completion) will require additional work and is expected to be satisfied before the end of FY 2010. Details on the waivers were provided in letters to Congress in January 2010 and will be included in the December 2009 Selected Acquisition Report due to the Congress in April 2010.

A. Mission Description and Budget Item Justification

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605457A: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>	PROJECT S40: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>
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of the program. During this phase, the IBCS contractor will be furthering their design efforts with respect to the command post, the common side of the Plug and Fight Kit, and the Integrated Fire Control Network. AIAMD funding also includes the contributing acquisition programs (Phased Array Tracking to Intercept of Target (PATRIOT), Surface Launched Advanced Medium Range Air-To-Air Missile (SLAMRAAM), Improved Sentinel, and Joint Land Attack Cruise Missile Defense Elevated Netted Sensor Systems (JLENS)) to place their respective contractors under contract for the development of the unique side of the Plug and Fight Kit which enables the weapons and sensors to be placed on the Integrated Fire Control Network. An IBCS Critical Design Review (CDR) is planned for third quarter FY 2011 with the contributing programs CDRs and the AIAMD CDR in fourth quarter FY 2011. This funding was transferred from the Army IAMD PE 0603327A, Project Code S34, for FY 2011 and beyond.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Continuing product development for command post, the common and unique side of the Plug and Fight kits, and the Integrated Fire Control Network. Provides for an IBCS CDR, contributing programs CDRs and the AIAMD CDR. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO	0.000	0.000	218.863	0.000	218.863
Program #2 Support Cost	0.000	0.000	15.264	0.000	15.264

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605457A: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>	PROJECT S40: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3 Provides for Modeling & Simulation, Joint Interoperability Test Support , Army Evaluation Center/ Developmental Test Command/Operational Test Command support and White Sands Missile Range Test Support		0.000	0.000	16.997	0.000	16.997
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Accomplishments/Planned Programs Subtotals		0.000	0.000	251.124	0.000	251.124

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE			PROJECT					
2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)			PE 0605457A: ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)			S40: ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)					
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: PE 0604869A, Project M06, PATRIOT/MEADS Combined Aggregate Program (CAP)	454.565	566.215	467.139	0.000	467.139	408.012	325.184	240.018	75.585	Continuing	Continuing
• Ord. #2: PE 0605456A, Project PA3, PAC- 3/MSE Missile	0.000	0.000	62.500	0.000	62.500	62.100	3.500	62.000	64.500	Continuing	Continuing
• Ord. #3: SSN C53101, MSE Missile	0.000	0.000	0.000	0.000	0.000	607.796	534.022	516.479	503.786	Continuing	Continuing
• Ord. #4: SSN C53201, PATRIOT/ MEADS GSE	0.000	0.000	0.000	0.000	0.000	0.000	126.589	217.639	528.435	Continuing	Continuing
• Ord. #5: PE PE 0102419A, Proj E55, JLENS	344.850	328.356	372.493	0.000	372.493	176.198	118.448	0.000	0.000	Continuing	Continuing
• Ord. #6: SSN BZ0525, JLENS Production	0.000	0.000	0.000	0.000	0.000	470.661	419.801	427.731	394.325	Continuing	Continuing
• Ord. #7: PE 0604802A, Project S23, SLAMRAAM	31.306	56.441	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• Ord. #8: PE 0605450A, Project S35, SLAMRAAM	0.000	0.000	23.700	0.000	23.700	17.800	53.500	7.500	7.600	Continuing	Continuing
• Ord. #9: SSN C81002, SLAMRAAM Launcher	40.349	0.000	116.732	0.000	116.732	83.302	233.762	241.691	248.895	Continuing	Continuing
• Ord. #10: SSN C81004, SLAMRAAM Missile	0.000	0.000	0.000	0.000	0.000	0.000	39.542	39.426	15.416	Continuing	Continuing
• Ord. #11: PE 0603305A, Proj TR7, Protection Capability II - Intercept	0.000	0.000	4.296	0.000	4.296	21.303	714.197	93.679	94.006	Continuing	Continuing
• Ord. #12: SSN WK5053, FAAD GBS	0.000	0.000	91.467	169.260	260.727	7.948	7.935	0.000	0.000	Continuing	Continuing
• Ord. #13: PE 0603327A, Project S34, Army Integrated Air and Missile Defense (AIAMD)	111.496	164.531	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• Ord. #14: BZ5075, Army IAMD Battle Command System (IBCS)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	24.045	99.102	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605457A: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>	PROJECT S40: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Ord. #15: <i>PE 0208053, Proj 635, JOINT TACT GRD STATION-P3I (MIP)</i>	1.949	36.005	12.403	0.000	12.403	12.630	13.038	7.982	7.947	Continuing	Continuing
• Ord. #16: <i>BZ8401, Joint Tactical Ground Station (JTAGS)</i>	0.000	6.682	9.279	0.000	9.279	0.000	0.000	9.415	4.658	Continuing	Continuing

D. Acquisition Strategy

The Army Integrated Air and Missile Defense (AIAMD) Program will employ an evolutionary acquisition strategy consisting of multiple capability increments leading to an Increment 2 capability in FY 2016. The AIAMD Program carried two competitive prototyping developmental contractors through an initial Preliminary Design Review (PDR) with a down select after Milestone B (MS B) in December 2009 to conduct the EMD phase. Each AIAMD capability increment follows the AIAMD Capability Development Document (CDD), JROC approved 11 December 2009, and is defined as:- Increment 1 is a User-executed capability increment focused on realignment of current force systems into an AMD Composite Battalion (BN) organizational construct. (not part of the materiel development program) - Increment 2 provides the first increment of an integrated materiel solution, and is the initial acquisition program to develop the threshold AIAMD capability. The AIAMD incremental development approach provides the opportunity for technology insertions into the program throughout each increment as high-payoff technologies mature and are ready for integration. This enables an orderly and cost-effective migration from the current system-centric architecture to the AIAMD architecture. Key principles of the AIAMD acquisition approach are the following:- Migrate from system-based acquisition to component-based acquisition- Use system-of-systems acquisition approach with collaboration among AIAMD, PEO MS, PEO C3T, and Brigade Combat Team (BCT) Modernization Component Project Offices, Missile Defense Agency (MDA), and other Service Project Offices to network enable weapons and sensor components- Develop and procure common Army IAMD Battle Command System (IBCS) Command Post (CP) that replaces seven weapon system unique Battle Management Command, Control, Communications, Computers and Intelligence (BMC4I) components- Establish product lines used to evaluate and select, modify and integrate modular open systems Hardware (HW) and Software (SW) common configuration items- Conduct architecture-based System Engineering, Integration and Test (SEI&T) activities for an incremental fielded configuration of the AIAMD Integrated Fire Control (IFC) Network-compatible IBCS CP, weapons and sensor system components

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605457A: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>	PROJECT S40: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Air Space and Missile Defense (ASMD) System of Systems (SOS) Hardware-in-the- Loop Testbed	C	Multiple OGA's Inhouse and Contractor, Huntsville, AL and variou	0.000	0.000		17.697		0.000		17.697	Continuing	Continuing	0
AIAMD System Engineering & Integration	C	Contractor Huntsville, AL	0.000	0.000		20.236		0.000		20.236	Continuing	Continuing	0
IBCS Engineering Manufacturing and Development	C	Contractor Huntsville, AL/ other locations	0.000	0.000		165.874		0.000		165.874	Continuing	Continuing	0
Government Furnished Equipment	C	Multiple Location could not be determined.	0.000	0.000		10.803		0.000		10.803	Continuing	Continuing	0
US Army Aviation and Missile Research Development and Engineering Center (AMRDEC)	C	AMRDEC AL	0.000	0.000		4.253		0.000		4.253	Continuing	Continuing	0
Subtotal			0.000	0.000		218.863		0.000		218.863			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605457A: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>				PROJECT S40: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>					

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Army Evaluation Center/ Developmental Test Command/Operational Test Command	C	Various Location could not be determined.	0.000	0.000		0.811		0.000		0.811	Continuing	Continuing	0
White Sands Missile Range (WSMR)	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.125		0.000		0.125	Continuing	Continuing	0
Modeling & Sim/Joint Interoperability Test Spt	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		16.061		0.000		16.061	Continuing	Continuing	0
Subtotal			0.000	0.000		16.997		0.000		16.997			0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
	C	Multiple OGAs	0.000	0.000		15.264		0.000		15.264	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605457A: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>	PROJECT S40: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government System Engineering & Program Management (SEPM)		Inhouse and Contractor, Huntsville, AL											
Subtotal			0.000	0.000		15.264		0.000		15.264			0.000

