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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE							
2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>					PE 0604270A: <i>Electronic Warfare Development</i>							
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	33.164	181.347	154.621	-	154.621	238.309	186.251	121.720	104.293	Continuing	Continuing
665: <i>A/C Surv Equip Dev</i>	-	9.247	21.976	10.426	-	10.426	20.572	20.469	15.374	20.080	Continuing	Continuing
DX5: <i>Electronic Warfare And Management Tool</i>	-	0.000	0.000	0.013	-	0.013	21.549	17.502	9.978	9.622	Continuing	Continuing
DX6: <i>Multi-Function Electronic Warfare (MFEW)</i>	-	0.000	0.000	0.000	-	0.000	34.698	53.160	17.501	14.378	Continuing	Continuing
VS6: <i>Integrated Electronic Warfare Systems</i>	-	7.155	49.836	20.322	-	20.322	17.206	8.872	6.000	6.000	Continuing	Continuing
VU7: <i>Common Missile Warning System</i>	-	16.591	12.094	2.910	-	2.910	4.622	4.484	4.143	3.713	Continuing	Continuing
VU8: <i>Common Infrared Countermeasure</i>	-	0.171	97.441	120.950	-	120.950	139.662	81.764	68.724	50.500	Continuing	Continuing

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

^{##} The FY 2014 OCO Request will be submitted at a later date

Note

Change Summary Explanation: Realigned to higher priority requirements.

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.

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APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
2040: Research, Development, Test & Evaluation, Army		PE 0604270A: Electronic Warfare Development			
BA 5: System Development & Demonstration (SDD)					
B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	34.233	181.347	245.239	-	245.239
Current President's Budget	33.164	181.347	154.621	-	154.621
Total Adjustments	-1.069	0.000	-90.618	-	-90.618
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.069	-			
• Adjustments to Budget Years	-	-	-90.618	-	-90.618

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013								
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604270A: Electronic Warfare Development				PROJECT 665: A/C Surv Equip Dev								
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost					
665: A/C Surv Equip Dev	-	9.247	21.976	10.426	-	10.426	20.572	20.469	15.374	20.080	Continuing	Continuing					
Quantity of RDT&E Articles																	
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012																	
## The FY 2014 OCO Request will be submitted at a later date																	
A. Mission Description and Budget Item Justification																	
The 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 path forward, supported by the user and HQDA.																	
Phase I serves as an obsolescence / sustainment upgrade to the Processor Line Replaceable Unit (LRU) of the AN/APR-39A(V) Radar Warning Receiver (RWR) through modernization and reduced parts count. 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, RWR Modernization, leverages the on-going United States Navy Class I Engineering Change Proposal (ECP) to the APR-39B(V) RWR, known as APR-39D(V), pending mid-year 2013 approval of the Acquisition Strategy for this plan. APR-39D(V) will significantly improve the near spherical RF threat coverage, automatic detection and identification of threat types, bearing, and lethality. Phase 3 adds active Electronic Countermeasures (ECM) jamming capability for selected aircraft.																	
Fiscal Year (FY)14 RDTE funding of \$10.426 million funds limited testing of Phase 2 prototypes, development engineering, Intelligence and Information Warfare Directorate (I2WD) Software Integration Lab (SIL) updates, platform integration on AH-64E, and integration with other ASE systems.																	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014						
Title: Phase 1 Radio Frequency Countermeasures Articles: Description: Phase 1 obsolescence upgrade FY 2012 Accomplishments: Will continue to fund Phase II RFCM									2.489 0	0.000	0.000						
Title: Phase 2 Radio Frequency Countermeasures Articles: Description: Phase 2 Product Development (Digital RWR) FY 2012 Accomplishments:									6.758 0	21.976 0	10.426						

