Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Army										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*							
COST ($ in Millions)	**FY 2010**	**FY 2011**	**FY 2012 Base**	**FY 2012 OCO**	**FY 2012 Total**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**Cost To Complete**	**Total Cost**
Total Program Element	168.496	172.269	101.265	-	101.265	207.036	186.589	126.262	89.148	Continuing	Continuing
665: *A/C SURV EQUIP DEV*	-	4.900	9.554	-	9.554	21.740	14.231	18.553	18.772	Continuing	Continuing
L12: *Signals Warfare Development (MIP)*	5.172	-	-	-	-	-	-	-	-	Continuing	Continuing
L13: *COUNTER-IEDS*	24.498	-	-	-	-	-	-	-	-	Continuing	Continuing
L15: *ARAT-TSS*	2.986	-	-	-	-	-	-	-	-	Continuing	Continuing
L16: *TROJAN DEVELOPMENT (MIP)*	3.502	-	-	-	-	-	-	4.559	4.589	Continuing	Continuing
L20: *ATIRCM/CMWS*	132.338	167.369	-	-	-	-	-	-	-	Continuing	Continuing
VS6: *INTEGRATED ELECTRONIC WARFARE SYSTEMS*	-	-	7.393	-	7.393	49.301	83.635	87.232	54.506	0.000	282.067
VU7: *Common Missile Warning System*	-	-	17.141	-	17.141	11.964	-	-	-	0.000	29.105
VU8: *Common Infrared Counter Measure*	-	-	67.177	-	67.177	124.031	88.723	15.918	11.281	0.000	307.130

Note

Change Summary Explanation: Funding - FY 2010: Funding - FY 10: Increase for for Overseas Contingency Operations efforts.

A. Mission Description and Budget Item Justification

FY 2012 budget request funds Electronic Warfare Development. This program element (PE) encompasses engineering and manufacturing development for tactical electronic warfare (EW), signals warfare (SW), aircraft survivability equipment (ASE), battlefield deception, rapid software reprogramming and protection of personnel and equipment from hostile artillery. 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. This program element satisfies requirements for brigade, division, corps and higher commanders to conduct electronic warfare to meet tactical and Special Electronic Mission Aircraft (SEMA), attack/scout, and assault/cargo mission requirements. The Prophet program provides for the development of multifunction ground based and airborne intelligence and electronic warfare systems. Trojan will complete Proof-of-Principle R&D for specific applications in advanced threat signals processing, prototype software upgrades, high frequency (HF) algorithms for compact antenna array technology (CAAT), search and acquisition capabilities for unattended signal collectors, and new digital intelligence collection, processing and dissemination technology. The

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Army	DATE: February 2011
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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.

B. Program Change Summary ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	219.608	172.269	94.196	-	94.196
Current President's Budget	168.496	172.269	101.265	-	101.265
Total Adjustments	-51.112	-	7.069	-	7.069
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments 1	-51.112	-	7.069	-	7.069

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011
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COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
665: *A/C SURV EQUIP DEV*	-	4.900	9.554	-	9.554	21.740	14.231	18.553	18.772	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

The objective of the Aircraft Survivability Equipment (ASE) Development project is to improve radio frequency (RF) ASE for Army aviation. Milestone Decision Authority (MDA) approved phase 1 of a phased/incremental path forward, supported by the user and HQDA.

Phase I upgrades the Processor Line Replaceable Unit (LRU) of the AN/APR-39A(V)1 Radar Signal Detecting Set through modernization and reduced parts count. Along with improved maintainability and reliability, performance will be enhanced via increased processing speed and expanded memory. These improvements will result in faster response time, better dense environment capability and improved parameter measurement. Phase 1 serves to make the currently fielded system viable until affordable improved RF ASE capability can be pursued in Phases 2 and 3. Phase 2 initiates development of an improved digital Radar Warning Receiver (RWR) and Phase 3 adds active Electronic Countermeasures (ECM) for selected aircraft.

FY 12 RDTE funding $9.554 million continues the AOA of the digital RWR.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: Radio Frequency Countermeasures ***Description:*** In-house and program management administration ***FY 2012 Plans:*** WIll continue to fund Phase II RFCM	-	-	2.489
Title: Phase II Digital RWR ***Articles:*** ***Description:*** Phase II Product Development (Digital RWR) ***FY 2011 Plans:*** Phase II AOA ***FY 2012 Plans:*** Phase II Prototype	-	4.900 0	7.065
Accomplishments/Planned Programs Subtotals	-	4.900	9.554

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011
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C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

The Army Radio Frequency (RF) Aircraft Survivability Equipment (ASE) is managed by Program Manager ASE (PM ASE) for integration and installation on Army Aviation platforms. PM ASE proposed a three phased path forward commensurate with user priorities and life cycle management philosophy. Phase 1, approved by MDA, upgrades the currently fielded AN/APR-39A(V)1 Radar Signal Detecting Set which is employed by approximately 3,000 aircraft; awarded sole source via ECP to the existing contractor of the APR-39A. Phase 2 develops an improved digital Radar Warning Receiver for modernized Army platforms by capitalizing on emerging technologies to provide enhanced aircrew situational awareness. Phase 3 will develop and integrate active Electronic Countermeasures jamming capability for select aircraft. Competition will be considered for the future phases.

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army		DATE: February 2011
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management	Various	Various:Various	0.121	-		-		-		-	Continuing	Continuing	Continuing
Other Development	Various	Various:Various	7.985	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	8.106	-		-		-		-			

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Digital Radar Warning Receiver (RWR)	SS/FP	Lab Demo Studies:TBD	-	4.900		7.065		-		7.065	Continuing	Continuing	Continuing
		Subtotal	-	4.900		7.065		-		7.065			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	Various	Various:Various	4.395	-		1.560		-		1.560	Continuing	Continuing	Continuing
Contractor Support	Various	Various:Various	0.921	-		0.929		-		0.929	Continuing	Continuing	Continuing
		Subtotal	5.316	-		2.489		-		2.489			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Phase II DT/OT/FOTE	TBD	TBD:tbd	0.145	-		-		-		-	Continuing	Continuing	Continuing
Flight Test/Range Support (Phase I)	TBD	ATTC,:TBD	0.450	-		-		-		-	Continuing	Continuing	Continuing
Phase I Test and Evaluation	TBD	TSSQ,:Eglin AFB, FL	0.400	-		-		-		-	Continuing	Continuing	Continuing
Processor Upgrade Evaluation	TBD	Evaluation Center:TBD	0.025	-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT 665: *A/C SURV EQUIP DEV*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	1.020	-		-		-		-			