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
	Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost	Cost	Cost
Project Cost Totals	0.000	0.000		251.124		0.000		251.124			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605457A: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>	PROJECT S40: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				
	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 Reviews (PDRs) (IBCS Incr 2)	#																												
Preliminary Design Review (PDR) (IAMD Incr 2)			#																										
MS B (IAMD Incr 2)				#																									
Delta Preliminary Design Review (PDR) (IBCS Incr 2)							#																						
Delta Preliminary Design Review (PDR) (IAMD Incr 2)								#																					
OIPT								#																					
Critical Design Review (CDR) (IBCS Incr 2)											#																		
Critical Design Review (CDR) (IAMD Incr 2)												#																	
Post CDR Assessment															#														
DAB IPR												#																	
Design Readiness Review (DRR)																#													
FDE/LUT																			#	#	#								
MS C																								#					

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605457A: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>	PROJECT S40: <i>ARMY INTEGRATED AIR AND MISSILE DEFENSE (AIAMD)</i>
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Preliminary Design Reviews (PDRs) (IBCS Incr 2)	2	2009	2	2009
Preliminary Design Review (PDR) (IAMD Incr 2)	3	2009	3	2009
MS B (IAMD Incr 2)	4	2009	4	2009
Delta Preliminary Design Review (PDR) (IBCS Incr 2)	2	2010	2	2010
Delta Preliminary Design Review (PDR) (IAMD Incr 2)	3	2010	3	2010
OIPT	4	2010	4	2010
Critical Design Review (CDR) (IBCS Incr 2)	2	2011	2	2011
Critical Design Review (CDR) (IAMD Incr 2)	3	2011	3	2011
Post CDR Assessment	4	2011	4	2011
DAB IPR	4	2011	4	2011
Design Readiness Review (DRR)	4	2012	4	2012
FDE/LUT	1	2014	3	2014
MS C	4	2014	4	2014

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605625A: <i>Manned Ground Vehicle</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	79.583	934.366	0.000	934.366	1,882.839	2,242.756	1,375.128	744.771	Continuing	Continuing
FC8: <i>MANNED GROUND VEHICLE</i>	0.000	79.583	934.366	0.000	934.366	1,882.839	2,242.756	1,375.128	744.771	Continuing	Continuing

A. Mission Description and Budget Item Justification

The GCV program element was due to the termination of the Manned Ground Vehicle Core Program and subsequently restarted as a new ground combat vehicle program. The Ground Combat Vehicle program is based on a Draft Capabilities Development Document developed by the U.S. Army Training and Doctrine Command (TRADOC). The accomplishments and funding reflected in this justification are based on preliminary analysis of the draft requirements. Upon finalization of the requirement and detailed planning, adjustments will occur which could potentially change planned accomplishments, funding requirements, and program schedule. The funding and accomplishments are a top-level attempt to incorporate the new direction to refocus the Army's ground combat development program.. Currently, the requirements are being defined for this new Ground Combat Vehicle program. Preliminary analysis plan for a contract award in 4Q FY10 to begin the development of the Ground Combat Vehicle (GCV). The GCV program will use an evolutionary acquisition approach based on an open architecture which facilitates the incremental improvement of capabilities over time and subsequent development of other variants. This approach integrates technologies that are mature and found to support the established system requirements. The primary focus of this technical design phase will be on design integration (i.e., integration of mature components and subsystems); however, it is likely that some of the requirements will require design of components and subsystems that are not necessarily mature. As such, the overall goal of the Technology Demonstration (TD) phase is to complete the preliminary design of the system. The overall program strategy will take the GCV program from a Milestone A (MS A- 4QFY10) through Full Rate Production in a manner which will allow the maximum affordable competition. At MS A, two competitive contracts are anticipated to be awarded in support of the Tech Development (TD) phase. A System Functional Review (SFR) will occur after contract award and will review the initial contractor's designs to verify if they are fully compliant with the current user requirements. Contractors will be required to develop, fabricate, integrate and test subsystems based on their initial design. Among other criteria, the contractors will be evaluated based on the performance of these subsystems and their developmental maturity. The focus of this testing is not only to evaluate the capabilities of the contractors, but to mitigate the risk to prototype fabrication. Building subsystems early will allow the contractors to validate key and critical portions of their vehicle designs and identify issues that can be addressed early and improve the robustness of the prototype vehicles. Prototype subsystem competitive testing will be conducted by the Government to support the evaluation of competing designs. This data will also be used to support Modeling and Simulation, and the Preliminary Design Review (PDR). The GCV PDR (4QFY12, prior to MS B), will be conducted to evaluate contractor's preliminary designs and determine if they are mature enough to enter detailed design and then on to the Engineering and Manufacturing Development (EMD) phase. Ground Combat Vehicle (GCV) Network Analysis and Integration Support: GCV capabilities are required to support Joint Forces across the full range of military operations conducted in a wide range of terrain and environments. The GCV will include specific platform capabilities that address current and future tactical Army capability gaps to include a robust networking capability to meet Net Ready Key Performance Parameter (NR KPP) requirements of the GCV Interface Control Document (ICD) and Capability Design Document (CDD). As such, the GCV requires improved network performance, functionality and connectivity to enable superior situational awareness, as well as, responsive well-integrated information systems (INFOSYS) to support command, control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) for deployed forces. During all operations, this capability will enable the Joint Force Commander to conduct small unit operations, develop the situation through action, and reduce the

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605625A: <i>Manned Ground Vehicle</i>
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demand for logistics. The GCV network will enable GCV platforms to be an integral component of future Joint war-fighting concepts and will be essential to the Joint Force's ability to dominate all operational environments.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	100.000	350.000	0.000	350.000
Current President's Budget	0.000	79.583	934.366	0.000	934.366
Total Adjustments	0.000	-20.417	584.366	0.000	584.366
• Congressional General Reductions		-20.417			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Adjustments to Budget Years	0.000	0.000	584.366	0.000	584.366

Change Summary Explanation

Change Summary Explanation:Funding:FY10: Congress reduced the programFY11: Funds increase was provided to meet the program schedule.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605625A: <i>Manned Ground Vehicle</i>				PROJECT FC8: <i>MANNED GROUND VEHICLE</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
FC8: <i>MANNED GROUND VEHICLE</i>	0.000	79.583	934.366	0.000	934.366	1,882.839	2,242.756	1,375.128	744.771	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u> Not applicable for this item.											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Government System Engineering and Program Management FY10: Effort to begin initial requirement decomposition and initial design effort of the Infantry Fighting Vehicle (New Combat platform). Develop MS A required documentation. Formulate the Program Office cost Estimate to support MS A and future budget developments. Staff, and facilitate the GCV competitive Source Selection Evaluation Board (SSEB). Provide integrated program management (i.e. planning, directing, tools and controlling functions), for all development activities to include data and supplier management, program control, government training, procurement and contracts management, operations management for the Army's new combat vehicle development. Provide Congressional Title 10 oversight. Develop and publish the detailed plans for cost analysis and management, budget management and execution, Earned Value Management, Schedule management, Complementary Program management and operations management associated with contractor management. These funds also cover the costs of travel and the facilities/operational equipment required for effectively executing the program. Also includes TRADOC support for requirement analysis, Analysis of Alternatives (AoA) support, and Milestone reviews. <i>FY 2009 Accomplishments:</i> FY 2009							0.000	24.450	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605625A: <i>Manned Ground Vehicle</i>	PROJECT FC8: <i>MANNED GROUND VEHICLE</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #2</p> <p>Government System Engineering and Program Management FY11: Implement the GCV Management team and execute the GCV management plan. The plan consists of monitoring and analyzing each separate contractor's detailed Integrated Master Schedules (IMS) and the integration and tracking of all GCV activities into a single GCV program level IMS. Standup the GCV Performance Management Baseline (PMB) team and execute the GCV PMB process for each separate contractor. The PMB process consists of monitoring and analyzing each of the separate contractor's PMB. Standup the GCV Design management/Manned System Integration (MSI) team and execute the Design management plan for each separate contractor in order to monitor and track the design development of the Hull, Turret, Suspension, Electrical, Power Train, Fire Control, Armament, Navigation, Command and Control, Communications systems and provide operational and technical guidance. Monitor the design development of the vehicle's auxiliary systems, testing and training. The government management team will also oversee each separate contractor as they perform systems engineering, requirements analysis, functional analysis, configuration management, risk management, interface management, data management, technical reviews, trade studies, modeling and simulation, specialty engineering, along with software engineering, test and training. Includes the costs of travel and the facilities/operational equipment required for executing the program. Provide integrated program management (i.e. planning, directing, tools and controlling functions), for all development activities to include data and supplier management, program control, government training, procurement and contracts management, operations management for new combat vehicle development.</p>		0.000	0.000	20.454	0.000	20.454