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>	PROJECT 665: <i>A/C Surv Equip Dev</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013
Will fund Technical Studies			
FY 2013 Plans: Will fund Phase 2 system prototypes			
FY 2014 Plans: Will fund development engineering, lab updates, and platform integration			
Accomplishments/Planned Programs Subtotals		9.247	21.976
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy The Army RF ASE is managed by Program Manager ASE (PM ASE) for development, testing, procurement, integration and installation on Army rotary wing and small fixed wing aviation platforms. PM ASE proposed a three-phased path forward commensurate with user priorities and affordability considerations. Phase 1, approved by Milestone Decision Authority (MDA), upgrades the currently fielded AN/APR-39A(V) Radar Warning Receiver (RWR); awarded sole source via Engineering Change Proposal (ECP) to the existing contractor of the APR-39A. Phase 2 will leverage the on-going United States Navy (USN) Class I Correction of Deficiencies ECP to the APR-39B(V) RWR, limiting service-unique design, test, and integration requirements prior to reaching a production decision. These measures, if approved, will provide the Army the opportunity to gain efficiencies and to increase affordability through cross-service sharing efforts during system development, testing, procurement, and sustainment. PM ASE anticipates approval of Phase 2 RWR Modernization Acquisition Strategy mid-year 2013. Phase 3 will develop and integrate active Electronic Countermeasures jamming capability for select aircraft.			
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 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>						PROJECT 665: <i>A/C Surv Equip Dev</i>			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Other Development	Various	Various:-	7.985	-		2.638		-		-		-	Continuing	Continuing	Continuing
Project Management	Various	Various:-	0.182	-		-		0.146		-		0.146	Continuing	Continuing	Continuing
Subtotal			8.167	0.000		2.638		0.146		0.000		0.146			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Digital Radar Warning Receiver (RWR)	Various	Lab Demo / Studies:Various-	3.569	7.065		8.391		3.560		-		3.560	Continuing	Continuing	Continuing
S/W Development	MIPR	AMRDEC, SED:Redstone Arsenal, AL	0.000	-		2.104		1.060		-		1.060	Continuing	Continuing	0.000
Modeling & Simulation Development Facilities (Depot Standup)	MIPR	Tobyhanna:Tobyhanna, PA	0.000	-		1.052		-		-		-	Continuing	Continuing	0.000
Platform Integration	TBD	Multiple:Multiple	0.000	-		-		2.730		-		2.730	0.000	2.730	0.000
Subtotal			3.569	7.065		11.547		7.350		0.000		7.350			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Support	Various	Various:-	1.439	0.920		0.945		0.500		-		0.500	Continuing	Continuing	Continuing
Matrix Support	Various	Various:-	4.974	1.262		1.587		0.390		-		0.390	Continuing	Continuing	Continuing
Subtotal			6.413	2.182		2.532		0.890		0.000		0.890			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>				PROJECT 665: <i>A/C Surv Equip Dev</i>				

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government & Contracting DT Testing	TBD	Evaluation Center:I2WD	0.025	-		5.259		2.040		-		2.040	Continuing	Continuing	Continuing
Subtotal			0.025	0.000		5.259		2.040		0.000		2.040			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	18.174	9.247		21.976		10.426		0.000		10.426			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>		PROJECT 665: <i>A/C Surv Equip Dev</i>	