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	14.442	4.900		9.554		-		9.554			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army		DATE: February 2011
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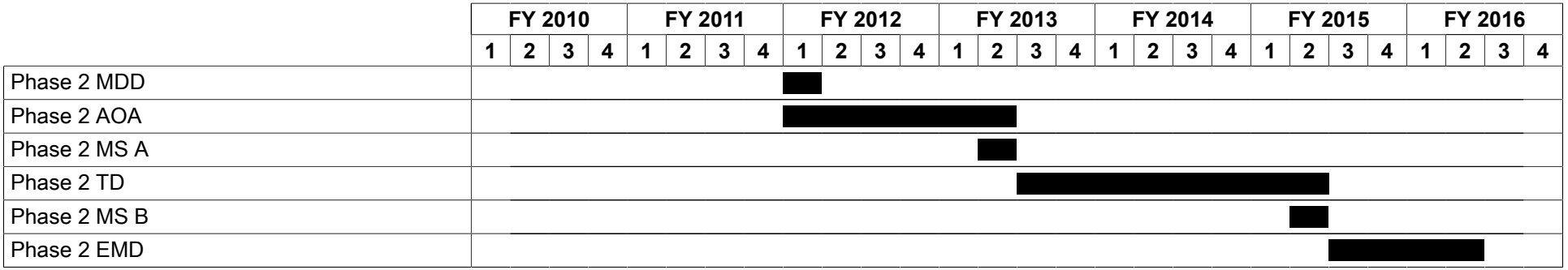

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604270A: *Electronic Warfare Development*	**PROJECT** 665: *A/C SURV EQUIP DEV*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Phase 2 MDD	1	2012	1	2012
Phase 2 AOA	1	2012	2	2013
Phase 2 MS A	2	2013	2	2013
Phase 2 TD	3	2013	2	2015
Phase 2 MS B	2	2015	2	2015
Phase 2 EMD	3	2015	2	2016

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT L12: *Signals Warfare Development (MIP)*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
L12: *Signals Warfare Development (MIP)*	5.172	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles											

Note

Note: This program is not terminating. Program transferred to 0304270A beginning in FY 11 to comply with fully captured Military Intelligence Program (MIP) elements.

A. Mission Description and Budget Item Justification

Prophet is the tactical commander's sole organic ground-based Signals Intelligence (SIGINT)/Electronic Warfare system for the Brigade Combat Team (BCT), Stryker Brigade Combat Team (SBCT), and Battlefield Surveillance Brigade (BfSB). Its primary mission is to provide 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 Modernization providing Near Real Time (NRT) information to the Brigade Commander within his combat decision cycle. This NRT information, when processed, provides a key component of the fused intelligence Common Operating Picture (COP). Prophet Enhanced (PE) provides a modular, scalable, open architecture-based system solution optimized for ease of use and rapid integration of Technical Insertions/Pre-Planned Product Improvements to ensure operational relevance. PE is a non-vehicle specific system, allowing maximum flexibility to accommodate a myriad of platforms. PE also provides a simultaneous mission capability in stationary, mobile, and man-pack configuration/modes further increasing/enhancing the SIGINT capabilities for the unit commander. PE is being fielded to deploying units in accordance with ARFORGEN requirements. Prophet provides reach-back capability and interfaces directly with the National SIGINT Enterprise via Wideband Beyond Line of Sight (WB BLOS) Satellite Communications either at Prophet Control (PC) or the Prophet Sensor.

No FY2012 funding under this PE.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: S3B Software Upgrade	5.172	-	-
Articles:	0		
Description: Develop S3B Software Upgrades for Prophet systems under P3I program			
FY 2010 Accomplishments: Develop SIGINT Terminal Guidance			
Accomplishments/Planned Programs Subtotals	5.172	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• Electronic Warfare Development: *Electronic Warfare Development (RDT&E)*		18.426	10.431		10.431		15.061	15.491	14.933	Continuing	Continuing
• Prophet Ground: *Prophet Ground (OPA)*	58.299	90.417	72.041		72.041		41.090	40.239	35.926	Continuing	Continuing
• Special Purpose Systems: *Special Purpose Systems (MIP OPA) (Prophet Only)*	6.999	7.646	9.163		9.163		13.149	13.948	14.396	Continuing	Continuing
• Defense Cryptological Program for P: *Defense Cryptological Program for PROPHET (MIP) (RDT&E)*	0.319	2.136	5.989		5.989		4.724	4.814	4.896	Continuing	Continuing

D. Acquisition Strategy

The Prophet R&D Acquisition Strategy is structured to optimize system capability while reducing risk and streamlining business and engineering processes. PE entered production in 2QFY09 via Full and Open competition. The PE contract is Firm-Fixed-Price, Indefinite-Delivery Indefinite-Quantity with provisions to support R&D and other developmental work as Cost-Plus efforts. The PE contract will be used to maintain the operational relevancy of PE systems in a dynamic threat environment.

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT L12: *Signals Warfare Development (MIP)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	PM Electronic Warfare:Fort Monmouth, NJ	6.007	-		-		-		-	Continuing	Continuing	0.000
Blue Marauder (Congressional Add)	Various	PM CSIS:Fort Belvoir, VA	4.850	-		-		-		-	Continuing	Continuing	0.000
		Subtotal	10.857	-		-		-		-			0.000

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prophet Spiral 2 ES SDD Contract	Various	General Dynamics C4 Devision:Scottsdale, AZ	26.614	-		-		-		-	Continuing	Continuing	0.000
Spiral 1 (SP1) ES Development Platforms	Various	L3 Linkabit:San Diego, CA	4.494	-		-		-		-	Continuing	Continuing	0.000
4303 Enhancements	Various	Raytheon:Garland, TX	0.260	-		-		-		-	Continuing	Continuing	0.000
SIGINT Terminal Guidance	Various	I2WD:Fort Monmouth, NJ	2.104	-		-		-		-	Continuing	Continuing	0.000
S3B Software Upgrade	Various	LM:Wall, NJ	-	-		-		-		-	Continuing	Continuing	0.000
ACOC Tech Insertion	Various	GD:Scottsdale, AZ	-	-		-		-		-	Continuing	Continuing	0.000
		Subtotal	33.472	-		-		-		-			0.000

Remarks

Funds moved to PE 354270 - EW5 starting FY11. No further financial execution will be conducted under this PE.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	Various	CECOM:Fort Monmouth, NJ	8.901	-		-		-		-	Continuing	Continuing	0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army		DATE: February 2011
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Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contract Engineering Support	Various	BAH:Eatontown, NJ	-	-		-		-		-	Continuing	Continuing	0.000
Contractor Engineering Support	Various	CACI:Eatontown, NJ	4.025	-		-		-		-	Continuing	Continuing	0.000
Contractor Engineering Support	Various	Mitre:McLean, VA	2.819	-		-		-		-	Continuing	Continuing	0.000
		Subtotal	15.745	-		-		-		-			0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prepare for and Conduct Spiral 2 ES - Phase I Demo	Various	EPG/AEC:Fort Huachuca, AZ	10.095	-		-		-		-	Continuing	Continuing	0.000
Threat T&E	Various	TRADOC:Fort Monroe, VA	0.100	-		-		-		-	Continuing	Continuing	0.000
Geo-Location Testing	Various	BAH:Eatontown, NJ	0.365	-		-		-		-	Continuing	Continuing	0.000
		Subtotal	10.560	-		-		-		-			0.000

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	70.634	-		-		-		-			0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT L12: *Signals Warfare Development (MIP)*