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605625A: <i>Manned Ground Vehicle</i>	PROJECT FC8: <i>MANNED GROUND VEHICLE</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3 Government System Engineering and Program Management FY11 (Continued): Provide Congressional Title 10 oversight, cost analysis and management, budget development, justification and tracking, Earned Value Management, Integrated Master Schedule development and management, Complementary Program management and operations management associated with contractor management. These funds also cover the costs of travel and the facilities/operational equipment required for effectively executing the program. Also includes TRADOC support for requirement analysis, AoA support, and Milestone reviews. Develops network interfaces and architecture for integrating the GCV into the Army's Battle Command and Communication Network. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		0.000	0.000	0.000	0.000	0.000

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605625A: <i>Manned Ground Vehicle</i>	PROJECT FC8: <i>MANNED GROUND VEHICLE</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Contractor: Systems Engineering/Program Management FY10: The Technology Development (TD) phase begins immediately after 4QFY10 contract award. In 4QFY10, prepare for award subsystem and component provider contracts. In 4QFY10, begin balanced vehicle design and integration of subsystems focusing on size, weight, power, and cooling requirements. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	55.133	0.000	0.000	0.000
Program #5 Contractor: Systems Engineering/Program Management FY11: In 1QFY11, award subsystem and component provider contracts. Continue vehicle design and integration of subsystems focusing on size, weight, power, and cooling requirements. Include Mobility Systems (propulsion, cooling, suspension, and track); Survivability		0.000	0.000	716.108	0.000	716.108

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Systems (armor and structures, signal management, chemical, biological, radiological, nuclear, and explosives); Hit Avoidance Systems (long and short range); Crew Systems and Chassis Auxiliary components (close combat armament system, common crew stations, and auxiliary systems); Core Vetronics (data/signal electronics, and power distribution/management); Lethality Systems (fire control, turret structure, slip ring, ammunition handling system, armament); Mission Module Structure (infantry squad compartment, squad situational awareness, equipment stowage, ramp, and infantryman interfaces). Complete preparation and conduct System Functional Review (SFR) in 2QFY11; verify contractor's ability to meet requirements. Conduct Subsystem Preliminary Design Review (SPDR) in 4QFY11 to ensure subsystems are ready for 2QFY12 competitive testing and 4QFY12 Modeling and Simulation (M&S).</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #6</p> <p>Contractor: Prototypes FY11: In 1QFY11 begin building subsystems for prototype subsystem testing in 2QFY12. Begin design and build of the indirect driving and 360 degree situational awareness demonstrator. Begin building two (2) Automotive Test Rigs (ATR) and two (2) each of the following key subsystems and their supporting components: Indirect Vision-Driving/Local Situational Awareness demonstrator; Non-Lethal subsystem demonstrator; Hit Avoidance/Active Protection System demonstrator, Mine Blast Test Asset demonstrator. In</p>		0.000	0.000	75.689	0.000	75.689

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>2QFY11 develop and begin build of System Integration Laboratories (SIL) and Modeling and Simulations (M&S) programs for government testing and design integration in FY12. 4QFY11: Order long-lead item subsystems for prototype fabrication in 1QFY13.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #7</p> <p>Government Tests and Modeling and Simulation FY11: In 2QFY11 begin development of the System Integration Laboratories (SIL) and Modeling and Simulations (M&S) test procedures for government testing in FY12. Additionally, test planning/coordination and safety requirements development and coordination efforts in support of the Prototype subsystem testing will commence in FY11. Begin building the government's subsystem demonstrator test facility. Plan and develop the Indirect driving and 360 degree situational awareness demonstrators testing procedures, which is intended to verify the operational feasibility of the contractor's indirect vision material solution. Plan and develop the subsystem demonstrator Test SIL requirements and test procedures which will evaluate the contractor's ability to safely and effectively operate the IFV over hard surface, cross country, and urban terrain during day and night operations. Begin development of the ATR test requirements that will be used to evaluate the contractor's design feasibility against the mobility Key Performance Parameter (KPP). The ATR will be tested at a Government test facility to evaluate its automotive performance operations in</p>		0.000	0.000	2.650	0.000	2.650

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>accordance with the draft GCV Operational Mode Summary/Mission Profile (OMS/MP). Additionally, laboratory testing of integrated Engine/Transmission solution against the fuel efficiency KPP will be required. The Mine Blast Test Asset is intended to reflect the Contractor's vehicle structure, and crew and passenger seating. It will be tested against the Level 1 underbelly threats to assess vehicle/mine kit structural integrity and mitigation of harmful accelerations to the crew to support the Governments evaluation of the Survivability and Force Protection KPPs. The Mine Blast Test Asset will be tested at a Government test facility.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #8</p> <p>Government Tests and Modeling and Simulation FY11 (continued): The Non-Lethal system demonstrator is intended to verify the contractor's design from both a stationary and on the move perspective. Contractors will be allowed to mount their respective systems on a surrogate platform to demonstrate performance on the move. The Non-Lethal system demonstrator will be tested at a Government test facility. Additionally, contractor will be required to test their APS solution set against GCV requirements. If hardware is available for test, APS testing will be tested at a Government test facility.</p>		0.000	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #9 Contractor: Software FY11: Initiate vehicle software development activities in 1QFY11 for supporting FY12 prototype subsystem competitive testing and Modeling and Simulation tests. Define software development plan and schedule. Define and establish software development and integration environments. Initiate work on development of Software Requirements Specification, interface requirements specification, software architecture definition/description, formulate software build plan to align with system and subsystem requirements development, and begin software development and integration. Create vehicle model and selected subsystem models (e.g. Mobility, Survivability, etc.) for M&S. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010		0.000	0.000	26.880	0.000	26.880

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #10 Contractor: APS FY11: Contractor: continue to design, develop, integrate, model/simulate and test the Active Protection System. Continue maturation of the Short Range APS (Execute/Complete the Short Range Design Verification and Test (DVT)) number 2 using 20 Countermeasures that were purchased in FY10, execute Insensitive Munitions testing with the 10 countermeasures and warheads, plan and prepare Short Range Counter Measure Initial Qualification Test (IQT) and Short Range (SR) Active Protection System (APS) Production Qualification test (PQT) in FY12 with the purchase of 159 Countermeasures. Transition the Kinetic Energy (KE Army Technology Objective (ATO) Kinetic Energy Interceptor program into the Long Range APS System, prepare for Long Range Design Verification Test (DVT) number 1 by procuring 10 countermeasures for FY12. Development and Integration of APS Fire Control System: Integrate the Passive Threat Warner, Laser Warning Receiver and APS Radar (integration of the Hit Avoidance System to Common Radar Design Interface (HCRDIF) Full Spectrum Software and Ballistic Radome) with the APS Countermeasure Controller Software and APS Operations Controller Software; Design and Construction of Surrogate Test Vehicle (Trailer). <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base		0.000	0.000	92.585	0.000	92.585

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B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals						0.000	79.583	934.366	0.000	934.366	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>0604646A Non Line of Sight - Launch System</i>	253.684	91.223	81.247	0.000	81.247	58.718	27.418	0.000	0.000	0	512.290
• Ord. #2: <i>0604647A Non Line of Sight Cannon</i>	87.038	47.964	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	135.002
• Ord. #3: <i>0604660A FCS Manned Ground Vehicles & Common Grd Vehicle</i>	760.744	275.116	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	1,035.860
• Ord. #4: <i>0604661A FCS System of Systems Engr & Program Management</i>	1,022.165	912.399	568.711	0.000	568.711	566.378	582.775	618.755	727.415	Continuing	Continuing
• Ord. #5: <i>0604662A FCS Reconnaissance (UAV) Platforms</i>	55.923	75.107	50.304	0.000	50.304	12.058	4.180	0.000	0.000	0	197.572
• Ord. #6: <i>0604663A FCS Unmanned Ground Vehicles</i>	104.571	124.962	249.948	0.000	249.948	98.737	25.368	0.000	0.000	0	603.586
• Ord. #7: <i>0604664A FCS Unattended Ground Sensors</i>	20.135	26.778	7.515	0.000	7.515	1.071	1.071	0.000	0.000	0	56.570
• Ord. #8: <i>0604665A FCS Sustainment & Training R&D</i>	819.721	655.745	610.389	0.000	610.389	523.580	366.647	253.810	258.367	Continuing	Continuing
• Ord. #9: <i>0604666A Spin Out Technology/Capability Insertion</i>	122.788	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	122.788