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Phase 1 Qual and Flight Test																												
Phase 1 Fielding Decision																												
Phase 1 FUE																												
Phase 2 MDA IPR																												
Phase 2 RWR EMD Phase																												
Phase DT/OT																												
Phase 2 MS C LRIP/FRP Decision Review																												
Phase 2 Production/Deployment Phase																												
Phase 2 FUE																												
Phase 3 Initiation																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>	PROJECT 665: <i>A/C Surv Equip Dev</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Phase 1 Qual and Flight Test	3	2012	3	2013
Phase 1 Fielding Decision	3	2013	3	2013
Phase 1 FUE	2	2014	2	2014
Phase 2 MDA IPR	2	2013	2	2013
Phase 2 RWR EMD Phase	2	2013	1	2016
Phase DT/OT	3	2014	3	2015
Phase 2 MS C LRIP/FRP Decision Review	1	2016	1	2016
Phase 2 Production/Deployment Phase	1	2016	4	2018
Phase 2 FUE	4	2017	4	2017
Phase 3 Initiation	2	2016	2	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604270A: Electronic Warfare Development				PROJECT DX5: Electronic Warfare And Management Tool			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
DX5: Electronic Warfare And Management Tool	-	0.000	0.000	0.013	-	0.013	21.549	17.502	9.978	9.622	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
This effort is funded in FY12, FY13, and FY14 under PE 0604270A, Project VS6, Integrated Electronic Warfare Systems.												
A. Mission Description and Budget Item Justification												
Electronic Warfare Planning and Management Tools (EWPMT) will provide planning capabilities to coordinate, manage, and deconflict unit Electronic Warfare (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. EWPMT is a suite of software tools and applications that will provide a spectrum Common Operating Picture (COP) for the Electronic Warfare Officer (EWO). EWPMT will integrate data elements from Mission Command, Intelligence, and Fires to achieve situational awareness of the Electromagnetic Operational Environment.												
Justification: FY2014 funds in the amount of \$.013 million will provide funds for Project Management support of EWPMT.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2012	FY 2013	FY 2014	
Title: EWPMT									0.000	0.000	0.013	
Description: EWPMT is a suite of software tools and applications that will allow the Commander and staff a mission command capability to plan, coordinate, manage, and de-conflict unit EW activities.												
FY 2014 Plans: Fund Product Management office operations.												
Accomplishments/Planned Programs Subtotals									0.000	0.000	0.013	
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost	
• K00002: EW Planning & Management Tools (EWPMT)			0.013		0.013	15.100	15.350	15.680	15.999	0.000	62.142	

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>				PROJECT DX5: <i>Electronic Warfare And Management Tool</i>			
C. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2014</u>	<u>FY 2014</u>	<u>FY 2014</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Complete</u>	<u>Total Cost</u>
Remarks											
D. Acquisition Strategy											
EWPMT will follow an evolutionary acquisition strategy using an Information Technology (IT) acquisition process construct with emphasis on rapid development and continuous product improvement. The overall strategy is to deploy annual software Capability Drops (CDs) beginning with Limited Deployment in FY15. This approach will allow for insertion of yearly improvements earlier than would be possible following a traditional 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 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>				PROJECT DX5: <i>Electronic Warfare And Management Tool</i>					

Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO Staff/Travel	Allot	PM EW:Aberdeen Proving Ground, MD	0.000	-		-		0.013	Nov 2013	-		0.013	0.000	0.013	0.000
Subtotal			0.000	0.000		0.000		0.013		0.000		0.013	0.000	0.013	0.000

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000	0.000	0.013	0.000	0.013	0.000	0.013	0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>		PROJECT DX5: <i>Electronic Warfare And Management Tool</i>	

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Establish Product Management Office																												
EWPMT Milestone B Decision																												
EWPMT Contract																												
Development of CD 1																												
EWPMT Limited Deployment																												
Continued development of CDs																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>	PROJECT DX5: <i>Electronic Warfare And Management Tool</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Establish Product Management Office	2	2012	2	2013
EWPMT Milestone B Decision	2	2013	2	2013
EWPMT Contract	2	2013	2	2018
Development of CD 1	2	2013	3	2015
EWPMT Limited Deployment	3	2015	3	2015
Continued development of CDs	3	2015	2	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>					R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>				PROJECT DX6: <i>Multi-Function Electronic Warfare (MFEW)</i>			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013[#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
DX6: <i>Multi-Function Electronic Warfare (MFEW)</i>	-	0.000	0.000	0.000	-	0.000	34.698	53.160	17.501	14.378	Continuing	Continuing
Quantity of RDT&E Articles												
[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012 ^{##} The FY 2014 OCO Request will be submitted at a later date Note Not applicable A. Mission Description and Budget Item Justification Not applicable B. Accomplishments/Planned Programs (\$ in Millions) N/A C. Other Program Funding Summary (\$ in Millions) N/A Remarks D. Acquisition Strategy N/A E. Performance Metrics 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 2014 Army												DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>				PROJECT DX6: <i>Multi-Function Electronic Warfare (MFEW)</i>				

Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
NA	TBD	NA:NA	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000			

