Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army										DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*							
COST ($ in Millions)	**FY 2009 Actual**	**FY 2010 Estimate**	**FY 2011 Base Estimate**	**FY 2011 OCO Estimate**	**FY 2011 Total Estimate**	**FY 2012 Estimate**	**FY 2013 Estimate**	**FY 2014 Estimate**	**FY 2015 Estimate**	**Cost To Complete**	**Total Cost**
Total Program Element	0.000	0.000	21.571	0.000	21.571	13.854	13.963	12.640	14.303	Continuing	Continuing
EW5: *ELECTRONIC WARFARE DEVELOPMENT - MIP*	0.000	0.000	18.426	0.000	18.426	10.457	10.489	8.618	9.059	Continuing	Continuing
EW6: *ARAT-TSS - MIP*	0.000	0.000	3.145	0.000	3.145	3.397	3.474	4.022	5.244	Continuing	Continuing

Note

Note: This is not a new start. Program transferred from 0604270A beginning in FY 11 to comply with fully captured Military Intelligence Program (MIP) elements.

A. Mission Description and Budget Item Justification

FY 2011 budget request funds Electronic Warfare Development. This program element (PE) encompasses engineering and manufacturing development for tactical electronic warfare (EW). EW encompasses the development of tactical EW equipment and systems mounted in both ground and air vehicles. The systems under this program provides the Army with the capability to degrade or deny hostile forces the effective use of their communications, countermortar/counterbattery radars, surveillance radars, infrared/optical battlefield surveillance systems and electronically fused munitions. Existing Army EW systems must be replaced or upgraded to maintain their capability in the face of threats. The Army Reprogramming Analysis Team (ARAT) Project will develop, test and equip an Army-wide infrastructure capable of rapidly reprogramming electronic combat software embedded in offensive and defensive weapon systems.

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army	DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0304270A: *Electronic Warfare Development*

B. Program Change Summary ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	21.571	0.000	21.571
Total Adjustments	0.000	0.000	21.571	0.000	21.571
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments 3	0.000	0.000	21.571	0.000	21.571

Change Summary Explanation

Change Summary Explanation: Funding - FY 2011: Program transferred from 0604270A beginning in FY 11 to comply with fully captured Military Intelligence Program (MIP) elements.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW5: *ELECTRONIC WARFARE DEVELOPMENT - MIP*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
EW5: *ELECTRONIC WARFARE DEVELOPMENT - MIP*	0.000	0.000	18.426	0.000	18.426	10.457	10.489	8.618	9.059	Continuing	Continuing
Quantity of RDT&E Articles											

Note

Note: This is not a new start. Program transferred from 0604270A beginning in FY 11 to comply with fully captured Military Intelligence Program (MIP) elements.

A. Mission Description and Budget Item Justification

Prophet's primary mission is providing 24-hour Situation Development and Information Superiority to the supported maneuver brigade to enable the most effective engagement of enemy forces. Prophet is an integral part of the Army Transformation, providing Near Real Time (NRT) information to the Brigade Commander within his combat decision cycle. It is the tactical commander's sole organic ground-based Signals Intelligence/Electronic Warfare (SIGINT/EW) system for the Division, Brigade Combat Team (BCT), Stryker Brigade Combat Team (SBCT), Armored Calvary Regiments (ACR) and Battlefield Surveillance Brigade (BfSB). Prophet provides the tactical commander with the next generation SIGINT/ EW - radio detection/direction finding capabilities. Prophet stationary and on-the-move direction finding information develops battlespace visualization, Intelligence Preparation of the Battlefield (IPB) and target development for enemy and gray emitters within radio line-of-sight across the brigade area of responsibility. This NRT information when processed provides a key component of the fused intelligence Common Operating Picture (COP). Prophet interfaces via Prophet Control with the maneuver brigade Analysis Control Team - Enclave (ACT-E) and All Source Analysis System (ASAS) Intelligence Fusion System (IFS). Prophet Control capability will migrate into Distributed Common Ground System-Army (DCGS-A). The ACT-E forwards the gathered information to the division and armored cavalry Analysis and Control Element (ACE). Also, Prophet interfaces directly with the National SIGINT Enterprise either via Prophet Control or via Wideband Beyond Line of Sight Satellite Communications. Prophet enables the Brigade Commander to detect signals while the vehicle is moving, a first for a Tactical SIGINT system. Prophet is utilizing an evolutionary acquisition strategy: Electronic Support (ES) Block I (SIGINT), ES 1 (Modern Signals), ES 2, Electronic Attack (EA) and Prophet Enhanced. FY2011 Base dollars develops P3I for Next Generation Signals to increase the capabilities of the Prophet Enhanced and Spiral 1 ES systems. It will also develop hardware and software upgrades for the ES 1 and Prophet Enhanced systems. Stand up a Prophet System Integration Lab. Conduct pre-system acquisition activities associated with Integrated Electronic Warfare systems.