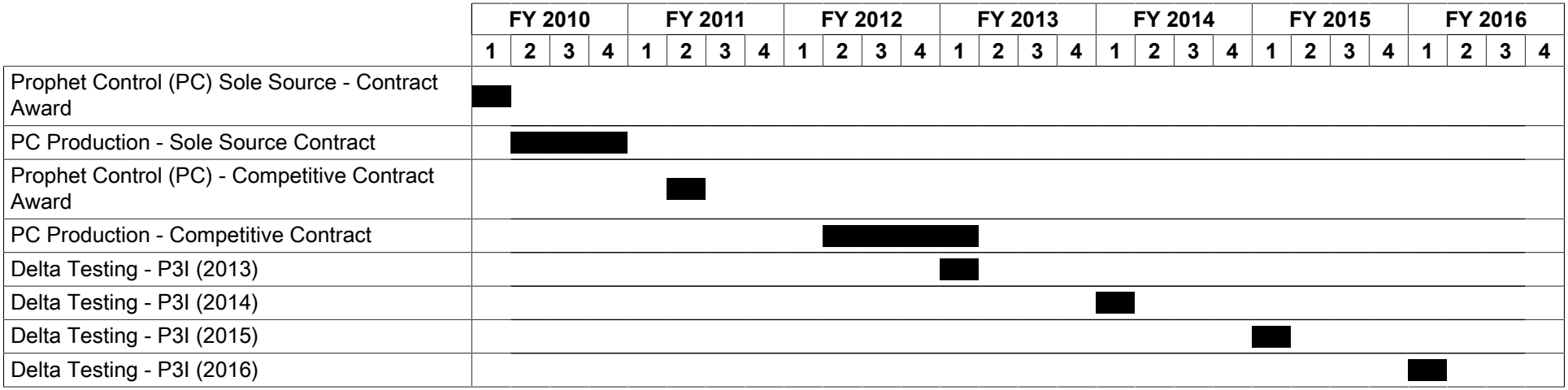

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604270A: *Electronic Warfare Development*	**PROJECT** L12: *Signals Warfare Development (MIP)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Prophet Control (PC) Sole Source - Contract Award	1	2010	1	2010
PC Production - Sole Source Contract	2	2010	4	2010
Prophet Control (PC) - Competitive Contract Award	2	2011	2	2011
PC Production - Competitive Contract	2	2012	1	2013
Delta Testing - P3I (2013)	1	2013	1	2013
Delta Testing - P3I (2014)	1	2014	1	2014
Delta Testing - P3I (2015)	1	2015	1	2015
Delta Testing - P3I (2016)	1	2016	1	2016

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011
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COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
L13: *COUNTER-IEDS*	24.498	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles											

Note

FY 2010 funding was for the Counter Radio Controlled Improvised Explosive Devises (RCIED) Electronics Warfare (CREW) family. There was no funding request in FY 2011.

A. Mission Description and Budget Item Justification

The Counter Improvised Explosive Devices (R-IED) is part of the family of Electronic Warfare and Electronic Counter Measure (ECM) systems used to provide essential force protection for fixed sites, vehicle platforms and soldiers. The Counter-IEDS funds will support the evolving Integrated Electronic Warfare Systems Program by supporting the technology and development of Electronic Attack, Electronic Protect and Electronic Support systems and continued support to specific Electronic Counter Measure (ECM) System such as the Counter Radio Controlled Improvised Explosive Devices (RCIED) Electronic Warfare (CREW) family of systems.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: COUNTER-IEDS	24.498	-	-
Articles:	0		
Description: Funding is provided for the following effort			
FY 2010 Accomplishments: FY10 funding was used to fund the Duke Technical Insertion (DTI) non-recurring engineering effort, anechoic chamber developmental testing and field testing at Yuma Proving Ground, AZ. It was also used for PM Operations and government engineering support.			
Accomplishments/Planned Programs Subtotals	24.498	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• VA8000: *WARLOCK*	164.435	24.127					15.448	60.259	200.754	0.000	480.588

D. Acquisition Strategy

The Duke Technical Insertion (DTI) effort will enable the Duke System to maintain relevancy and performance in pace with the changing threat. The engineering and manufacturing development was awarded competitively through the CERDEC S3 Contract vehicle for the CREW 2 Duke system improvement.

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011
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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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT L13: *COUNTER-IEDS*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO Staff/Travel OH	Various	PM Electronic Warfare -:PM Electronic Warfare - Fort Monmouth, NJ	-	-		-		-		-	Continuing	Continuing	0.000
Program SETA Support	Various	CACI -:NJ/MD	-	-		-		-		-	Continuing	Continuing	0.000
		Subtotal	-	-		-		-		-			0.000

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Tech Insertion Range and Frequency Leverage - Duke	TBD	SRCTec -:Syracuse, NY	-	-		-		-		-	Continuing	Continuing	0.000
		Subtotal	-	-		-		-		-			0.000

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
COMMS Compatability & EMI	Various	I2WD:Fort Monmouth, NJ	-	-		-		-		-	Continuing	Continuing	0.000
Modeling and Simulation	Various	CERDEC, S&TCD:Fort Monmouth, NJ	-	-		-		-		-	Continuing	Continuing	0.000
Government Engineering Support	Various	I2WD:Fort Monmouth, NJ	-	-		-		-		-	Continuing	Continuing	0.000
Government Engineering Support	Various	Various:Various	-	-		-		-		-	Continuing	Continuing	0.000
		Subtotal	-	-		-		-		-			0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army		DATE: February 2011
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Chamber Test	Various	I2WD -:Fort Monmouth, NJ	-	-		-		-		-	Continuing	Continuing	0.000
Operational Range Test	MIPR	Yuma Proving Ground,:Yuma Proving Ground, AZ	-	-		-		-		-	Continuing	Continuing	0.000
		Subtotal	-	-		-		-		-			0.000

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		-		-		-			0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army		DATE: February 2011
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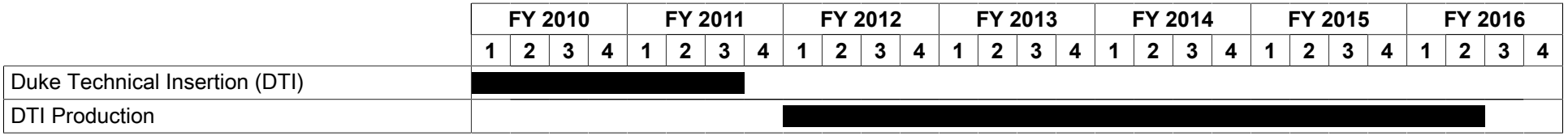

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604270A: *Electronic Warfare Development*	**PROJECT** L13: *COUNTER-IEDS*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Duke Technical Insertion (DTI)	1	2010	3	2011
DTI Production	1	2012	2	2016

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011
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COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
L15: *ARAT-TSS*	2.986	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles											

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.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: ARAT-TSS	2.986	-	-
Articles:	0		
Description: CREW Reprogramming -			
FY 2010 Accomplishments: 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			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
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.			
Accomplishments/Planned Programs Subtotals	2.986	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

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.