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

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604270A: Electronic Warfare Development				PROJECT VS6: Integrated Electronic Warfare Systems			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
VS6: Integrated Electronic Warfare Systems	-	7.155	49.836	20.322	-	20.322	17.206	8.872	6.000	6.000	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note												
FY14 VS6 funding will support the IEWS System of Systems to include Electronic Warfare Planning and Management Tools (EWPMT), Multi-Function Electronic Warfare (MFEW), and Duke Technology Insertion (DTI).												
A. Mission Description and Budget Item Justification												
IEWS will provide Electronic Warfare (EW) 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), Electronic Warfare Planning and Management Tools (EWPMT), and Defensive Electronic Attack (DEA). MFEW will provide offensive and defensive electronic warfare and attack and EW support capabilities organic to the Brigade Combat Team to include mounted, dismounted, fixed site, and airborne variants. 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. DEA capability is currently provided by Duke. Duke V3 and Duke Technical Insertion (DTI) will provide DEA capability until MFEW is fielded. These three efforts will also inform Joint CREW material solutions for all service requirements.												
Justification: FY2014 funds in the amount of \$20.322 million will support development of EWPMT and MFEW and provide for DTI continued growth and conduct of research, development and testing against emerging Radio Controlled Improvised Explosive Devices (RCIED) threats.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: IEWS									7.155	49.836	20.322	
									0	0		
Description: The IEW System (IEWS) will consist of an Electronic Warfare Planning and Management Tool (EWPMT), Multi-Function EW (MFEW), and Defensive Electronic Attack (DEA) family of systems.												
FY 2012 Accomplishments:												

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APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>				R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>				PROJECT VS6: <i>Integrated Electronic Warfare Systems</i>			

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
IEWS FoS: Establish Product Management Offices and support Analysis of Alternatives (AoA) efforts for all three components of the IEWS. EWPMT: Initiate efforts on an Acquisition Requirements Package (ARP) and prepare documentation in support of a Milestone B Decision. MFEW: Initiate efforts on an ARP and prepare documentation in support of a Milestone A Decision. <i>FY 2013 Plans:</i> EWPMT: Conduct Milestone B Decision Review. Complete ARP development, initiate a competitive procurement, conduct source selection, and award an EMD contract. MFEW: Conduct a Milestone A Decision Review. Complete ARP development, conduct source selection and award competitive prototyping efforts as architecture, networking, and technology risk reduction activities to support the MFEW effort. <i>FY 2014 Plans:</i> EWPMT: Continue development of EWPMT software development and test. CREW DTI: Develop hardware/software solutions to support a Duke Technical Insertion (DTI) material solution as a component of the IEWS FoS.			
Accomplishments/Planned Programs Subtotals	7.155	49.836	20.322

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

<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• EWPMT: K00002			0.013		0.013	15.100	15.350	15.680	15.999	0.000	62.142
• CREW: VA8000	1,487.600									0.000	1,487.600

Remarks
CREW VA8000 FY13 - \$15,446

D. Acquisition Strategy

IEWS efforts consist of completion of Material Solution Analysis (MSA) phase efforts to include Analysis of Alternatives (AoAs) that will inform a Technology Development strategy and initial actions towards technology development and Engineering Manufacturing Development (EMD) contracts. Multiple competitive contracts are anticipated for IEWS lines of effort. EWPMT will follow an evolutionary acquisition strategy using an Information Technology (IT) acquisition process construct with emphasis on rapid development and continuous product improvement. The overall strategy is to deploy annual software Capability Drops beginning with Limited Deployment in FY15. For MFEW, multiple competitive contracts are anticipated for the Technology Development phase. For DEA, Duke V3 and DTI will provide a bridge and provide DEA capability until MFEW is fielded.

Duke Technical Insertion (DTI) provides for the continued growth and conduct of research, development and testing against emerging Radio Controlled Improvised Explosive Devices (RCIED) threats. Continuing research, development and testing will allow the technology to be relevant to all requirements and remain responsive to urgent needs as required.