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	0.000	0.000	4.598	0.000	4.598

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW5: *ELECTRONIC WARFARE DEVELOPMENT - MIP*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
PE H/W Upgrade *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Program #2	0.000	0.000	6.428	0.000	6.428
PE/SP1 ES S/W Upgrade *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW5: *ELECTRONIC WARFARE DEVELOPMENT - MIP*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #3	0.000	0.000	2.500	0.000	2.500
Stand Up System Integration Lab					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #4	0.000	0.000	4.900	0.000	4.900
Integrate Electronic Warfare Systems					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW5: *ELECTRONIC WARFARE DEVELOPMENT - MIP*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Accomplishments/Planned Programs Subtotals	0.000	0.000	18.426	0.000	18.426

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• Ord. #1: *654270 L12 Electronic Warfare Development (RDT&E)*	3.604	10.094	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0	13.698
• Ord. #2: *BZ7326 Prophet Ground (OPA)*	113.749	64.294	71.517	0.000	71.517	49.820	21.125	7.482	4.657	0	332.644
• Ord. #3: *BZ9751 Special Purpose Systems (MIP) (OPA)*	2.416	6.999	7.646	0.000	7.646	9.178	10.967	3.557	3.835	0	44.598
• Ord. #4: *PE 305288G Defense Cryptological Program for Prophet (MIP) (RDT&E)*	5.960	0.316	2.164	0.000	2.164	6.028	5.610	4.775	4.873	0	29.726

D. Acquisition Strategy

Acquisition Strategy - The Prophet R&D Acquisition Strategy is structured to optimize system capability while reducing risk and streamlining business and engineering processes. The Prophet Enhanced entered production in 2QFY09 via Full and Open competition. The Prophet Enhanced contract is a Firm-Fixed-Price, Indefinite-Delivery Indefinite-Quantity with provisions to support R&D and other developmental work. The Prophet Enhanced contract will be used to achieve the Prophet Enhanced Hardware and Prophet Enhanced/ES1 Software upgrades. They will be executed via Time and Material/Cost Plus Delivery Orders to the contract. Development testing and support to FOT&E testing will be included in the Delivery Orders. The System Integration Lab will be established utilizing US Army RDECOM's CERDEC - I2WD personnel and facilities to procure the necessary test bed hardware and its installation, maintenance of test bed and conduct of new product development/integration/testing. The pre-system acquisition activities for Integrate Electronic Warfare Systems will support the Analysis of Alternatives efforts and Pre-Milestone A activities.

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 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW5: *ELECTRONIC WARFARE DEVELOPMENT - MIP*

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Prophet Enhanced H/W Upgrade	C	GD C4 SystemsScottsdale AZ	0.000	0.000		3.000		0.000		3.000	Continuing	Continuing	0
Prophet Enhanced/SP1 ES S/W Upgrade	C	GD C4 SystemsScottsdale AZ	0.000	0.000		4.200		0.000		4.200	Continuing	Continuing	0
Integrate Electronic Warfare Systems	C/TBD	TBD Location could not be determined.	0.000	0.000		4.900		0.000		4.900	Continuing	Continuing	0
		Subtotal	0.000	0.000		12.100		0.000		12.100			0.000

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	C	CECOMFort Monmouth NJ	0.000	0.000		0.473		0.000		0.473	Continuing	Continuing	0
Contract Engineering Support	C	MITREEatontown NJ	0.000	0.000		0.600		0.000		0.600	Continuing	Continuing	0
System Integration Lab	C		0.000	0.000		2.500		0.000		2.500	Continuing	Continuing	0