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Ord. #10: <i>WTCV G86100 FCS Core Program</i>	154.127	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	154.127
• Ord. #11: <i>WTCV G86200 FCS Spin Out Program</i>	67.268	326.909	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	394.177
• Ord. #12: <i>WTCV G86000 Ground Combat Vehicle (GCV)</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	98.030	778.220	Continuing	Continuing
• Ord. #13: <i>ACFT A00015 BCT Unmanned Aerial Veh (UAVs) Incr 1</i>	0.000	0.000	44.206	0.000	44.206	40.216	12.770	3.718	1.850	Continuing	Continuing
• Ord. #14: <i>ACFT A00016 BCT Unmanned Aerial Veh (UAVs) Incr 2</i>	0.000	0.000	0.000	0.000	0.000	2.141	85.345	90.245	92.686	Continuing	Continuing
• Ord. #15: <i>OPA B00001 BCT Unattended Ground Sensor</i>	0.000	0.000	29.718	0.000	29.718	60.578	9.582	1.544	1.328	Continuing	Continuing
• Ord. #16: <i>OPA B00004 BCT Unattended Ground Sensor Incr 2</i>	0.000	0.000	0.000	0.000	0.000	19.093	87.478	96.172	86.259	Continuing	Continuing
• Ord. #17: <i>OPA B00002 BCT Network</i>	0.000	0.000	176.543	0.000	176.543	192.632	20.619	0.317	0.187	Continuing	Continuing
• Ord. #18: <i>OPA B00003 BCT Network Incr 2</i>	0.000	0.000	0.000	0.000	0.000	81.277	301.864	454.480	431.835	Continuing	Continuing
• Ord. #19: <i>OPA F00001 BCT Unmanned Ground Vehicle</i>	0.000	0.000	20.046	0.000	20.046	42.703	6.002	2.288	1.870	Continuing	Continuing
• Ord. #20: <i>OPA F00002 BCT Unmanned Ground Vehicle Incr 2</i>	0.000	0.000	0.000	0.000	0.000	373.193	710.680	676.230	711.940	Continuing	Continuing
• Ord. #21: <i>OPA G80001 BCT Training/Logistics/Management</i>	0.000	0.000	61.581	0.000	61.581	12.178	94.491	68.033	50.468	Continuing	Continuing
• Ord. #22: <i>OPA G00002 BCT Training/Logistics/Management Incr 2</i>	0.000	0.000	0.000	0.000	0.000	75.069	387.173	396.593	446.806	Continuing	Continuing
• Ord. #23: <i>MSLS C64501 BCT NLOS-LS Incr 1</i>	0.000	0.000	350.574	0.000	350.574	758.657	112.115	0.000	0.000	0	1,221.346
	0.000	0.000	0.000	0.000	0.000	0.000	605.192	679.078	579.210	Continuing	Continuing

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605625A: <i>Manned Ground Vehicle</i>	PROJECT FC8: <i>MANNED GROUND VEHICLE</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Ord. #24: <i>MSLS C64601 BCT NLOS-LS Incr 2</i>											

D. Acquisition Strategy

Pursuant to an Acquisition Decision Memorandum (ADM), signed 23 June 2009, which directed the cancellation of the FCS (BCT) Acquisition Program and the termination of the Manned Ground Vehicle system, the Army chartered the Program Executive Office - Integration. The PEO-I, in order to meet the ADM requirements, initiated the Ground Combat Vehicle program. The strategy is to execute the program incrementally in three phases. It will enter the acquisition process at MS A (4Q FY10) with the competitive selection of multiple contractors to execute the Technology Development (TD) phase. The TD phase will consist of designing an Infantry Fighting Vehicle which meets the Capability Design Document (CDD) and Army Specification (A-Spec) and building sub-system prototype components. (FY10 into FY12). The TD phase will end with competitive testing & evaluation of sub-system prototype components and the successful completion of a Preliminary Design Review (PDR) (3Q FY12). Upon successful completion of the TD phase the program will enter MS B (1Q FY13). At MS B the program will enter the Engineering and Manufacturing Development (EMD) phase which will end at MS C (1Q FY16). During this phase each contractor will successfully complete a Critical Design Review (CDR) and produce ten (10) complete prototypes. The EMD phase will end with a competitive down select to one contractor. The selected contractor will execute Low Rate Initial Production (LRIP).

E. Performance Metrics

Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army **DATE:** February 2010

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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Contractor System Engineering and Prog. Mgt	C/TBD	TBD Location could not be determined.	0.000	55.133		911.262		0.000		911.262	Continuing	Continuing	0
Subtotal			0.000	55.133		911.262		0.000		911.262			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government System Engineering and Prog. Mgt	C	PEO Integration St. Louis, MO	0.000	24.450		20.454		0.000		20.454	Continuing	Continuing	0
Subtotal			0.000	24.450		20.454		0.000		20.454			0.000

Remarks

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Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Government Tests & Modeling & Simulation	C	PEO Integration St. Louis, MO	0.000	0.000		2.650		0.000		2.650	Continuing	Continuing	0
Subtotal			0.000	0.000		2.650		0.000		2.650			0.000

Remarks

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
New R3 Line	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.000		0.000		0.000		0.000	0	0	0
Subtotal			0.000	0.000		0.000		0.000		0.000	0.000	0.000	0.000

Remarks

All Management Service costs for this project are included in 0604661 FC2 SoS Engineering and Program Management project.

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605625A: <i>Manned Ground Vehicle</i>	PROJECT FC8: <i>MANNED GROUND VEHICLE</i>
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	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	79.583	934.366	0.000	934.366			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0605625A: <i>Manned Ground Vehicle</i>		PROJECT FC8: <i>MANNED GROUND VEHICLE</i>	

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Material Development Decision					#																							
Milestone A								#																				
Technical Development Source Selection Board						#	#																					
Technical Development Contract Award						#																						
Technical Design (Infantry Fighting Vehicle)								#	#	#	#	#	#	#	#	#												
Order Subsystems for Prototypes											#																	
Prototype Subsystem Testing												#	#	#	#													
Subsystem PDR											#																	
System PDR													#															
Milestone B																#												
Engineering / Manufacturing Development Contract Award																#												

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605625A: <i>Manned Ground Vehicle</i>	PROJECT FC8: <i>MANNED GROUND VEHICLE</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Material Development Decision	1	2010	1	2010
Milestone A	3	2010	3	2010
Technical Development Source Selection Board	2	2010	3	2010
Technical Development Contract Award	3	2010	3	2010
Technical Design (Infantry Fighting Vehicle)	4	2010	4	2012
Order Subsystems for Prototypes	3	2011	3	2011
Prototype Subsystem Testing	4	2011	3	2012
Subsystem PDR	3	2011	3	2011
System PDR	1	2012	1	2012
Milestone B	4	2012	4	2012
Engineering / Manufacturing Development Contract Award	4	2012	4	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605626A: <i>Aerial Common Sensor - SDD</i>							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	211.500	0.000	211.500	31.400	3.200	0.000	0.000	0	457.600
AC5: <i>AERIAL COMMON SENSOR - SDD</i>	0.000	0.000	211.500	0.000	211.500	31.400	3.200	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Aerial Common Sensor program has been restructured and renamed Enhanced Medium Altitude Reconnaissance and Surveillance system (EMARSS). EMARSS is the Army's future force airborne intelligence collection, processing, and targeting support system. EMARSS is a manned multi-INT Airborne Intelligence Surveillance and Reconnaissance (AISR) system that provides a persistent capability to detect, locate, classify/identify, and track surface targets in day/night, near-all-weather conditions with a high degree of timeliness and accuracy. EMARSS aircraft will be located within Aerial Exploitation Battalions (AEB), which are assigned to the U.S. Army Intelligence and Security Command (INSCOM). The EMARSS system will consist of a commercial derivative aircraft equipped with Electro-optic/Infrared (EO/IR) Full Motion Video (FMV) sensor, a COMINT collection system, an aerial precision geolocation system, line-of-site (LOS) tactical and beyond line-of-site (LOS/BLOS) communications suites, two operator workstations and a self-protection suite. EMARSS will operate as a single platform in support of tactical missions. Mission altitude and flight tracks are chosen to optimize sensor data collection on the target area of interest while avoiding known threats. Flight tracks may be selected to strike a balance among the capabilities of multiple sensors, or to optimize collection from individual sensors based upon the daily collection tasking dictated by the tactical commanders Priority Intelligence Requirements (PIRs). EMARSS will provide efficient response to Combat Forces ISR tasking with centralized Processing, Exploitation & Dissemination (PED) of ISR while simultaneously transmitting critical FMV and intelligence products to engaged tactical forces. The National Security Agency's Military Intelligence Program (MIP) provides funding to support enhanced SIGINT capabilities. FY11 Base funding in the amount of \$211.500 million funds continuation of the EMARSS Engineering, Manufacturing and Development (EMD) contract and purchases one EMD (1) aircraft system. Funding supports Developmental and Operational Tests (DT/OT); and Limited Users Test (LUT); Purchases Government Furnished Equipment (GFE) and support; Preparation for ASARC/MS C and documentation; Continues Army test support; Program Management Office (PMO) support; DCGS-A on-board processing and System Integration Laboratory (SIL) efforts. FY10 was funded through PE 0307207A Project 024