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>	PROJECT VS6: <i>Integrated Electronic Warfare Systems</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 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>						PROJECT VS6: <i>Integrated Electronic Warfare Systems</i>			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PMO Staff/Travel	Allot	PM Electronic Warfare:Aberdeen Proving Ground, MD	0.000	0.744		3.025		1.675	Oct 2013	-		1.675	Continuing	Continuing	0.000
Program and Technical Assistance support	C/TBD	TBD:Aberdeen Proving Ground, MD	0.000	0.489	May 2012	-		-		-		-	Continuing	Continuing	0.000
Source Selection Evaluation Board (SSEB) support	MIPR	TBD:Aberdeen Proving Ground, MD	0.000	-		4.360		-		-		-	0.000	4.360	0.000
Subtotal			0.000	1.233		7.385		1.675		0.000		1.675			0.000
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
EMD Contract - EWPMT	C/TBD	TBD:TBD	0.000	-		11.748	Mar 2013	14.522	Oct 2013	-		14.522	Continuing	Continuing	0.000
IEWS Engineering and Development	MIPR	I2WD:Aberdeen MD	0.000	3.757	Feb 2012	-		-		-		-	Continuing	Continuing	Continuing
Technology Studies and Technology Maturation Efforts for MFEW	C/TBD	TBD:TBD	0.000	-		24.461	Mar 2013	-		-		-	Continuing	Continuing	0.000
CREW DTI Solutions	SS/TBD	SRCTech:Syracuse, NY	0.000	-		-		1.841	Oct 2013	-		1.841	0.000	1.841	0.000
Subtotal			0.000	3.757		36.209		16.363		0.000		16.363			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical/Engineering Support - Contractor	C/TBD	GTRI:Atlanta, GA	0.000	-		2.405		-		-		-	Continuing	Continuing	Continuing
Government Engineering Support	MIPR	USACECOM:Aberdeen Proving Ground, MD	0.000	2.165	Feb 2012	3.837		0.341	Oct 2013	-		0.341	0.000	6.343	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604270A: Electronic Warfare Development				PROJECT VS6: Integrated Electronic Warfare Systems					
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
EWPMT Support	C/TBD	TBD:TBD	0.000	-		-		0.396	Nov 2013	-		0.396	0.000	0.396	0.000
DTI Engineering support	C/CPFF	Various:Various	0.000	-		-		0.205	Oct 2013	-		0.205	0.000	0.205	0.000
DTI Government Engineering	MIPR	Various:Various	0.000	-		-		0.313	Oct 2013	-		0.313	0.000	0.313	0.000
Subtotal			0.000	2.165		6.242		1.255		0.000		1.255			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
EWPMT Test support	MIPR	Various:TBD	0.000	-		-		0.770		-		0.770	Continuing	Continuing	0.000
DTI Test support	MIPR	Yuma Proving Ground:Yuma, AZ	0.000	-		-		0.259	Apr 2014	-		0.259	0.000	0.259	0.000
Subtotal			0.000	0.000		0.000		1.029		0.000		1.029			0.000
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	7.155		49.836		20.322		0.000		20.322			
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>		
			PROJECT VS6: <i>Integrated Electronic Warfare Systems</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Establish Product Management Offices (PMOs)																												
(1) EWPMT Milestone B Decision																												
EWPMT Contract																												
EWPMT Limited Deployment																												
Multi-Functional EW - MS A																												
MFEW TD Phase Prototyping Efforts																												
Delivery of CREW DTI Systems for Development																												
Develop H/W and S/W solutions for CREW DTI																												
Developmental testing of CREW DTI solutions																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>	PROJECT VS6: <i>Integrated Electronic Warfare Systems</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Establish Product Management Offices (PMOs)	2	2012	2	2013
(1) EWPMT Milestone B Decision	2	2013	2	2013
EWPMT Contract	2	2013	3	2015
EWPMT Limited Deployment	3	2015	3	2015
Multi-Functional EW - MS A	4	2013	4	2013
MFEW TD Phase Prototyping Efforts	4	2013	4	2014
Delivery of CREW DTI Systems for Development	3	2013	4	2013
Develop H/W and S/W solutions for CREW DTI	1	2014	4	2018
Developmental testing of CREW DTI solutions	3	2014	4	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604270A: Electronic Warfare Development				PROJECT VU7: Common Missile Warning System			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
VU7: Common Missile Warning System	-	16.591	12.094	2.910	-	2.910	4.622	4.484	4.143	3.713	Continuing	Continuing
Quantity of RDT&E Articles												