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 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Labor (internal Gov't)	Various	CECOM,:Fort Monmouth, NJ & Aberdeen Proving Grounds, MD	4.269	-		-		-		-	Continuing	Continuing	Continuing
Travel	Various	Various sites:various	0.692	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	4.961	-		-		-		-			

Remarks

Organic Government R&D Development Labor.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support (CECOM RDEC T&E CECOM SEC Omnibus)	Various	various:various	8.894	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	8.894	-		-		-		-			

Remarks

R&D Development Costs associated with contractual ARAT Team.

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	13.855	-		-		-		-			

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011
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COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
L16: *TROJAN DEVELOPMENT (MIP)*	3.502	-	-	-	-	-	-	4.559	4.589	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

This project is a Military Intelligence Program (MIP). Trojan research and development 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 support that can dynamically execute operations from sanctuary-based to deployed assets in theater. In support of Army Modernization and Army Force Generation, 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 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 future force success is 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 intelligence 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 keep pace with digitization initiatives in order to respond aggressively to the emerging intelligence communication threats.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: Hardware/Software Integration and Testing	0.370	-	-
Articles:	0		
Description: 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.			
FY 2010 Accomplishments: Integrated and tested specialized hardware/software for classified pre-processing of new signals of interest utilizing enhanced signal processing algorithms. Completed resource development of GLAIVE software. Integrated several new NSA SW packages.			
Title: Multi-bandwidth Compression Algorithm Technology	0.320	-	-
Articles:	0		

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Description: Funding is provided for the following effort ***FY 2010 Accomplishments:*** Acquired and applied multi-bandwidth compression algorithm technology to maximize TROJAN intelligence network throughput.			
Title: Prototype QRC Receiver Packages ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2010 Accomplishments:*** Developed prototype QRC Receiver packages for fixed and transportable TROJAN systems to acquire non-standard modulations using DSP and FPGA technologies.	0.357 0	-	-
Title: Direction Finding (DF) and Geolocation Technologies ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2010 Accomplishments:*** Integrated Direction Finding (DF) and geolocation technologies into TROJAN Remote Receiving Groups (RRGs).	0.350 0	-	-
Title: Hardware/Software Interface ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2010 Accomplishments:*** Developed hardware/software interface for TCXXI system and NexGEN to ONEROOF storage system.	0.400 0	-	-
Title: Software Enhancements for TROJAN Audio Streaming Systems ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2010 Accomplishments:***	0.256 0	-	-

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Developed specialized software enhancements to the TROJAN audio streaming subsystems to improve system redundancy & throughput capacity and system management capabilities; Investigated compression/processing technologies to reduce communications bandwidth requirements for remoted TROJAN systems, including streaming audio technologies.			
Title: Develop smaller, mobile SATCOM dishes and receivers ***Articles:*** ***Description:*** Funding is provided for the following effort ***FY 2010 Accomplishments:*** Developed smaller more mobile SATCOM dishes and receivers. Developed more efficient use of bandwidth, Comm's on the move and man-packable intelligence collection systems.	0.701 0	-	-
Title: Engineering Support ***Articles:*** ***Description:*** Provided engineering support to GLAIVE and other efforts. ***FY 2010 Accomplishments:*** Funded labor for two SW engineers at NSA in support of GLAIVE and other above applicable efforts. Funded labor for one MAT DEV technologist, one MAT DEV software and one MAT DEV HW engineer.	0.748 0	-	-
Accomplishments/Planned Programs Subtotals	3.502	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

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 extend 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.

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army		DATE: February 2011
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Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Develop Prototype QRC Receiver packages	Various	CERDEC I2WD:various	4.067	-		-		-		-	Continuing	Continuing	Continuing
Develop DF Capabilities for TROJAN RRG	Various	CERDEC I2WD:various	1.797	-		-		-		-	Continuing	Continuing	Continuing
Investigate Compression / processing technologies	Various	CERDEC I2WD:various	1.038	-		-		-		-	Continuing	Continuing	Continuing
Develop specialized software enhancements to TROJAN audio streaming	Various	CERDEC I2WD:various	2.420	-		-		-		-	Continuing	Continuing	Continuing
Develop hardware/software interface to ONEROOF	Various	CERDEC I2WD:various	1.766	-		-		-		-	Continuing	Continuing	Continuing
Develop small, mobile SATCOM dishes and receivers	Various	Various:various	-	-		-		-		-	Continuing	Continuing	0.000
		Subtotal	11.088	-		-		-		-			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Aquire & Apply muliti bandwidth compr Algorithm	Various	CECOM I2WD:Various	1.126	-		-		-		-	Continuing	Continuing	Continuing
Engineering Support	Various	Various:various	-	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	1.126	-		-		-		-			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrate/test hardware/ software	Various	CECOM I2WD:various	2.600	-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army		DATE: February 2011
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Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational test/eval of enhanced SIG Processing	Various	CECOM I2WD:various	0.429	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	3.029	-		-		-		-			

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	15.243	-		-		-		-			

Remarks

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COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
L20: *ATIRCM/CMWS*	132.338	167.369	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles											

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

Beginning in FY12, L20 is broken into subprograms consisting of CMWS (VU7), CIRCM (VU8) and HFDS (VS6).

The US Army operational requirements concept for Infrared (IR) countermeasure systems is known as the Suite of Integrated Infrared Countermeasures (SIIRCM). It is an integrated warning and countermeasure system to enhance aircraft survivability against IR guided threat missile systems. The core element of the SIIRCM concept is the Advanced Threat Infrared Countermeasure/Common Missile Warning System (ATIRCM/CMWS) Program. The ATIRCM/CMWS, a subsystem to a host aircraft, is an integrated ultraviolet (UV) missile warning system and an IR Laser Jamming and Improved Countermeasure Dispenser (ICMD).

The ATIRCM/CMWS program was restructured per an Under Secretary of Defense for Acquisition, Technology, and Logistics (USD (AT&L)) Acquisition Decision Memorandum (ADM) dated April 15, 2009. USD (AT&L) designated the ATIRCM/CMWS program as an Acquisition Category (ACAT) 1D special interest program, and directed the establishment of the CMWS, ATIRCM QRC and Common Infrared Countermeasure (CIRCM) subprograms. On September 3, 2010, Mr Kendall, Principal Deputy to the USD(AT&L), Acting DAE signed an ADM approving the reinstatement of MS C for CMWS and redesignating the ATIRCM QRC and CMWS subprograms as ACAT IC. Mr. Kendall also approved new baselines for each subprogram.

The CMWS subprogram is a UV missile warning system that cues both flare and laser countermeasures to defeat incoming infrared missiles. The B-kit consists of the components which perform the missile detection and identification, false alarm rejection, hostile missile declaration, and countermeasure employment functions of the system. The CMWS Electronic Control Unit (ECU) receives UV missile detection data from Electro-optic Missile Sensors (EOMS) and sends a missile alert signal to alert crewmen via on-board avionics, and ATIRCM QRC Jam Head Control Unit. Tier 1 threat missiles detected and tracked by the CMWS are subsequently defeated by a combination of missile seeker countermeasures, including decoy flares and ATIRCM IR Laser Jamming (CH-47 platform). The CMWS Generation 3 (Gen 3) Electronics Control Unit (ECU) will meet Tier 1 requirements while retaining a low false alarm rate. The Gen 3 ECU is required to obtain a Full Material Release for CMWS and ensure protection against emerging IR guided missile threats.