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW5: *ELECTRONIC WARFARE DEVELOPMENT - MIP*	

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		I2WDFort Monmouth NJ											
		Subtotal	0.000	0.000		3.573		0.000		3.573			0.000

Remarks

Test and Evaluation ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Theater Test/Technical Support	C	EPG/AEC Location could not be determined.	0.000	0.000		0.500		0.000		0.500	Continuing	Continuing	0
Prepare and Conduct DT/ FOT&E	C	EPG/AEC Location could not be determined.	0.000	0.000		1.873		0.000		1.873	Continuing	Continuing	0
		Subtotal	0.000	0.000		2.373		0.000		2.373			0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW5: *ELECTRONIC WARFARE DEVELOPMENT - MIP*

Management Services ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	C	PM Electronic Warfare Fort Monmouth, NJ	0.000	0.000		0.380		0.000		0.380	Continuing	Continuing	0
		Subtotal	0.000	0.000		0.380		0.000		0.380			0.000

Remarks

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		18.426		0.000		18.426			0.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW5: *ELECTRONIC WARFARE DEVELOPMENT - MIP*

	FY 2009				FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
ES 1 IOT&E		#																										
ES 1 SOTM - DT 1				#																								
ES 1 SOTM DT 2			#	#																								
ES 1 Recap/Reset Contract Award													#															
Prophet Control (PC) - Sole Source Contract Award					#																							
PC Production - Sole Source Contract							#	#																				
Prophet Control (PC) - Competitive Contract Award										#																		
PC Production - Competitive Contract														#	#	#	#											
Prophet Enhanced (PE) - Contract Award_	#																											
Production - Prophet Enhanced	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#
FOT&E - P3I													#															
FOT&E - P3I - 2																	#											
FOT&E - P3I - 3																					#							
FOT&E - P3I - 4																									#			

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0304270A: *Electronic Warfare Development*	**PROJECT** EW5: *ELECTRONIC WARFARE DEVELOPMENT - MIP*

Schedule Details

	Start		End	
Event	**Quarter**	**Year**	**Quarter**	**Year**
ES 1 IOT&E	2	2009	2	2009
ES 1 SOTM - DT 1	4	2009	4	2009
ES 1 SOTM DT 2	3	2009	4	2009
ES 1 Recap/Reset Contract Award	1	2012	1	2012
Prophet Control (PC) - Sole Source Contract Award	1	2010	1	2010
PC Production - Sole Source Contract	3	2010	4	2010
Prophet Control (PC) - Competitive Contract Award	2	2011	2	2011
PC Production - Competitive Contract	2	2012	1	2013
Prophet Enhanced (PE) - Contract Award_	1	2009	1	2009
Production - Prophet Enhanced	1	2009	4	2015
FOT&E - P3I	1	2012	1	2012
FOT&E - P3I - 2	1	2013	1	2013
FOT&E - P3I - 3	1	2014	1	2014
FOT&E - P3I - 4	1	2015	1	2015

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW6: *ARAT-TSS - MIP*	

COST ($ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
EW6: *ARAT-TSS - MIP*	0.000	0.000	3.145	0.000	3.145	3.397	3.474	4.022	5.244	Continuing	Continuing
Quantity of RDT&E Articles											

Note

This is not a new start. Program transferred from 0604270A beginning in FY 11 to comply with fully captured Military Intelligence Program (MIP) elements.

A. Mission Description and Budget Item Justification

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 Program ($ in Millions)