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

^{##} The FY 2014 OCO Request will be submitted at a later date

Note

Previously funded in L20 Electronic Warfare Development

A. Mission Description and Budget Item Justification

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

The CMWS program is a UV missile warning system that cues both flare and laser countermeasures to defeat incoming IR missiles and will provide a limited ability to warn aircrews of incoming unguided munitions. The B-Kit consists of the components which perform the missile detection and aircrew notification, unguided munitions detection and aircrew notification, 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. Tier 1 threat missiles detected and tracked by the CMWS are subsequently defeated by a combination of missile seeker countermeasures, including decoy flares and IR Laser Jamming (CH-47 platform only). In addition, the CMWS ECU receives detections of unguided munitions which it then passes to the aircrew through aural and visual cues. The aircrew then applies the appropriate Tactics Techniques and Procedures (TTPs) to break contact or engage the enemy with on ship ordnance. The CMWS Generation 3 (Gen 3) 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 (FMR) 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.

CMWS will continue to spend RDT&E funds on the next generation sensor studies, new algorithm updates (Tier 2/3 upgrades) to counter new variants, missiles, and program security initiatives. The sensor studies will evaluate current CMWS technology as compared to the Navy Joint Allied Threat Awareness System (JATAS) program and other service missile warning systems and look at the pros and cons of UV missile warning sensors compared to infrared missile warning sensors for

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>		R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>	PROJECT VU7: <i>Common Missile Warning System</i>
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 United States Government (USG). Justification Fiscal Year (FY)14 Base RDT&E dollars in the amount of \$2.910 million supports development engineering of the Threat Analysis Database (TAD) and integration with other ASE systems.			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013
Title: Development Effort Articles: Description: - FY 2012 Accomplishments: RDT&E funding supports the design and development for the CMWS Generation 3 (Gen 3) Electronic Control Unit (ECU), CMWS Enhanced Sensors, and CMWS Tier 2/3 enhancement. FY 2013 Plans: RDT&E funding supports the design and development of the CMWS Tier 2/3 enhancement, the CMWS Enhanced Sensors studies. FY 2014 Plans: RDT&E funding supports development engineering of the Threat Analysis Database (TAD), and salaries.		16.591 0	12.094 0
Accomplishments/Planned Programs Subtotals		16.591	12.094
C. Other Program Funding Summary (\$ in Millions)			
Line Item	FY 2012	FY 2013	FY 2014 Base FY 2014 OCO FY 2014 Total FY 2015 FY 2016 FY 2017 FY 2018 Cost To Complete Total Cost
• APA Funding: <i>APA, BA 4 AZ3517</i>	104.251	127.751	126.869 126.869 149.073 192.472 155.324 50.107 0.000 905.847
Remarks			
D. Acquisition Strategy			
The current CMWS program Acquisition Program Baseline (APB) is dated September 2010 and the program is fully funded to the Cost Assessment and Program Evaluation Independent Cost Estimate (CAPE ICE). The acquisition strategy includes buying CMWS B-Kits (2002) to support the Army Force Generation (ARFORGEN) model and installation of A-Kits on all modernized aircraft. The previous CMWS production contract was a firm fixed-priced (FFP), Indefinite Delivery,			