The ATIRCM Quick Reaction Capability (QRC) subprogram is an ATIRCM program transition in response to Operational Needs Statement (ONS) Number 08-5661 dated June 10, 2008. This ONS outlines the urgent requirement to equip CH-47 helicopters being used in SWA in support of Operation Enduring Freedom/ Operation New Dawn (OEF/OND) with an improved IRCM capability to counter threats from advanced Man Portable Air Defense Systems (MANPADS). To address this requirement, an ATIRCM QRC for seventy (70) CH-47 helicopters was authorized by an Acquisition Decision Memorandum (ADM) signed September 15, 2008 by

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the Army Acquisition Executive (AAE). The DAE signed an ADM on April 15, 2009 that increased this urgent requirement to equip a total of eighty-three (83) CH-47 helicopters.

The CIRCM (next generation ATIRCM) subprogram is an infrared countermeasure system that interfaces with a Missile Warning System (MWS) to provide near spherical coverage of the host platform in order to defeat all IR threats. In an ADM dated July 19, 2010, the Defense Acquisition Executive (DAE) directed that the SIIRCM ORD be the requirement baseline for the CIRCM, in lieu of an Initial Capabilities Document (ICD). The DAE directed that CIRCM provide the sole acquisition of future laser based infrared countermeasure systems for all rotary-wing, tilt-rotor, and small fixed wing aircraft across the Department of Defense. The CIRCM subprogram is projected to reach Milestone A in Fiscal Year 2011.

The A-kit for CMWS, ATIRCM QRC, and CIRCM includes mounting hardware, wiring harnesses, cables, and other components necessary to install and interface the mission kit on host aircraft. The A-kit ensures the mission kit is functionally and physically operational with a specific host aircraft type.

The Hostile Fire Detection System (HFDS) provides small arms fire detection, orientation, type and real time cueing to all aircrew members enabling avoidance and/or response.

The Hostile Fire Quick Reaction Capability (HF QRC) is in response to Operational Needs Statement (ONS) Number 09-0836 dated May 09, 2009. This ONS outlines the urgent requirement for a ballistic threat detection system for Army aircraft. To address this requirement the Army Resource and Requirements Board (AR2B) and War Production Board (WPB) approved a Common Missile Warning System (CMWS) based solution. This capability is scheduled for fielding in Fiscal Year 2012.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: Development Efforts	132.338	167.369	-
Articles:	0	0	
Description: ATIRCM/CMWS RDT&E funding supports the design and development for the CMWS Generation 3 (Gen 3) Electronic Control Unit (ECU), CMWS Enhanced Sensor, CMWS Tier 2/3 enhancement, and HFDS/HF QRC development and begins the design and development of the CIRCM system.			
FY 2010 Accomplishments: RDT&E dollars support design and development of the completion of the CMWS Gen 3 ECU and the CMWS Enhanced Sensor, funds the planning for the Technology Development phase for CIRCM and starts HFDS development.			
FY 2011 Plans: RDT&E dollars support HF QRC, CMWS Enhanced Sensor studies, initial development of the CMWS Tier 2/3 enhancement, the CIRCM Technology Development phase and HFDS development.			
Accomplishments/Planned Programs Subtotals	132.338	167.369	-

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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• ****: *APA, BA 4 AZ3507 ASE Infrared CM, APA, BA 4 AZ3517 and APA, BA 4 AZ3537*	285.141	174.222								0.000	459.363

D. Acquisition Strategy

The current ATIRCM/CMWS Acquisition Program Baseline is dated September 2010, and the program is fully funded to the CAPE ICE. The acquisition strategy includes buying CMWS separately from ATIRCM and installation of A-kits on all modernized aircraft. The current CMWS production contract is a fixed-priced, Indefinite Delivery, Indefinite Quantity (IDIQ) contract. The Gen 3 ECU became a part of the system in Fiscal Year 2010, and fielding will begin in Fiscal Year 2012. The ATIRCM QRC effort was procured using three letter contracts; two for ATIRCM QRC A-kits and one for ATIRCM QRC B-kits. A new contract for ATIRCM QRC A-kits and B-kits will be awarded in Fiscal Year 2011.

After a full and open competition in Fiscal Year 2011 for the CIRCM Technology Development (TD) phase, at least two contractors will be selected and awarded TD contracts. CIRCM will continue pre-MS B activities and enter into a competition for EMD in Fiscal Year 2013. MS B approval will be followed by award of a single EMD contract with priced options for LRIP and for the procurement of all technical data relevant to the performance of this contract or life cycle of this program. Upon CIRCM MS C approval, the LRIP option will be exercised and the program will immediately enter the Production & Deployment phase. At this time, PM IRCM intends to award a fixed price contract for CIRCM Full Rate Production.

The Hostile Fire Detection System (HFDS) will be pursued via a competitive procurement following the MS A approval.

The Hostile Fire (HF) Quick Reaction Capability (QRC) effort was procured under the CMWS Generation 3 (Gen 3) program utilizing the current T206 (Hardware and T&M Effort) contract and a letter contract.

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT L20: *ATIRCM/CMWS*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR	Various	Various:-	0.414	-		-		-		-	Continuing	Continuing	Continuing
ATIRCM QRC SUBPROGRAM	Various	-:-	-	-		-		-		-	Continuing	Continuing	Continuing
CMWS System Engineering Program Management	Various	PM ASE, HSV, AL:-	88.613	-		-		-		-	Continuing	Continuing	Continuing
CIRCM System Engineering Program Management	Various	PM ASE, HSV, AL:-	-	10.789		-		-		-	Continuing	Continuing	Continuing
		Subtotal	89.027	10.789		-		-		-			