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW6: *ARAT-TSS - MIP*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	0.000	0.000	0.192	0.000	0.192
CREW Reprogramming - Determine intelligence/information requirements and then study methods to reduce the effort and time necessary to collect, process, analyze and disseminate information required for CREW reprogramming. Based on established reprogramming methodology, develop tools to reprogram CREW and establish government organic post production & MDS support for the system. Continuing effort is required in out-years to accommodate threat changes and CREW system improvements.					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #2	0.000	0.000	0.075	0.000	0.075
Automated Multi-Spectral IED Trigger Intercept: Conduct initial study to develop process for automated multi-spectral IED trigger intercept in order to support future CREW reprogramming requirements. Determine intelligence/information requirements, and develop methodology for data collection to reprogram multi-spectral IED triggers.					
FY 2009 Accomplishments: FY 2009					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW6: *ARAT-TSS - MIP*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Program #3 Keeping Pace with the Enemy & Technology - Analysis & Studies for EO/IR/UV Multi-Spectral FPS/TSS Support: In order to keep pace with changing threat and technology ARAT requires assets to better understand the impact of the physical battlefield environment on deployed high-technology sensors and their sustainment. This effort will 1) study the intelligence data requirements to support MDS development for Electro-optical/Ultra-violet/Infra-red (EO/UV/IR) and other multi-spectral sensors for aviation & non-aviation force protection systems (FPS) and target sensing systems and to include active protection systems (APS), 2) Develop government organic knowledge and application-base enabling reprogramming of future systems and 3) Perform requirements analysis and concept development for the reprogramming of multi-spectral TSS. *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base	0.000	0.000	2.170	0.000	2.170

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW6: *ARAT-TSS - MIP*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO					
Program #4 Infrastructure improvements (general) - Enhance the ARAT communications architecture to facilitate the transmission of mission software changes to FPS & TSS users, with emphasis on remote user and highly mobile Warfighter connectivity. Develop/implement integrated ASE test environment to ensure MDS and aircraft counter-measure (CM) Integration flight test support. *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO	0.000	0.000	0.215	0.000	0.215
Program #5 Platform-specific TSS, FPS & survivability equipment support - Conduct requirements analysis and concept development for the reprogramming of ground platform (e.g. Stryker) Target Sensing Systems (TSS), Active Protection Systems (APS) and other Force Protections Systems (FPS), and expand the reprogramming of aviation TSS, FPS and Aircraft Survivability Equipment (ASE). Building on the work completed in prior FYs, determine individual platform benefits vs. potential costs to upgrade systems on each ground or Aviation platform.	0.000	0.000	0.085	0.000	0.085

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW6: *ARAT-TSS - MIP*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Initiate lab testing of potential system updates to verify the additional benefit and identify intelligence collection methodology to enable information use for reprogramming purposes. *FY 2009 Accomplishments:* FY 2009 *FY 2010 Plans:* FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Program #6 Threat Flagging & MDS Reprogramming Tool Development - Develop applications for ARAT internal system-specific threat flagging, threat analysis, MDS generation, and MDS testing. Enhance threat flagging (threat performance change detection) and intelligence analytical tools, based on supported systems performance criteria, to rapidly identify and counter emerging & changing threats that adversely affect the performance of FPS & TSS. Create MDS development, testing and validation tools to decrease time from threat-change detection to the distribution of MDS products in order to increase the accuracy and fidelity of threat identification, and reduce the engineering involvement/workload associated with the manually intensive analysis and MDS development processes. Define requirements and develop tools to migrate to a data support infrastructure that employs Next Generation EWIR System (NGES) when the NGES is deployed and the current EWIR system is decommissioned. *FY 2009 Accomplishments:* FY 2009	0.000	0.000	0.408	0.000	0.408

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW6: *ARAT-TSS - MIP*

B. Accomplishments/Planned Program ($ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010 *FY 2011 Base Plans:* FY 2011 Base *FY 2011 OCO Plans:* FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	0.000	0.000	3.145	0.000	3.145

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW6: *ARAT-TSS - MIP*	

Product Development ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Labor (internal Gov't)	C	CECOM Fort Monmouth, NJ & Aberdeen Proving Grounds, MD	0.000	0.000		0.550		0.000		0.550	Continuing	Continuing	0
Travel	C	Various locations Location could not be determined.	0.000	0.000		0.095		0.000		0.095	Continuing	Continuing	0
		Subtotal	0.000	0.000		0.645		0.000		0.645			0.000

Remarks

Support ($ in Millions)

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support (CECOM RDEC T&E CECOM SEC Omnibus)	C	TBD/Various Locations Location could not be determined.	0.000	0.000		2.500		0.000		2.500	Continuing	Continuing	0
		Subtotal	0.000	0.000		2.500		0.000		2.500			0.000

Remarks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304270A: *Electronic Warfare Development*	PROJECT EW6: *ARAT-TSS - MIP*	

	Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		3.145		0.000		3.145			0.000

Remarks