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>	PROJECT VU7: <i>Common Missile Warning System</i>
Indefinite Quantity (IDIQ) contract. A FFP bridge contract will be awarded March 2013 for CMWS hardware and the follow on CMWS production FFP/CPFF IDIQ contract will be a 3 year firm fixed price contract to procure the remaining Gen 3 ECUs and A-Kits. The Gen 3 ECU became a part of the system in FY10, and fielding will begin in FY13.		
<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 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>						PROJECT VU7: <i>Common Missile Warning System</i>			
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CMWS System Engineering Program Management	Various	PM ASE, HSV, AL:-	0.000	2.670		1.984		0.274		-		0.274	Continuing	Continuing	Continuing
Subtotal			0.000	2.670		1.984		0.274		0.000		0.274			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CMWS Tier 2/3 Upgrades	Various	Various:-	0.000	2.000		0.815		-		-		-	Continuing	Continuing	Continuing
CMWS Modeling and Simulation	Various	Various:-	0.000	0.455		1.200		-		-		-	Continuing	Continuing	Continuing
Threat Analysis Database (TAD)	TBD	NGIC:TBD	0.000	-		-		2.636		-		2.636	0.000	2.636	0.000
CMWS Enhanced Sensor Study & Evaluation	Various	TBD:-	0.000	11.466		8.095		-		-		-	Continuing	Continuing	Continuing
CMWS Gen 3 Providence Additional Phases	Various	TBD:-	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			0.000	13.921		10.110		2.636		0.000		2.636			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CMWS Contractor Support	SS/FP	Various:-	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
CMWS Matrix Support	Various	Various:-	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
Subtotal			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 2014 Army												DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>							R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>				PROJECT VU7: <i>Common Missile Warning System</i>			

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government System Test and Evaluation	C/TBD	AMCOM RTC:Redstone	0.000	-		-		-		-		-	Continuing	Continuing	0.000
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000			0.000

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	16.591		12.094		2.910		0.000		2.910			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army												DATE: April 2013					
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)								R-1 ITEM NOMENCLATURE PE 0604270A: Electronic Warfare Development						PROJECT VU7: Common Missile Warning System			

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
CMWS Enhanced Sensor Study & Evaluation																												
Start of CMWS Gen 3 ECU Fielding to support CMWS Assets																												
Start of HF QRC Fielding to support CMWS Assets																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>	PROJECT VU7: <i>Common Missile Warning System</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
CMWS Enhanced Sensor Study & Evaluation	3	2012	1	2014
Start of CMWS Gen 3 ECU Fielding to support CMWS Assets	4	2013	4	2013
Start of HF QRC Fielding to support CMWS Assets	4	2013	4	2013

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604270A: Electronic Warfare Development				PROJECT VU8: Common Infrared Countermeasure			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
VU8: Common Infrared Countermeasure	-	0.171	97.441	120.950	-	120.950	139.662	81.764	68.724	50.500	Continuing	Continuing
Quantity of RDT&E Articles												
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
Note Not applicable for this item.												
A. Mission Description and Budget Item Justification												
The Common Infrared Countermeasure (CIRCM) (next generation Advanced Threat Infrared Countermeasure (ATIRCM)) is an infrared (IR) countermeasure system that interfaces with a Missile Warning System (MWS) to provide near spherical coverage of the host platform in order to defeat IR threats. The CIRCM will provide the sole acquisition of future laser-based IR countermeasure systems for all rotary-wing, tilt-rotor, and small fixed-wing aircraft across the Department of Defense. The December 28, 2011 Defense Acquisition Executive Acquisition Decision Memorandum (DAE ADM) authorized entry into the Technology Development (TD) phase, designated the program a pre-Major Defense Acquisition Program (MDAP), and approved the updated exit criteria. CIRCM was approved to be funded to the Director, Cost Assessment and Program Evaluation Independent Cost Estimate (CAPE ICE) per DAE ADM, December 28, 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. The CIRCM B-Kit is the mission kit (laser, pointer tracker, and controller) to achieve near spherical coverage for an aircraft.												
Justification: Fiscal Year 2014 Base RDT&E dollars in the amount of \$120.950 million continues the CIRCM TD phase, preparation for Engineering and Manufacturing Development (EMD) phase, and integration with other Aircraft Survivability Equipment (ASE) systems.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Development Efforts									0.171	97.441	120.950	
									Articles: 0	0		
Description: RDT&E dollars begin the design and development of the CIRCM system.												
FY 2012 Accomplishments:												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Army						DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>			PROJECT VU8: <i>Common Infrared Countermeasure</i>			

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
RDT&E dollars support the CIRCM TD phase.			
<i>FY 2013 Plans:</i> RDT&E dollars support the CIRCM TD phase and begin preparation for the EMD phase.			
<i>FY 2014 Plans:</i> RDT&E dollars support the CIRCM TD phase and continue preparation for the EMD phase.			
Accomplishments/Planned Programs Subtotals	0.171	97.441	120.950