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ATIRCM QRC Design and Development	C/CPFF	BAE Systems, Nashua, NH:-	128.507	-		-		-		-	Continuing	Continuing	Continuing
ATIRCM QRC (AIRCMM)	SS/FP	Various:-	1.563	-		-		-		-	Continuing	Continuing	Continuing
ATIRCM QRC Test Facility	SS/FP	Amherst, HSV, AL:-	1.300	-		-		-		-	Continuing	Continuing	Continuing
ATIRCM QRC	SS/FP	Cowley, Chantilly, VA:-	0.100	-		-		-		-	Continuing	Continuing	Continuing
CMWS Modeling and Simulation	Various	CAS, HSV, AL:-	6.900	1.200		-		-		-	Continuing	Continuing	Continuing
CMWS Enhanced Sensor Study & Evaluation	Various	TBD:-	-	17.000		-		-		-	Continuing	Continuing	Continuing
CMWS Tier 2/3 Threat Upgrades	Various	Various:-	2.475	1.000		-		-		-	Continuing	Continuing	Continuing
CMWS Development Engineering	Various	-:-	43.982	-		-		-		-	Continuing	Continuing	0.000
CMWS Gen 3 ECU ETC	Various	Various:-	14.140	-		-		-		-	Continuing	Continuing	Continuing
CMWS Gen 3 Providence Additional Phases	Various	TBD:-	5.210	-		-		-		-	Continuing	Continuing	Continuing
CIRCM Non-Recurring Engineering	C/CPFF	TBD:-	-	80.640		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT L20: *ATIRCM/CMWS*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
HFDS Modernization Efforts	Various	Various:TBD	4.000	40.240		-		-		-	Continuing	Continuing	Continuing
		Subtotal	208.177	140.080		-		-		-			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CMWS Contractor Support	SS/FP	Various:-	37.911	-		-		-		-	Continuing	Continuing	Continuing
CMWS Matrix Support	Various	Various:-	3.055	-		-		-		-	Continuing	Continuing	Continuing
CIRCM Support Equipment	Various	TBD:-	-	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	40.966	-		-		-		-			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ATIRCM QRC Test and Evaluation	Various	Various:-	21.350	-		-		-		-	Continuing	Continuing	Continuing
CMWS System Test and Evaluation	Various	Various:-	-	12.000		-		-		-	Continuing	Continuing	Continuing
CIRCM Test	Various	TBD:-	-	4.500		-		-		-	Continuing	Continuing	Continuing
CIRCM System Test & Evaluation	Various	Various:-	-	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	21.350	16.500		-		-		-			

	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	359.520	167.369		-		-		-			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT L20: *ATIRCM/CMWS*

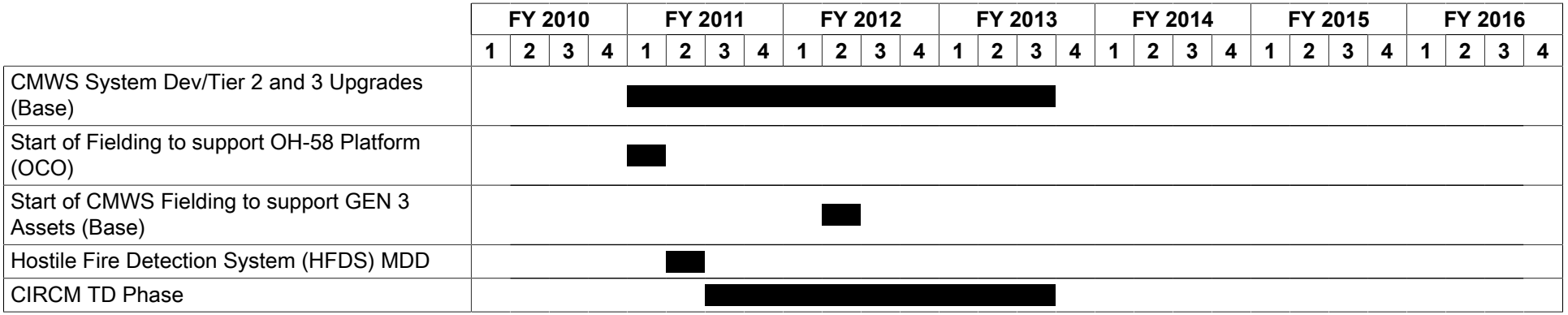

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604270A: *Electronic Warfare Development*	**PROJECT** L20: *ATIRCM/CMWS*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
CMWS System Dev/Tier 2 and 3 Upgrades (Base)	1	2011	3	2013
Start of Fielding to support OH-58 Platform (OCO)	1	2011	1	2011
Start of CMWS Fielding to support GEN 3 Assets (Base)	2	2012	2	2012
Hostile Fire Detection System (HFDS) MDD	2	2011	2	2011
CIRCM TD Phase	3	2011	3	2013

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT VS6: *INTEGRATED ELECTRONIC WARFARE SYSTEMS*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
VS6: *INTEGRATED ELECTRONIC WARFARE SYSTEMS*	-	-	7.393	-	7.393	49.301	83.635	87.232	54.506	0.000	282.067
Quantity of RDT&E Articles											

Note

There was no funding request in FY2011. FY2012-FY2016 is for the Integrated Electronic Warfare Systems (IEWS).

A. Mission Description and Budget Item Justification

The Integrated Electronic Warfare (IEW) Family of Systems (FoS) will provide Electronic Warfare capabilities to the Army and Joint Force Commander with a modular, scalable and interoperable architecture to allow tailored responses to a variety of EW threats/scenarios. The program is structured along three lines of effort: Multi-Function EW (MFEW), EW Planning & Management Tools (EWPMT), and Defensive Electronic Attack (DEA). The MFEW FoS will provide Offensive Electronic Attack (OEA) capability organic to the Brigade Combat Team (BCT) through a Family of Systems (FoS) including ground vehicle, man-pack, fixed site, and airborne variants. The EWPMT will provide planning capabilities to coordinate, manage, and deconflict unit EW activities; employ EW assets to conduct offensive EW targeting, and synchronize EW spectrum operations within an Effects/Fires Cell as an element of Mission Command. The DEA FoS includes mounted, dismounted and fixed site variants to provide force protection to personnel, equipment, and facilities. FY2012 funds will support the establishment of a Program Office(s), preparation of Milestone Documentation and pre-acquisition activities for EWPMT.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: IEWS	-	-	7.393
Description: The IEW System (IEWS) will consist of an Electronic Warfare Planning and Management Tool (EWPMT), Multi-Functional EW (Offensive Electronic Attack) and Defensive EA systems. ***FY 2012 Plans:*** Establish Program Office, prepare technical and specification documentation in support of Milestone B for release of solicitation for engineering and manufacturing development (EMD) phase of the EWPMT.			
Accomplishments/Planned Programs Subtotals	-	-	7.393

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT VS6: *INTEGRATED ELECTRONIC WARFARE SYSTEMS*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• OPA SSN: K00000: *Integrated Electronic Warfare Systems (IEWS)*								44.989	200.754	0.000	245.743

D. Acquisition Strategy

FY12 IEWS efforts will consist of completion of Material Solution analysis phase efforts to include AoAs that will inform a Technology Development strategy, and initial actions towards a technology development contract. The EWPMT program will initiate first, with an anticipated MS B decision in 4Q FY12.