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605626A: <i>Aerial Common Sensor - SDD</i>
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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	211.500	0.000	211.500
Total Adjustments	0.000	0.000	211.500	0.000	211.500
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Adjustments to Budget Years	0.000	0.000	211.500	0.000	211.500

Change Summary Explanation

Change Summary Explanation: Funding - FY 2011: Program transferred to this PE from 0307665A.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605626A: <i>Aerial Common Sensor - SDD</i>				PROJECT AC5: <i>AERIAL COMMON SENSOR - SDD</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
AC5: <i>AERIAL COMMON SENSOR - SDD</i>	0.000	0.000	211.500	0.000	211.500	31.400	3.200	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
<u>A. Mission Description and Budget Item Justification</u>											
<p>The Aerial Common Sensor program has been restructured and renamed Enhanced Medium Altitude Reconnaissance and Surveillance system (EMARSS). EMARSS is the Army's future force airborne intelligence collection, processing, and targeting support system. EMARSS is a manned multi-INT Airborne Intelligence Surveillance and Reconnaissance (AISR) system that provides a persistent capability to detect, locate, classify/identify, and track surface targets in day/night, near-all-weather conditions with a high degree of timeliness and accuracy. EMARSS aircraft will be located within Aerial Exploitation Battalions (AEB), which are assigned to the U.S. Army Intelligence and Security Command (INSCOM). The EMARSS system will consist of a commercial derivative aircraft equipped with Electro-optic/Infrared (EO/IR) Full Motion Video (FMV) sensor, a COMINT collection system, an aerial precision geolocation system, line-of-site (LOS) tactical and beyond line-of-site (LOS/BLOS) communications suites, two operator workstations and a self-protection suite. EMARSS will operate as a single platform in support of tactical missions. Mission altitude and flight tracks are chosen to optimize sensor data collection on the target area of interest while avoiding known threats. Flight tracks may be selected to strike a balance among the capabilities of multiple sensors, or to optimize collection from individual sensors based upon the daily collection tasking dictated by the tactical commanders Priority Intelligence Requirements (PIRs). EMARSS will provide efficient response to Combat Forces ISR tasking with centralized Processing, Exploitation & Dissemination (PED) of ISR while simultaneously transmitting critical FMV and intelligence products to engaged tactical forces. The National Security Agency's Military Intelligence Program (MIP) provides funding to support enhanced SIGINT capabilities. FY11 Base funding in the amount of \$211.500 million funds continuation of the EMARSS Engineering, Manufacturing and Development (EMD) contract and purchases one EMD (1) aircraft system. Funding supports Developmental and Operational Tests (DT/OT); and Limited Users Test (LUT); Purchases Government Furnished Equipment (GFE) and support; Preparation for ASARC/MS C and documentation; Continues Army test support; Program Management Office (PMO) support; DCGS-A on-board processing and System Integration Laboratory (SIL) efforts. FY11 OCO - No budget request FY10 was funded through PE 0307207A Project 024</p>											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #1						0.000	0.000	176.332	0.000	176.332	

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605626A: <i>Aerial Common Sensor - SDD</i>	PROJECT AC5: <i>AERIAL COMMON SENSOR - SDD</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Continues EMD contract, purchases 1 EMD aircraft, purchases GFE and technical support. Continues DCGS-A on board processing and test.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>						
<p>Program #2</p> <p>Continues Government test support, Program Management Office (PMO) and MS C preparation.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>		0.000	0.000	35.168	0.000	35.168

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0605626A: <i>Aerial Common Sensor - SDD</i>				PROJECT AC5: <i>AERIAL COMMON SENSOR - SDD</i>				
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Accomplishments/Planned Programs Subtotals						0.000	0.000	211.500	0.000	211.500	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>Army PE 0307207A Project 024</i>	0.000	115.430	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	115.430
• Ord. #2: <i>Army PE 0203744A Project 028</i>	0.000	0.074	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	.074
• Ord. #3: <i>A02005</i>	0.000	0.000	88.483	0.000	88.483	204.677	243.373	385.439	362.382	0	1,284.354
• Ord. #4: <i>ACS NSA MIP</i>	3.690	2.022	1.350	0.000	1.350	10.634	9.554	7.395	7.395	Continuing	Continuing
• Ord. #5: <i>GRCS NSA MIP</i>	6.790	2.780	0.685	0.000	0.685	5.246	4.697	3.601	3.601	Continuing	Continuing
D. Acquisition Strategy											
<p>The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is a program of record supported by an Army G-3/5/7 Directed Requirement (DR) signed 11 December 2009. The decision to pursue EMARSS is a direct result of relooking the Army's approach to the Airborne Intelligence Surveillance and Reconnaissance (ISR) construct and applying the lessons learned from current overseas operations. The second quarter FY10 Material Development Decision (MDD) review will authorize the program to enter the acquisition process in the Engineering and Manufacturing Development (EMD) Phase. The EMARSS EMD contract will be competitively awarded to a single contractor. An option for LRIP is anticipated to be part of this effort. MS C is scheduled for 4QFY11 and FRP in 3QFY12.</p>											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605626A: <i>Aerial Common Sensor - SDD</i>				PROJECT AC5: <i>AERIAL COMMON SENSOR - SDD</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
EMARSS EMD	C/CPIF	TBD Location could not be determined.	0.000	0.000		167.912		0.000		167.912	Continuing	Continuing	0
Vortex Data Links/PALS/DBOS	C/FFP	L3COMM Warner Robins AFB	0.000	0.000		1.470		0.000		1.470	Continuing	Continuing	0
Other GFE/COMSEC Equipment	C/TBD	TBD Location could not be determined.	0.000	0.000		0.250		0.000		0.250	Continuing	Continuing	0
Airborne Precision Geo-Location (APG) System	C/TBD	NSA Location could not be determined.	0.000	0.000		0.500		0.000		0.500	Continuing	Continuing	0
Subtotal			0.000	0.000		170.132		0.000		170.132			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DCGS-A & Orion S/W processing on Board	C/TBD	Various Location could not be determined.	0.000	0.000		6.200		0.000		6.200	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605626A: <i>Aerial Common Sensor - SDD</i>				PROJECT AC5: <i>AERIAL COMMON SENSOR - SDD</i>					

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			0.000	0.000		6.200		0.000		6.200			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support	C	Gov't/various Location could not be determined.	0.000	0.000		5.200		0.000		5.200	Continuing	Continuing	0
Test Flight Ranges	C	Gov't/various Location could not be determined.	0.000	0.000		6.000		0.000		6.000	Continuing	Continuing	0
Subtotal			0.000	0.000		11.200		0.000		11.200			0.000

Remarks

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0605626A: <i>Aerial Common Sensor - SDD</i>				PROJECT AC5: <i>AERIAL COMMON SENSOR - SDD</i>					

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PMO Staff/travel/O/H expenses	C	PM AC Sensors: Ft. Monmouth, NJ; Aberdeen, MD	0.000	0.000		8.550		0.000		8.550	Continuing	Continuing	0
Program SETA Support	C	CACI BAH,USFalcon, LM: NJ/DC	0.000	0.000		4.700		0.000		4.700	Continuing	Continuing	0
SETA Mgmt Support	SS/CPFF	Mitre: various Location could not be determined.	0.000	0.000		2.310		0.000		2.310	Continuing	Continuing	0
Gov't Matrix Support	C	Multiple: Ft. Monmouth NJ	0.000	0.000		2.550		0.000		2.550	Continuing	Continuing	0
Gov't Matrix Support - 2	C/CPFF	PMFW AMRDEC: Redstone, Al	0.000	0.000		5.858		0.000		5.858	Continuing	Continuing	0
Subtotal			0.000	0.000		23.968		0.000		23.968			0.000

Remarks

Project Cost Totals	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		211.500		0.000		211.500			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605626A: <i>Aerial Common Sensor - SDD</i>
PROJECT AC5: <i>AERIAL COMMON SENSOR - SDD</i>	

