Exhibit R-2, RDT&E Budget Item 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 0604710A: *Night Vision Systems - Eng 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**
Total Program Element	-	55.412	32.621	43.405	-	43.405	37.581	24.084	15.581	22.585	Continuing	Continuing
L67: *Soldier Night Vision Devices*	-	23.268	0.000	11.271	-	11.271	16.987	13.880	12.773	19.729	Continuing	Continuing
L70: *Night Vision Dev Ed*	-	9.900	11.116	6.669	-	6.669	5.819	0.812	0.000	0.000	Continuing	Continuing
L75: *Profiler*	-	2.512	0.000	2.759	-	2.759	3.605	0.936	0.000	0.000	Continuing	Continuing
L76: *Dismounted Fire Support Laser Targeting Systems*	-	0.000	0.000	1.100	-	1.100	1.119	1.138	1.157	1.177	Continuing	Continuing
L79: *Joint Effects Targeting Systems (JETS)*	-	19.732	21.505	21.606	-	21.606	10.051	7.318	1.651	1.679	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

Program Change Summary Explanation:

Fiscal Year 2012: Program decreases of $2.389 million to Project L70, $.081 million to Project L75, $0.678 million to Project L67 and $0.635 million to Project L79 which were realigned to higher priority Army efforts.

Fiscal Year 2014: Program increases of $6.669 million to Project L70 for Next Generation FLIR B Kit and sensor development, program increase of $2.759 million to Project L75 for Profiler development activities and program increase of $1.100 million to Project L76 for Dismounted Fire Support Targeting System development efforts. Program decreases of -$3.504 million to Project L67 and $6.584 million to Project L79 realigned to higher priority Army efforts.

A. Mission Description and Budget Item Justification

This program element provides night vision/reconnaissance, surveillance and target acquisition technologies required for U. S. defense forces to engage enemy forces twenty-four hours a day under conditions of degraded visibility due to darkness, adverse weather, battlefield obscurants, foliage and man-made structures. These developments and improvements to high performance night vision electro-optics, radar, laser, and thermal systems and integration of related multi-sensor suites will enable near to long range target acquisition, identification and engagement to include significant fratricide reduction, which will improve battlefield command and control in "around-the-clock" combat operations.

Project L67 develops, improves and miniaturizes high performance night vision electro-optics, thermal and laser systems. It also provides for systems integration of related multi-sensor suites to enable near to long-range target acquisition and engagement as well as improved battlefield command and control in around-the-

clock combat operations. It focuses on adapting demonstrated technologies that bring improvements to the dismounted Soldiers' equipment. This project develops or enhances equipment that provides the individual Soldier's day/night situational awareness and individual targeting capability, sniper fire detection and location capability, and integrates improved target location and self-location capability to eliminate friendly fire incidents.

Project L70 focuses on night vision, reconnaissance, surveillance and target acquisition (RSTA) sensor and suites of sensors to provide well-defined surveillance and targeting capabilities for a variety of Current, Modular, and Future Force platforms. This project includes: System Development and Demonstration of the Thermal Imaging Engine (transitioned from an Advanced Technology Objective); night vision sensor acquisition support of Unattended Ground Sensors and ASTAMIDS; development of a Standard Ground Station for Persistent Surveillance Sensors (RAID and PTDS), development for the Next Generation FLIR (NGF) B-kit and improvements and enhancements to Persistent Surveillance System (PSS)and Pre Planned Product Improvements (P3I) software related to meeting network interoperability requirements and improving the soldier - machine interface of the POR.

Project L75 focuses on development of Profiler Block enhanced capabilities for meteorological measurement sensors and data. Improvements have reduced the footprint (less soldiers/vehicles) and complexity of the system, improved performance (accuracy), improved survivability, connectivity, no balloon sensor, multiple initialization data, and terrain visualization. The improved MET message data will increase lethality by enabling artillery a greater probability of first round hit with indirect fire systems. Profiler Block III will provide a networked laptop configuration while further reducing the system's logistics footprint with the elimination of the High Mobility Multi-purpose Wheeled Vehicle (HMMWV) mounted shelter and trailer. The Block III configuration consist of one computer with a common operating system co-located within the Tactical Operation Center (TOC) with a direct interface to the TOC Local Area Network (LAN). The system will be able to provide Gridded MET along with autonomously generate MET messages upon request from AFATDS eliminating the need for a dedicated MET section crew. The Army will realize a significant cost avoidance with the improved configuration.