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT VS6: *INTEGRATED ELECTRONIC WARFARE SYSTEMS*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO Staff/Travel	Allot	PM Electronic Warfare:Aberdeen Proving Ground, MD	-	-		0.975		-		0.975	Continuing	Continuing	0.000
Program and Technical Assistance support	C/FFPLOE	TBD:Aberdeen Proving Ground, MD	-	-		0.489		-		0.489	Continuing	Continuing	0.000
		Subtotal	-	-		1.464		-		1.464			0.000

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
IEWS Engineering and Development	C/CPFF	TBD:TBD	-	-		3.764		-		3.764	Continuing	Continuing	Continuing
		Subtotal	-	-		3.764		-		3.764			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	MIPR	USACECOM:Aberdeen Proving Ground	-	-		2.165		-		2.165	Continuing	Continuing	Continuing
Technical/Engineering Support	C/FFPLOE	TBD:TBD	-	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	-	-		2.165		-		2.165			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development testing	MIPR	Various:Various	-	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	-	-		-		-		-			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT VS6: *INTEGRATED ELECTRONIC WARFARE SYSTEMS*	

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		7.393		-		7.393			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT VS6: *INTEGRATED ELECTRONIC WARFARE SYSTEMS*

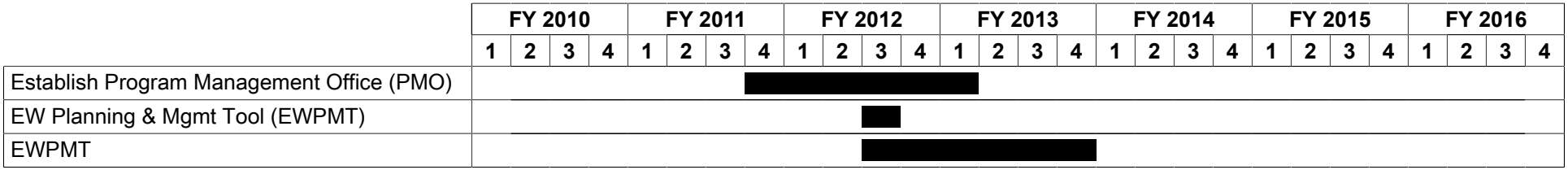

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604270A: *Electronic Warfare Development*	**PROJECT** VS6: *INTEGRATED ELECTRONIC WARFARE SYSTEMS*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Establish Program Management Office (PMO)	4	2011	1	2013
EW Planning & Mgmt Tool (EWPMT)	3	2012	3	2012
EWPMT	3	2012	4	2013

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT VU7: *Common Missile Warning System*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
VU7: *Common Missile Warning System*	-	-	17.141	-	17.141	11.964	-	-	-	0.000	29.105
Quantity of RDT&E Articles											

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

This is a continuation of the L20 which has been broken out into subprograms. CMWS is the subprogram identified as VU7.

The US Army operational requirements concept for Infrared (IR) countermeasure systems is known as the Suite of Integrated Infrared Countermeasures (SIIRCM). It is an integrated warning and countermeasure system to enhance aircraft survivability against IR guided threat missile systems. The core element of the SIIRCM concept is the Advanced Threat Infrared Countermeasure/Common Missile Warning System (ATIRCM/CMWS) Program. The ATIRCM/CMWS, a subsystem to a host aircraft, is an integrated ultraviolet (UV) missile warning system and an IR Laser Jamming and Improved Countermeasure Dispenser (ICMD).

The ATIRCM/CMWS program was restructured per an Under Secretary of Defense for Acquisition, Technology, and Logistics (USD (AT&L)) Acquisition Decision Memorandum (ADM) dated April 15, 2009. USD (AT&L) designated the ATIRCM/CMWS program as an Acquisition Category (ACAT) ID special interest program, and directed the establishment of the CMWS, ATIRCM QRC and Common Infrared Countermeasure (CIRCM) subprograms. On September 3, 2010, Mr Kendall, Principal Deputy to the USD(AT&L), Acting DAE signed an ADM approving the reinstatement of MS C for CMWS and redesignating the ATIRCM QRC and CMWS subprograms as ACAT IC. Mr. Kendall also approved new baselines for each subprogram.

The CMWS subprogram is a UV missile warning system that cues both flare and laser countermeasures to defeat incoming infrared missiles. The B-kit consists of the components which perform the missile detection and identification, false alarm rejection, hostile missile declaration, and countermeasure employment functions of the system. The CMWS Electronic Control Unit (ECU) receives UV missile detection data from Electro-optic Missile Sensors (EOMS) and sends a missile alert signal to alert crewmen via on-board avionics, and ATIRCM QRC Jam Head Control Unit. Tier 1 threat missiles detected and tracked by the CMWS are subsequently defeated by a combination of missile seeker countermeasures, including decoy flares and ATIRCM IR Laser Jamming (CH-47 platform). The CMWS Generation 3 (Gen 3) Electronics Control Unit (ECU) will meet Tier 1 requirements while retaining a low false alarm rate. The Gen 3 ECU is required to obtain a Full Materiel Release for CMWS and ensure protection against emerging IR guided missile threats.

The A-kit for CMWS includes mounting hardware, wiring harnesses, cables, and other components necessary to install and interface the mission kit on host aircraft. The A-kit ensures the mission kit is functionally and physically operational with a specific host aircraft type.

Justification

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604270A: *Electronic Warfare Development*	**PROJECT** VU7: *Common Missile Warning System*

RDT&E (CMWS)
Fiscal Year 2012 Base RDT&E dollars in the amount of $17,141 million supports design and development of Tier 2/3 upgrades and CMWS enhanced sensor studies.

CMWS will continue to spend RDT&E funds on three areas including next generation sensor studies, new algorithm updates (Tier 2/3 upgrades) to counter new variants/missiles, and continue program security initiatives. The sensor studies will evaluate current CMWS technology as compared to the Navy JATAS program and look at the pros and cons of UV missile warning sensor compared to infrared missile warning sensor for Army aircraft. The study will also examine other technologies to possibly enhance the CMWS UV sensor with either an IR or acoustic adjunct to determine possible cost savings to the USG.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: Development Effort	-	-	17.141
Description: ATIRCM/CMWS RDT&E funding supports the design and development for the CMWS Generation 3 (Gen 3) Electronic Control Unit (ECU), CMWS Enhanced Sensor and CMWS Tier 2/3 enhancement. ***FY 2012 Plans:*** RDT&E funding supports the design and development of the CMWS Tier 2/3 enhancement and the CMWS Enhanced Sensor studies.			
Accomplishments/Planned Programs Subtotals	-	-	17.141

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• AZ3517: *APA, BA 4*			162.811		162.811		151.409	113.666	178.134	0.000	757.131

D. Acquisition Strategy

The current ATIRCM/CMWS Acquisition Program Baseline is dated September 2010, and the program is fully funded to the CAPE ICE. The acquisition strategy includes buying CMWS separately from ATIRCM and installation of A-kits on all modernized aircraft. The current CMWS production contract is a fixed-priced, Indefinite Delivery, Indefinite Quantity (IDIQ) contract. The Gen 3 ECU became a part of the system in Fiscal Year 2010, and fielding will begin in Fiscal Year 2012. The ATIRCM QRC effort was procured using three letter contracts; two for ATIRCM QRC A-kits and one for ATIRCM QRC B-kits.