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
Material Development Decision (MDD)				#																								
Contract Award IPR					#																							
Engineering Manufacturing & Development					#	#	#	#	#	#	#																	
SRR/SFR					#																							
System Design Review									#																			
CT/DT									#	#																		
DT/OT & LUT									#	#																		
MS C										#																		
LRIP										#	#	#	#	#														
IOT&E													#															
Full Rate Production														#														
Production													#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605626A: <i>Aerial Common Sensor - SDD</i>	PROJECT AC5: <i>AERIAL COMMON SENSOR - SDD</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Material Development Decision (MDD)	1	2010	1	2010
Contract Award IPR	2	2010	2	2010
Engineering Manufacturing & Development	2	2010	3	2011
SRR/SFR	3	2010	3	2010
System Design Review	1	2011	1	2011
CT/DT	1	2011	2	2011
DT/OT & LUT	2	2011	3	2011
MS C	3	2011	3	2011
LRIP	3	2011	2	2012
IOT&E	1	2012	1	2012
Full Rate Production	2	2012	2	2012
Production	2	2012	3	2015

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0303032A: <i>TROJAN - RH12 - MIP</i>							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	3.697	0.000	3.697	3.930	4.156	4.389	0.000	0	19.869
RH5: <i>TROJAN - RH12 - MIP</i>	0.000	0.000	3.697	0.000	3.697	3.930	4.156	4.389	0.000	Continuing	Continuing
A. Mission Description and Budget Item Justification											
<p>This project is a Tactical Intelligence and Related Activities (TIARA) program. TROJAN RDT&E supports TROJAN Classic XXI (TCXXI) and next generation (NexGEN) future capabilities to fulfill the Army's need for a worldwide, deployable, remorable, intelligence, surveillance and reconnaissance (ISR) support that can dynamically execute operations from sanctuary-based to deployed assets in theater. In support of the Objective Force and Future Combat System (FCS), TCXXI will provide soldiers with a real-world, hands-on, live and near-real time SIGINT training environment sustaining, maintaining and enhancing their military occupational specialty (MOS) proficiencies and specific target expertise. This operational readiness training will fulfill the Army's larger intelligence training requirement via a secure collaborative architecture. A key factor for success the Objective Force and FCS will be the ability to collect, process and use information about an adversary while preventing similar information from being disclosed. TROJAN is a combined operational and readiness mission system which uses advanced networking technology to provide seamless rapid radio relay, secure communications to include voice, data, facsimile, and electronic reconnaissance support to U.S. forces throughout the world. TROJAN operations may be easily tailored to fit military intelligence unit training schedules and surged during specific events to involve every aspect of the tactical intelligence collection, processing, analysis and reporting systems. This project engineers, tests and evaluates new digital intelligence collection, processing and dissemination technology using the fielded TROJAN systems, prior to the acquisition of those technologies. As part of the Objective C4ISR Architecture, these capabilities will enable processing and dissemination of real-time intelligence data from various sources to form the intelligence needed to issue orders inside the threat decision cycle. To that end, it is imperative that TROJAN keeps pace with digitization initiatives in order to respond aggressively to the emerging intelligence communication threats.</p>											

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0303032A: <i>TROJAN - RH12 - MIP</i>
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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	3.697	0.000	3.697
Total Adjustments	0.000	0.000	3.697	0.000	3.697
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Adjustments to Budget Years	0.000	0.000	3.697	0.000	3.697

Change Summary Explanation

Change Summary Explanation: Funding - FY 2011: Program transferred to stand alone MIP PE. FY 2010 and prior was funded in 0604270A/L16.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0303032A: <i>TROJAN - RH12 - MIP</i>	PROJECT RH5: <i>TROJAN - RH12 - MIP</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
RH5: <i>TROJAN - RH12 - MIP</i>	0.000	0.000	3.697	0.000	3.697	3.930	4.156	4.389	0.000	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project is a Tactical Intelligence and Related Activities (TIARA) program. TROJAN RDT&E supports TROJAN Classic XXI (TCXXI) and next generation (NexGEN) future capabilities to fulfill the Army's need for a worldwide, deployable, remotable, intelligence, surveillance and reconnaissance (ISR) support that can dynamically execute operations from sanctuary-based to deployed assets in theater. In support of the Objective Force and Future Combat System (FCS), TCXXI will provide soldiers with a real-world, hands-on, live and near-real time SIGINT training environment sustaining, maintaining and enhancing their military occupational specialty (MOS) proficiencies and specific target expertise. This operational readiness training will fulfill the Army's larger intelligence training requirement via a secure collaborative architecture. A key factor for success the Objective Force and FCS will be the ability to collect, process and use information about an adversary while preventing similar information from being disclosed. TROJAN is a combined operational and readiness mission system which uses advanced networking technology to provide seamless rapid radio relay, secure communications to include voice, data, facsimile, and electronic reconnaissance support to U.S. forces throughout the world. TROJAN operations may be easily tailored to fit military intelligence unit training schedules and surged during specific events to involve every aspect of the tactical intelligence collection, processing, analysis and reporting systems. This project engineers, tests and evaluates new digital intelligence collection, processing and dissemination technology using the fielded TROJAN systems, prior to the acquisition of those technologies. As part of the Objective C4ISR Architecture, these capabilities will enable processing and dissemination of real-time intelligence data from various sources to form the intelligence needed to issue orders inside the threat decision cycle. To that end, it is imperative that TROJAN keeps pace with digitization initiatives in order to respond aggressively to the emerging intelligence communication threats.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1 Integrate and test specialized hardware/software for classified pre-processing of new signals of interest utilizing enhanced signal processing algorithms. Resource development of GLAIVE software. Integrated several new NSA SW packages-efforts still ongoing.	0.000	0.000	0.388	0.000	0.388

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0303032A: <i>TROJAN - RH12 - MIP</i>	PROJECT RH5: <i>TROJAN - RH12 - MIP</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 Acquire and apply multi-bandwidth compression algorithm technology to maximize TROJAN intelligence network throughput.		0.000	0.000	0.336	0.000	0.336
<i>FY 2009 Accomplishments:</i> FY 2009						
<i>FY 2010 Plans:</i> FY 2010						
<i>FY 2011 Base Plans:</i> FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #3		0.000	0.000	0.375	0.000	0.375

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
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B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO								
Program #7 Development of smaller more mobile SATCOM dishes and receivers. Development of more efficient use of bandwidth, Comm's on the move and man-packable intelligence collection systems. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO				0.000	0.000	0.736	0.000	0.736
Program #8 Labor for two SW engineers at NSA in support of GLAIVE and other above applicable efforts. Labor for one MAT DEV technologist, one MAT DEV software and one MAT DEV HW engineer. <i>FY 2009 Accomplishments:</i> FY 2009				0.000	0.000	0.805	0.000	0.805

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0303032A: <i>TROJAN - RH12 - MIP</i>		PROJECT RH5: <i>TROJAN - RH12 - MIP</i>				
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010								
<i>FY 2011 Base Plans:</i> FY 2011 Base								
<i>FY 2011 OCO Plans:</i> FY 2011 OCO								
Accomplishments/Planned Programs Subtotals				0.000	0.000	3.697	0.000	3.697
<u>C. Other Program Funding Summary (\$ in Millions)</u>								
N/A								
<u>D. Acquisition Strategy</u>								
This Acquisition Strategy for the TROJAN Classic XXI System supported by TROJAN RDT&E is to adapt and leverage from Commercial Off the Shelf (COTS) and Government Off the Shelf (GOTS) products. Additionally leverage off of development by DoD and other Government agencies to the greatest extent possible. TROJAN RDT&E is used to fund the development of enhancing these technologies to meet specific user requirements. The funding for production and fielding of these capabilities are funded under TROJAN BA0331.								
<u>E. Performance Metrics</u>								
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.								

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army **DATE:** February 2010

APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0304270A: <i>Electronic Warfare Development</i>
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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	0.000	0.000	21.571	0.000	21.571	13.854	13.963	12.640	14.303	Continuing	Continuing
EW5: <i>ELECTRONIC WARFARE DEVELOPMENT - MIP</i>	0.000	0.000	18.426	0.000	18.426	10.457	10.489	8.618	9.059	Continuing	Continuing
EW6: <i>ARAT-TSS - MIP</i>	0.000	0.000	3.145	0.000	3.145	3.397	3.474	4.022	5.244	Continuing	Continuing

Note

Note: This is not a new start. Program transferred from 0604270A beginning in FY 11 to comply with fully captured Military Intelligence Program (MIP) elements.