Project L76 focuses on the engineering development of technologies for insertion into Laser Target Locators and Laser Designators to improve overall performance of those systems and reduce weight. Technologies developed under this project will benefit the Lightweight Laser Designator Rangefinder (LLDR, AN/PED-1), various Laser Target Locators, and future precision targeting programs based on emerging Army requirements. In addition, this line will support improved accuracy (reduced target location error) in support of coordinate seeking weapons, such as Joint Direct Attack Munition (JDAM) and Excalibur.

Project L79 focuses on development of the Joint Effects Targeting System (JETS). The goal is to develop a lightweight set of mission equipment for the dismounted forward observers and controller (including Joint Tactical Air Controllers - JTAC) that will provide means to call for fire and control delivery of air, ground and naval surface fire support using precision/near-precision/non-precision munitions and effects (lethal and non-lethal). JETS consist of two subsystems, the Target Location Designation System (TLDS) and the Target Effects Coordination System (TECS).

Exhibit R-2, RDT&E Budget Item 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 0604710A: *Night Vision Systems - Eng Dev*			
B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	59.195	32.621	42.965	-	42.965
Current President's Budget	55.412	32.621	43.405	-	43.405
Total Adjustments	-3.783	0.000	0.440	-	0.440
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-3.783	-	0.440	-	0.440

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L67: *Soldier Night Vision Devices*	

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
L67: *Soldier Night Vision Devices*	-	23.268	0.000	11.271	-	11.271	16.987	13.880	12.773	19.729	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

This project develops, improves and miniaturizes high performance night vision electro-optics, thermal and laser systems. It also provides for systems integration of related multi-sensor suites to enable near to long-range target acquisition and engagement as well as improved battlefield command and control in around-the-clock combat operations. Further, this funding supports the development, test, and evaluation of Preemptive Threat Detection (PTD) through EMD. It focuses on adapting demonstrated technologies that bring improvements to the dismounted Soldiers' equipment. This project develops or enhances equipment that provides the individual Soldier's day/night situational awareness and individual targeting capability, sniper fire detection and location capability, and integrates improved target location and self-location capability to eliminate friendly fire incidents.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Enhanced Night Vision Goggle (ENVG)	1.901	0.000	1.735
Articles:	0		
Description: The AN/PSQ-20 ENVG is a helmet-mounted passive device for the individual Soldier that fuses image intensification and long wave infrared imagery into a single, integrated image.			
FY 2012 Accomplishments: Completed Production Qualification Testing (PQT) for multiple sources of AN/PSQ-20 (Enhanced Night Vision Goggle).			
FY 2014 Plans: Initiate production qualification testing for multiple (AN/PSQ-20) new contracts.			
Title: Sense Through The Wall (STTW)	5.747	0.000	0.000
Articles:	0		
Description: The STTW is a handheld sensor that provides dismounted Soldiers with the capability to detect and locate personnel targets through walls from a standoff distance.			
FY 2012 Accomplishments:			