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT VU7: *Common Missile Warning System*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CMWS System Engineering Program Management	Various	PM ASE, HSV, AL:-	88.613	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	88.613	-		-		-		-			

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CMWS Modeling and Simulation	Various	CAS, HSV, AL:-	6.000	-		1.200		-		1.200	Continuing	Continuing	Continuing
CMWS Enhanced Sensor Study & Evaluation	Various	TBD:-	-	-		13.936		-		13.936	Continuing	Continuing	Continuing
CMWS Tier 2/3 Threat Upgrades	Various	Various:-	2.475	-		1.000		-		1.000	Continuing	Continuing	Continuing
CMWS Development Engineering	Various	Various:-	43.982	-		1.005		-		1.005	Continuing	Continuing	Continuing
CMWS Gen 3 ECU ETC	Various	Various:-	14.140	-		-		-		-	Continuing	Continuing	Continuing
CMWS Gen 3 Providence Additional Phases	Various	TBD:-	5.210	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	71.807	-		17.141		-		17.141			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CMWS Contractor Support	SS/FP	Various:-	37.911	-		-		-		-	Continuing	Continuing	Continuing
CMWS Matrix Support	Various	Various:-	3.055	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	40.966	-		-		-		-			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT VU7: *Common Missile Warning System*

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	201.386	-		17.141		-		17.141			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT VU7: *Common Missile Warning System*

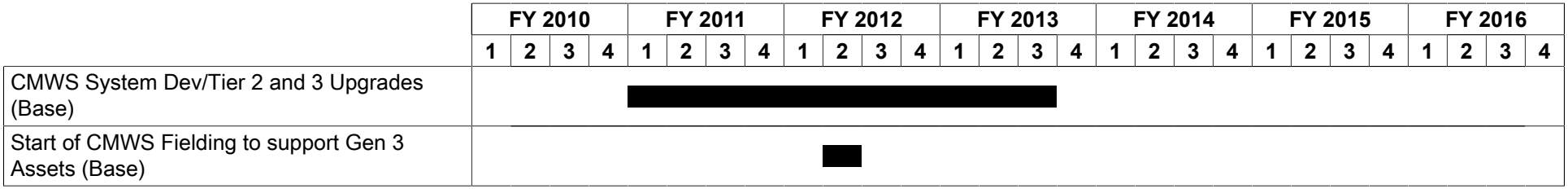

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604270A: *Electronic Warfare Development*	**PROJECT** VU7: *Common Missile Warning System*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
CMWS System Dev/Tier 2 and 3 Upgrades (Base)	1	2011	3	2013
Start of CMWS Fielding to support Gen 3 Assets (Base)	2	2012	2	2012

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT VU8: *Common Infrared Counter Measure*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
VU8: *Common Infrared Counter Measure*	-	-	67.177	-	67.177	124.031	88.723	15.918	11.281	0.000	307.130
Quantity of RDT&E Articles											

Note

Not applicable for this item.

A. Mission Description and Budget Item Justification

This is a continuation of the L20 which has been broken out into subprograms. CIRCM is the subprogram identified as VU8.

The CIRCM (next generation ATIRCM) subprogram is an infrared countermeasure system that interfaces with a Missile Warning System (MWS) to provide near spherical coverage of the host platform in order to defeat all IR threats. In an ADM dated July 19, 2010, the Defense Acquisition Executive (DAE) directed that the SIIRCM ORD be the requirement baseline for the CIRCM, in lieu of an Initial Capabilities Document (ICD). The DAE directed that CIRCM provide the sole acquisition of future laser based infrared countermeasure systems for all rotary-wing, tilt-rotor, and small fixed wing aircraft across the Department of Defense. The CIRCM subprogram is projected to reach Milestone A in Fiscal Year 2011.

The A-kit for CIRCM includes mounting hardware, wiring harnesses, cables, and other components necessary to install and interface the mission kit on host aircraft. The A-kit ensures the mission kit is functionally and physically operational with a specific host aircraft type.

Justification

RDT&E (CIRCM)
Fiscal Year 2012 Base RDT&E dollars in the amount of $67,177 million continues the CIRCM Technology Development phase.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2010	FY 2011	FY 2012
Title: Development Efforts	-	-	67.177
Description: RDT&E dollars begins the design and development of the CIRCM system. ***FY 2012 Plans:*** RDT&E dollars support the CIRCM Technology Development phase.			
Accomplishments/Planned Programs Subtotals	-	-	67.177

Exhibit R-2A, RDT&E Project Justification: PB 2012 Army		DATE: February 2011
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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• ****: *and APA, BA 4 AZ3537*								89.123	118.347	0.000	207.470

D. Acquisition Strategy

After a full and open competition in Fiscal Year 2011 for the CIRCM Technology Development (TD) phase, at least two contractors will be selected and awarded TD contracts. CIRCM will continue pre-MS B activities and enter into a competition for EMD in Fiscal Year 2013. MS B approval will be followed by award of a single EMD contract with priced options for LRIP and for the procurement of all technical data relevant to the performance of this contract or life cycle of this program. Upon CIRCM MS C approval, the LRIP option will be exercised and the program will immediately enter the Production & Deployment phase. At this time, PM IRCM intends to award a fixed price contract for CIRCM Full Rate 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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT VU8: *Common Infrared Counter Measure*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CIRCM System Engineering Program Management	Various	PM ASE, HSV, AL:-	-	-		9.425		-		9.425	Continuing	Continuing	Continuing
		Subtotal	-	-		9.425		-		9.425			

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CIRCM Non-Recurring Engineering	C/CPFF	TBD:-	-	-		39.118		-		39.118	Continuing	Continuing	Continuing
CIRCM Development Facilities	Various	Various:-	-	-		6.000		-		6.000	Continuing	Continuing	Continuing
CIRCM Other R&D	Various	Various:-	-	-		10.934		-		10.934	Continuing	Continuing	Continuing
		Subtotal	-	-		56.052		-		56.052			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CIRCM Support Equipment	Various	TBD:-	-	-		0.500		-		0.500	Continuing	Continuing	Continuing
		Subtotal	-	-		0.500		-		0.500			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CIRCM System Test & Evaluation	Various	Various:-	-	-		1.200		-		1.200	Continuing	Continuing	Continuing
		Subtotal	-	-		1.200		-		1.200			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Army			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT VU8: *Common Infrared Counter Measure*	

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		67.177		-		67.177			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270A: *Electronic Warfare Development*	PROJECT VU8: *Common Infrared Counter Measure*

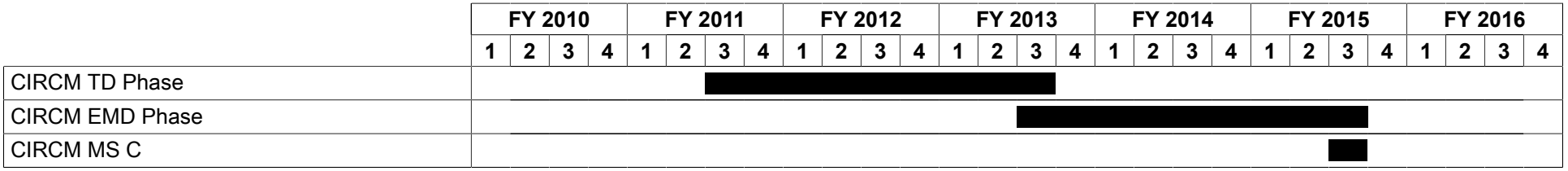

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Army		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604270A: *Electronic Warfare Development*	**PROJECT** VU8: *Common Infrared Counter Measure*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
CIRCM TD Phase	3	2011	3	2013
CIRCM EMD Phase	3	2013	3	2015
CIRCM MS C	3	2015	3	2015