A. Mission Description and Budget Item Justification

FY 2011 budget request funds Electronic Warfare Development. This program element (PE) encompasses engineering and manufacturing development for tactical electronic warfare (EW). EW encompasses the development of tactical EW equipment and systems mounted in both ground and air vehicles. The systems under this program provides the Army with the capability to degrade or deny hostile forces the effective use of their communications, countermortar/counterbattery radars, surveillance radars, infrared/optical battlefield surveillance systems and electronically fused munitions. Existing Army EW systems must be replaced or upgraded to maintain their capability in the face of threats. The Army Reprogramming Analysis Team (ARAT) Project will develop, test and equip an Army-wide infrastructure capable of rapidly reprogramming electronic combat software embedded in offensive and defensive weapon systems.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0304270A: <i>Electronic Warfare Development</i>
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B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	21.571	0.000	21.571
Total Adjustments	0.000	0.000	21.571	0.000	21.571
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments 3	0.000	0.000	21.571	0.000	21.571

Change Summary Explanation

Change Summary Explanation: Funding - FY 2011: Program transferred from 0604270A beginning in FY 11 to comply with fully captured Military Intelligence Program (MIP) elements.

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0304270A: <i>Electronic Warfare Development</i>				PROJECT EW5: <i>ELECTRONIC WARFARE DEVELOPMENT - MIP</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
EW5: <i>ELECTRONIC WARFARE DEVELOPMENT - MIP</i>	0.000	0.000	18.426	0.000	18.426	10.457	10.489	8.618	9.059	Continuing	Continuing
Quantity of RDT&E Articles											
Note Note: This is not a new start. Program transferred from 0604270A beginning in FY 11 to comply with fully captured Military Intelligence Program (MIP) elements.											
A. Mission Description and Budget Item Justification Prophet's primary mission is providing 24-hour Situation Development and Information Superiority to the supported maneuver brigade to enable the most effective engagement of enemy forces. Prophet is an integral part of the Army Transformation, providing Near Real Time (NRT) information to the Brigade Commander within his combat decision cycle. It is the tactical commander's sole organic ground-based Signals Intelligence/Electronic Warfare (SIGINT/EW) system for the Division, Brigade Combat Team (BCT), Stryker Brigade Combat Team (SBCT), Armored Cavalry Regiments (ACR) and Battlefield Surveillance Brigade (BfSB). Prophet provides the tactical commander with the next generation SIGINT/EW - radio detection/direction finding capabilities. Prophet stationary and on-the-move direction finding information develops battlespace visualization, Intelligence Preparation of the Battlefield (IPB) and target development for enemy and gray emitters within radio line-of-sight across the brigade area of responsibility. This NRT information when processed provides a key component of the fused intelligence Common Operating Picture (COP). Prophet interfaces via Prophet Control with the maneuver brigade Analysis Control Team - Enclave (ACT-E) and All Source Analysis System (ASAS) Intelligence Fusion System (IFS). Prophet Control capability will migrate into Distributed Common Ground System-Army (DCGS-A). The ACT-E forwards the gathered information to the division and armored cavalry Analysis and Control Element (ACE). Also, Prophet interfaces directly with the National SIGINT Enterprise either via Prophet Control or via Wideband Beyond Line of Sight Satellite Communications. Prophet enables the Brigade Commander to detect signals while the vehicle is moving, a first for a Tactical SIGINT system. Prophet is utilizing an evolutionary acquisition strategy: Electronic Support (ES) Block I (SIGINT), ES 1 (Modern Signals), ES 2, Electronic Attack (EA) and Prophet Enhanced. FY2011 Base dollars develops P3I for Next Generation Signals to increase the capabilities of the Prophet Enhanced and Spiral 1 ES systems. It will also develop hardware and software upgrades for the ES 1 and Prophet Enhanced systems. Stand up a Prophet System Integration Lab. Conduct pre-system acquisition activities associated with Integrated Electronic Warfare systems.											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #1						0.000	0.000	4.598	0.000	4.598	

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0304270A: <i>Electronic Warfare Development</i>	PROJECT EW5: <i>ELECTRONIC WARFARE DEVELOPMENT - MIP</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
PE H/W Upgrade <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #2 PE/SP1 ES S/W Upgrade <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	6.428	0.000	6.428

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0304270A: <i>Electronic Warfare Development</i>	PROJECT EW5: <i>ELECTRONIC WARFARE DEVELOPMENT - MIP</i>				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #3 Stand Up System Integration Lab <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	2.500	0.000	2.500
Program #4 Integrate Electronic Warfare Systems <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	4.900	0.000	4.900

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0304270A: <i>Electronic Warfare Development</i>				PROJECT EW5: <i>ELECTRONIC WARFARE DEVELOPMENT - MIP</i>				
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Accomplishments/Planned Programs Subtotals						0.000	0.000	18.426	0.000	18.426	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: <i>654270 L12 Electronic Warfare Development (RDT&E)</i>	3.604	10.094	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	13.698
• Ord. #2: <i>BZ7326 Prophet Ground (OPA)</i>	113.749	64.294	71.517	0.000	71.517	49.820	21.125	7.482	4.657	0	332.644
• Ord. #3: <i>BZ9751 Special Purpose Systems (MIP) (OPA)</i>	2.416	6.999	7.646	0.000	7.646	9.178	10.967	3.557	3.835	0	44.598
• Ord. #4: <i>PE 305288G Defense Cryptological Program for Prophet (MIP) (RDT&E)</i>	5.960	0.316	2.164	0.000	2.164	6.028	5.610	4.775	4.873	0	29.726
D. Acquisition Strategy											
<p>Acquisition Strategy - The Prophet R&D Acquisition Strategy is structured to optimize system capability while reducing risk and streamlining business and engineering processes. The Prophet Enhanced entered production in 2QFY09 via Full and Open competition. The Prophet Enhanced contract is a Firm-Fixed-Price, Indefinite-Delivery Indefinite-Quantity with provisions to support R&D and other developmental work. The Prophet Enhanced contract will be used to achieve the Prophet Enhanced Hardware and Prophet Enhanced/ES1 Software upgrades. They will be executed via Time and Material/Cost Plus Delivery Orders to the contract. Development testing and support to FOT&E testing will be included in the Delivery Orders. The System Integration Lab will be established utilizing US Army RDECOM's CERDEC - I2WD personnel and facilities to procure the necessary test bed hardware and its installation, maintenance of test bed and conduct of new product development/integration/testing. The pre-system acquisition activities for Integrate Electronic Warfare Systems will support the Analysis of Alternatives efforts and Pre-Milestone A activities.</p>											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0304270A: <i>Electronic Warfare Development</i>				PROJECT EW5: <i>ELECTRONIC WARFARE DEVELOPMENT - MIP</i>					

Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Prophet Enhanced H/W Upgrade	C	GD C4 SystemsScottsdale AZ	0.000	0.000		3.000		0.000		3.000	Continuing	Continuing	0
Prophet Enhanced/SP1 ES S/W Upgrade	C	GD C4 SystemsScottsdale AZ	0.000	0.000		4.200		0.000		4.200	Continuing	Continuing	0
Integrate Electronic Warfare Systems	C/TBD	TBD Location could not be determined.	0.000	0.000		4.900		0.000		4.900	Continuing	Continuing	0
Subtotal			0.000	0.000		12.100		0.000		12.100			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Matrix Support	C	CECOMFort Monmouth NJ	0.000	0.000		0.473		0.000		0.473	Continuing	Continuing	0
Contract Engineering Support	C	MITREEatontown NJ	0.000	0.000		0.600		0.000		0.600	Continuing	Continuing	0
System Integration Lab	C		0.000	0.000		2.500		0.000		2.500	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0304270A: <i>Electronic Warfare Development</i>				PROJECT EW5: <i>ELECTRONIC WARFARE DEVELOPMENT - MIP</i>					

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
		I2WDFort Monmouth NJ											
Subtotal			0.000	0.000		3.573		0.000		3.573			0.000

Remarks

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Theater Test/Technical Support	C	EPG/AEC Location could not be determined.	0.000	0.000		0.500		0.000		0.500	Continuing	Continuing	0
Prepare and Conduct DT/FOT&E	C	EPG/AEC Location could not be determined.	0.000	0.000		1.873		0.000		1.873	Continuing	Continuing	0
Subtotal			0.000	0.000		2.373		0.000		2.373			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management	C	PM Electronic Warfare Fort Monmouth, NJ	0.000	0.000		0.380		0.000		0.380	Continuing	Continuing	0
Subtotal			0.000	0.000		0.380		0.000		0.380			0.000