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L67: *Soldier Night Vision Devices*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Completed software modifications to enhance sensors performance and completed operational test activities.			
Title: Family of Weapons Sights (FWS) ***Articles:*** ***Description:*** FWS is a family of weapon sights that utilize advances in thermal and image intensified technologies to produce Individual (I) , Crew-Served (CS), and Sniper (S) weapon sights operable in-line with a day optic or in a stand-alone mode. FWS includes fused multi-band imagery and rapid target acquisition with ballistic equations, providing the Soldier with improved capabilities during day and night operations. ***FY 2012 Accomplishments:*** In FY 2012, accelerated delivery of FWS I prototypes, developed technical requirements for wireless Rapid Target Acquisition (RTA) and used modeling and simulation efforts to identify capability increases provided by the FWS-I. Additionally, continued development of High Definition (HD) thermal sensor and Electron Bombarded Active Pixel Sensor (EBAPS) for use in the FWS-CS prototypes. ***FY 2014 Plans:*** Will initiate and perform Engineering and Manufacturing Development (EMD) for the FWS Individual (FWS-I) variant. EMD tasks include refining the FWS-I design and producing production representative hardware that will enable an FY 2015 Limited User Test (LUT) and Milestone C.	15.418 0	0.000	9.536
Title: Small Tactical Optical Rifle Mounted ***Articles:*** ***Description:*** The AN/PSQ-23 Small Tactical Optical Rifle Mounted (STORM) Micro-Laser Range Finder (MLRF) is a weapon-mounted multi-function laser system. It provides an eye safe laser range finder, digital compass, Infrared (IR) and visible aiming lights, and an IR illuminator for far target location with continuous range, accuracy, weight and power performance enhanced capabilities. It also has an embedded training system, Multiple Integrated Laser Engagement System (MILES). ***FY 2012 Accomplishments:*** Completed production qualification testing for second source.	0.202 0	0.000	0.000
Accomplishments/Planned Programs Subtotals	23.268	0.000	11.271

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L67: *Soldier Night Vision Devices*

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
• 603774A VT7: *603774A - Night Vision Systems Advanced Development (VT7)*		10.715	9.066		9.066	6.208	5.260	5.193	5.000	Continuing	Continuing
• Helmet Mounted Enhanced Vision Devi: *Helmet Mounted Enhanced Vision Devices (HMEVD) (SSN K36400)*	119.078	125.917	167.379		167.379	174.861	183.695	121.581	64.238	Continuing	Continuing
• Thermal Weapon Sight (TWS): *Thermal Weapon Sight (TWS) (SSN K22900)*	176.972	82.162	14.074		14.074	95.920	141.121	143.565	154.000	Continuing	Continuing
• Sniper Night Sight (SNS): *Sniper Night Sight (SNS) (SSN K41500)*	0.661	11.660						11.240	19.838	Continuing	Continuing
• Sense Through The Wall (STTW): *Sense Through The Wall (STTW) (SSN KA2300)*	10.000	6.212	0.142		0.142					0.000	16.354
• Small Tactical Optical Rifle Mounte: *Small Tactical Optical Rifle Mounted (STORM) (SSN K35110)*	10.227	20.717	22.300		22.300	20.319	15.305	15.025	21.611	Continuing	Continuing

Remarks

D. Acquisition Strategy

The various developmental programs in this project continue to exercise competitively awarded contracts using best value source selection procedures.

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 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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L67: *Soldier Night Vision Devices*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PROGRAM MGMT	MIPR	Various:Various	0.000	0.946	Apr 2012	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.000	0.946		0.000		0.000		0.000		0.000			

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Sense Through The Wall (STTW)	MIPR	Various:Various	1.963	4.542	Dec 2011	-		-		-		-	0.000	6.505	0.000
Family of Weapon Sights (FWS)	MIPR	Various:Various	5.939	9.965	Feb 2012	-		9.304	Mar 2013	-		9.304	Continuing	Continuing	Continuing
Advanced Weapon Sight Technologies (AWST)	MIPR	Various:Various	0.000	4.714	May 2012	-		-		-		-	0.000	4.714	0.000
		Subtotal	7.902	19.221		0.000		9.304		0.000		9.304			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	Various	NVESD:Ft Belvoir, VA	0.363	1.323	Feb 2012	-		0.232	Dec 2014	-		0.232	Continuing	Continuing	0.000
Matrix Support	Various	TACOM:Warren, MI	0.789	-		-		-		-		-	0.000	0.789	0.000
		Subtotal	1.152	1.323		0.000		0.232		0.000		0.232			0.000

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Test Support Activity	Various	Army Test and Evaluation Command:Various	39.782	1.778	Dec 2011	-		1.735		-		1.735	Continuing	Continuing	Continuing

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L67: *Soldier Night Vision Devices*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	39.782	1.778		0.000		1.735		0.000		1.735			

	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	48.836	23.268		0.000		11.271		0.000		11.271			

Remarks

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L67: *Soldier Night Vision Devices*