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

<u>Line Item</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u> <u>Base</u>	<u>FY 2014</u> <u>OCO</u>	<u>FY 2014</u> <u>Total</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• APA Funding: <i>APA, BA 4 AZ3537</i>						8.335	94.746	71.656	101.000	Continuing	Continuing
Remarks											

D. Acquisition Strategy

After a full and open competition beginning in the second quarter of Fiscal Year 2011 (FY 2011), two contractors were selected and awarded Technology Development contracts on January 31, 2012. The CIRCM contract awards were followed by a contractor protest which resulted in a work stoppage of 100 days. Government Accountability Office (GAO) ruled in favor of the Government and effort was re-initiated on May 23, 2012. CIRCM will continue pre-Milestone B (MS B) activities and initiate a competitive procurement for Engineering and Manufacturing Development (EMD) in the second quarter of FY 2014. MS B approval is anticipated in the first quarter of FY 2015, followed by award of EMD contract(s) in the second quarter of FY 2015, with priced options for Low Rate Initial Production (LRIP) and for the procurement of a Technical Data Package (TDP) that will enable competition for Full Rate Production (FRP). Upon CIRCM MS C approval, the LRIP option will be exercised and the program will immediately enter the Production & Deployment phase. Currently, Product Manager (PdM) Countermeasures intends to pursue full and open competition for the award of a fixed price contract for CIRCM FRP.

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 2014 Army												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: System Development & Demonstration (SDD)						R-1 ITEM NOMENCLATURE PE 0604270A: Electronic Warfare Development				PROJECT VU8: Common Infrared Countermeasure					
Management Services (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering Program Management (SEPM)	Various	PM ASE, HSV, AL:-	10.509	0.171		9.133		11.835		-		11.835	Continuing	Continuing	Continuing
Data	TBD	Various:-	0.000	-		-		0.108		-		0.108	Continuing	Continuing	Continuing
Subtotal			10.509	0.171		9.133		11.943		0.000		11.943			
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Non-Recurring Engineering (NRE)	C/CPIF	Various:-	45.686	-		42.880		20.545		-		20.545	Continuing	Continuing	Continuing
Prototype Manufacturing	C/FFP	Various:-	23.684	-		-		67.486		-		67.486	Continuing	Continuing	Continuing
Development Facilities	Various	Various:-	0.000	-		8.390		2.557		-		2.557	Continuing	Continuing	Continuing
Other R&D	Various	Various:-	9.819	-		16.353		4.229		-		4.229	Continuing	Continuing	Continuing
Subtotal			79.189	0.000		67.623		94.817		0.000		94.817			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Support Equipment	Various	Various:-	0.200	-		3.670		7.000		-		7.000	Continuing	Continuing	Continuing
Subtotal			0.200	0.000		3.670		7.000		0.000		7.000			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government System Testing & Evaluation	Various	CECOM - I2WD APG MD:-	9.252	-		5.120		4.077		-		4.077	Continuing	Continuing	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Army												DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>						R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>				PROJECT VU8: <i>Common Infrared Countermeasure</i>				

Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Other Testing	Various	CECOM - I2WD APG MD:-	5.780	-		11.895		3.113		-		3.113	Continuing	Continuing	Continuing
Subtotal			15.032	0.000		17.015		7.190		0.000		7.190			

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	104.930	0.171	97.441	120.950	0.000	120.950			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Army			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>			R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>		
			PROJECT VU8: <i>Common Infrared Countermeasure</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
TD PHASE																												
TD Contract Award/Protest																												
Bridge Option																												
MS B																												
EMD PHASE																												
EMD CONTRACT AWARD																												
MS C																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 5: <i>System Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604270A: <i>Electronic Warfare Development</i>	PROJECT VU8: <i>Common Infrared Countermeasure</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
TD PHASE	3	2012	2	2014
TD Contract Award/Protest	2	2012	3	2012
Bridge Option	3	2014	4	2014
MS B	1	2015	1	2015
EMD PHASE	2	2015	2	2017
EMD CONTRACT AWARD	2	2015	2	2015
MS C	2	2017	2	2017