Remarks

	Total Prior Years Cost	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000	18.426	0.000	18.426			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0304270A: <i>Electronic Warfare Development</i>	PROJECT EW5: <i>ELECTRONIC WARFARE DEVELOPMENT - MIP</i>

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	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
ES 1 IOT&E		#																										
ES 1 SOTM - DT 1				#																								
ES 1 SOTM DT 2			#	#																								
ES 1 Recap/Reset Contract Award													#															
Prophet Control (PC) - Sole Source Contract Award					#																							
PC Production - Sole Source Contract							#	#																				
Prophet Control (PC) - Competitive Contract Award											#																	
PC Production - Competitive Contract													#	#	#	#												
Prophet Enhanced (PE) - Contract Award_	#																											
Production - Prophet Enhanced	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#
FOT&E - P3I													#															
FOT&E - P3I - 2																	#											
FOT&E - P3I - 3																					#							
FOT&E - P3I - 4																									#			

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Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0304270A: <i>Electronic Warfare Development</i>	PROJECT EW5: <i>ELECTRONIC WARFARE DEVELOPMENT - MIP</i>

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
ES 1 IOT&E	2	2009	2	2009
ES 1 SOTM - DT 1	4	2009	4	2009
ES 1 SOTM DT 2	3	2009	4	2009
ES 1 Recap/Reset Contract Award	1	2012	1	2012
Prophet Control (PC) - Sole Source Contract Award	1	2010	1	2010
PC Production - Sole Source Contract	3	2010	4	2010
Prophet Control (PC) - Competitive Contract Award	2	2011	2	2011
PC Production - Competitive Contract	2	2012	1	2013
Prophet Enhanced (PE) - Contract Award_	1	2009	1	2009
Production - Prophet Enhanced	1	2009	4	2015
FOT&E - P3I	1	2012	1	2012
FOT&E - P3I - 2	1	2013	1	2013
FOT&E - P3I - 3	1	2014	1	2014
FOT&E - P3I - 4	1	2015	1	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army								DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0304270A: <i>Electronic Warfare Development</i>				PROJECT EW6: <i>ARAT-TSS - MIP</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
EW6: <i>ARAT-TSS - MIP</i>	0.000	0.000	3.145	0.000	3.145	3.397	3.474	4.022	5.244	Continuing	Continuing
Quantity of RDT&E Articles											
<p>Note This is not a new start. Program transferred from 0604270A beginning in FY 11 to comply with fully captured Military Intelligence Program (MIP) elements.</p> <p>A. Mission Description and Budget Item Justification The Army Reprogramming Analysis Team (ARAT) is a Department of the Army established program to develop techniques, methods, tools and architecture to reprogram mission software embedded in Army Force Protection Systems (FPS) and Targeting Sensing Systems (TSS) in response to changes in threat signatures. Current military operations are conducted in a rapidly changing threat environment, where Improvised Explosive Devices (IEDs), IR man-portable air defense systems (MANPADS) seekers, radar guided surface-to-air-missiles (SAM), laser guided weapons, anti-helicopter mines, and targeting sensors are proliferating and evolving. Integrated solutions are required to counter increasingly sophisticated EW threats, and the ARAT reprogramming infrastructure supports the tactical Commander by providing timely rapid-reprogramming, and software/information dissemination for Army supported, Joint, allied service, Electronic Warfare (EW) Integrated Reprogramming (EWIR) target acquisition, target engagement, vehicle survivability, and aircraft survivability equipment (ASE). ARAT efforts support Electronic Attack (EA), Electronic Protect (EP) and Electronic Support (ES). The ARAT rapid-reprogramming infrastructure supports tactical requirements for deployed aircraft and ground-based (e.g. CREW) survivability systems including those deployed in the CENTCOM area of responsibility (AOR). ARAT identifies and analyzes threat signature changes which affect FPS & TSS; determines the impact of observed signature changes on FPS & TSS; creates new mission data software to adapt the system to the changes; disseminates the software changes; and provides methods to upload the new software into the affected FPS or TSS. Each element within the ARAT infrastructure plays a specific role within the program's rapid reprogramming process, providing the Warfighter with the capability to install mission and target identification software at the lowest possible level - maximizing flexibility for tactical commanders. ARAT participates in the operational and developmental test design of Army FPS, and supports Service and JCS Reprogramming Exercises in all theaters. ARAT R&D enables continuing development of 1) automated threat analysis tools to rapidly detect (flag) threat changes within the intelligence system; 2) tools to minimize the time to develop Mission Data Sets (MDS); 3) tools and technology to minimize the time required to test and validate MDSs; 4) improved communications conduits to transmit mission software changes to field users; and 5) enhanced mission-software uploading tools. These efforts allow for rapid threat analysis, simulation, software development, distribution and uploading of software changes directly to the supported Warfighter.</p> <p>B. Accomplishments/Planned Program (\$ in Millions)</p>											

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<p>Program #1</p> <p>CREW Reprogramming - Determine intelligence/information requirements and then study methods to reduce the effort and time necessary to collect, process, analyze and disseminate information required for CREW reprogramming. Based on established reprogramming methodology, develop tools to reprogram CREW and establish government organic post production & MDS support for the system. Continuing effort is required in out-years to accommodate threat changes and CREW system improvements.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p> <p><i>FY 2010 Plans:</i> FY 2010</p> <p><i>FY 2011 Base Plans:</i> FY 2011 Base</p> <p><i>FY 2011 OCO Plans:</i> FY 2011 OCO</p>		0.000	0.000	0.192	0.000	0.192
<p>Program #2</p> <p>Automated Multi-Spectral IED Trigger Intercept: Conduct initial study to develop process for automated multi-spectral IED trigger intercept in order to support future CREW reprogramming requirements. Determine intelligence/information requirements, and develop methodology for data collection to reprogram multi-spectral IED triggers.</p> <p><i>FY 2009 Accomplishments:</i> FY 2009</p>		0.000	0.000	0.075	0.000	0.075

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #4 Infrastructure improvements (general) - Enhance the ARAT communications architecture to facilitate the transmission of mission software changes to FPS & TSS users, with emphasis on remote user and highly mobile Warfighter connectivity. Develop/implement integrated ASE test environment to ensure MDS and aircraft counter-measure (CM) Integration flight test support. <i>FY 2009 Accomplishments:</i> FY 2009 <i>FY 2010 Plans:</i> FY 2010 <i>FY 2011 Base Plans:</i> FY 2011 Base <i>FY 2011 OCO Plans:</i> FY 2011 OCO		0.000	0.000	0.215	0.000	0.215
Program #5 Platform-specific TSS, FPS & survivability equipment support - Conduct requirements analysis and concept development for the reprogramming of ground platform (e.g. Stryker) Target Sensing Systems (TSS), Active Protection Systems (APS) and other Force Protections Systems (FPS), and expand the reprogramming of aviation TSS, FPS and Aircraft Survivability Equipment (ASE). Building on the work completed in prior FYs, determine individual platform benefits vs. potential costs to upgrade systems on each ground or Aviation platform.		0.000	0.000	0.085	0.000	0.085

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<u>B. Accomplishments/Planned Program (\$ in Millions)</u>								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
<i>FY 2010 Plans:</i> FY 2010								
<i>FY 2011 Base Plans:</i> FY 2011 Base								
<i>FY 2011 OCO Plans:</i> FY 2011 OCO								
Accomplishments/Planned Programs Subtotals				0.000	0.000	3.145	0.000	3.145
<u>C. Other Program Funding Summary (\$ in Millions)</u> N/A								
<u>D. Acquisition Strategy</u> The efforts to be funded in this project will require a combination of systems specific and high-tech knowledge. The contractual services portion for the project will be obtained from both the CECOM Software Engineering Center (SEC) competitive omnibus and the RDEC High Tech contracts.								
<u>E. Performance Metrics</u> Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.								

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Product Development (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Labor (internal Gov't)	C	CECOM Fort Monmouth, NJ & Aberdeen Proving Grounds, MD	0.000	0.000		0.550		0.000		0.550	Continuing	Continuing	0
Travel	C	Various locations Location could not be determined.	0.000	0.000		0.095		0.000		0.095	Continuing	Continuing	0
Subtotal			0.000	0.000		0.645		0.000		0.645			0.000

Remarks

Support (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Development Support (CECOM RDEC T&E CECOM SEC Omnibus)	C	TBD/Various Locations Location could not be determined.	0.000	0.000		2.500		0.000		2.500	Continuing	Continuing	0
Subtotal			0.000	0.000		2.500		0.000		2.500			0.000

Remarks

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