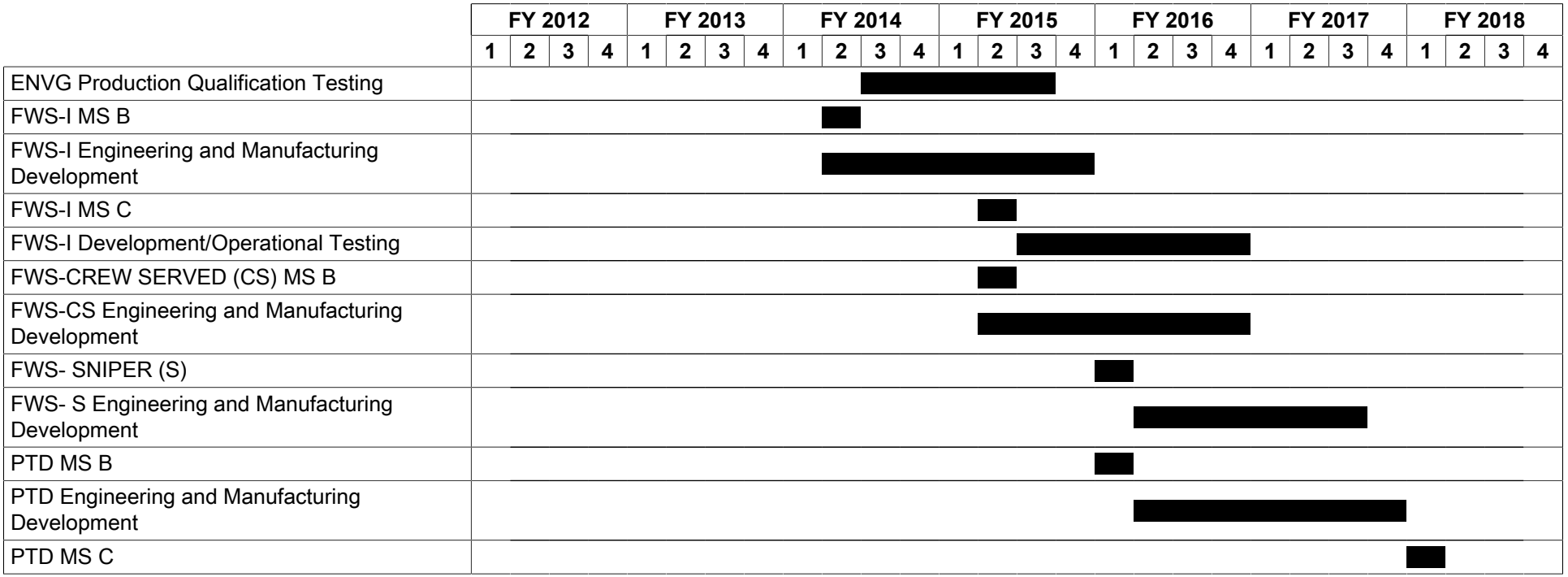

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L67: *Soldier Night Vision Devices*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
ENVG Production Qualification Testing	3	2014	3	2015
FWS-I MS B	2	2014	2	2014
FWS-I Engineering and Manufacturing Development	2	2014	4	2015
FWS-I MS C	2	2015	2	2015
FWS-I Development/Operational Testing	3	2015	4	2016
FWS-CREW SERVED (CS) MS B	2	2015	2	2015
FWS-CS Engineering and Manufacturing Development	2	2015	4	2016
FWS- SNIPER (S)	1	2016	1	2016
FWS- S Engineering and Manufacturing Development	2	2016	3	2017
PTD MS B	1	2016	1	2016
PTD Engineering and Manufacturing Development	2	2016	4	2017
PTD MS C	1	2018	1	2018

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L70: *Night Vision Dev Ed*	

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
L70: *Night Vision Dev Ed*	-	9.900	11.116	6.669	-	6.669	5.819	0.812	0.000	0.000	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

A. Mission Description and Budget Item Justification

This project performs Engineering and Manufacturing Development (EMD) on high performance night vision, Reconnaissance, Surveillance, and Target Acquisition (RSTA) systems and other related systems that allow forces to locate and track enemy units in day, night, and all battlefield conditions, and through natural and man-made structures and obscurants. It also develops and integrates suites of these sensors to provide well-defined surveillance and targeting capabilities, as well as architectures for these sensors to communicate automatically. The focus is on meeting the requisite night vision and RSTA capabilities required for evolving Current Force, Modular Force, and Future Force systems.

The project will leverage critical technologies from the Advanced Thermal Imaging EMD effort and Combat Vehicle Advanced Sensor Technology (CVAST) to develop a common Improved-Forward Looking Infrared (I-FLIR) B-Kit for integration into US Army FLIR sensor systems including emerging requirements of I-FLIR Army Combat and reconnaissance sensor systems to the Ground Combat Vehicle Infantry Fighting Vehicle (GCV IFV), Abrams, and Bradley. The I-FLIR B-Kit provides Mid Wave Infrared and Long Wave Infrared digital video and the electronic interfaces required to integrate the Next Generation FLIR (NGF) technology with the host platform sensor. This technology enhances the war-fighters' survivability and lethality through increased identification range performance when integrated in current sensor packages, while enabling the detection of difficult or obscured targets and faster threat detection through automated processes. The I-FLIR B-Kit will also be used to enhance mobility by maintaining current range performance in significantly smaller and lighter sensor packages.

This project also supports the Army Sensor Computing Environment effort in support of the Common Operating Environment (COE) vision. It focuses on the improving the network interoperability requirement and improving the soldier - machine interface. Resultant improvements would be implemented through upgrades to fielded systems, or informing future programs.

The funds allocated to Gunshot Detection supported a System Characterization study and Technology Readiness Level (TRL) determination for potential technical capabilities. The system characterization study will ascertain the performance of industry systems and will enhance Government knowledge of the benefits of various technology types and modalities in determining incoming gunshots. The study will aid the Government in writing the Performance Work Statement (PWS), Performance Specification and the Interface Control Document (ICD) and will enable schedule acceleration.

This project also supports development efforts for the I-FLIR B-Kit, to include specification development, integration analysis, milestone and solicitation preparation activities, and continues development and implementation of Block II Electro Optic Counter-Counter Measures (EOCCM). In addition, this project also supports the development of meeting the Army's network interoperability requirements and improving the soldier - machine interface.

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L70: *Night Vision Dev Ed*

FY 2014 Base Funding in the amount of $6.669 Million supports I-FLIR B-Kit component and sensor integration assessments, milestone and solicitation preparation activities, and also supports the continued activities associated with meeting network interoperability requirements and improving the soldier - machine interface in support of the Army's vision of the Common Operating Environment (COE).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Thermal Imaging Engine	1.379	0.000	0.000
Articles:	0		
Description: Engineering and Manufacturing Development (EMD) of Thermal Imaging Engine. MS B approval in FY08 initiated EMD effort. EMD program develops the Thermal Imaging Engine for the Next Gen FLIR Army Combat and reconnaissance systems to include fabrication and qualification of 15 prototypes.			
FY 2012 Accomplishments: FY 2012 Base Funding supported completion of qualification testing, System Verification Review, and contract closeout activities.			
Title: Improved-Forward Looking Infrared (I-FLIR) B-Kit	5.790	6.909	6.069
Articles:	0	0	
Description: Development of the I-FLIR B-Kit. The I-FLIR B-Kit will represent the B-Kit materiel solution in accordance with the I-FLIR CDD, resulting in a common sensor component for both Ground and Airborne host platforms.			
FY 2012 Accomplishments: FY 2012 Base Funding supported I-FLIR B-Kit performance spec & interface control document development, platform requirements decomposition, and maturation of critical technologies.			
FY 2013 Plans: Following FY12 approval of the I-FLIR CDD and Platform ECP/Sensor Upgrade programs, funding supports I-FLIR B-Kit specification development and I-FLIR B-Kit MS B preparation activities.			
FY 2014 Plans: FY 2014 Base Funding will support I-FLIR B-Kit component and platform sensor integration assessments. Funding will also support milestone and solicitation preparation activities.			
Title: Pre Planned Product Improvements (P3I) software for the Persistent Surveillance System (PSS) Program of Record (POR)	2.731	4.207	0.600
Articles:	0	0	
Description: Funding is provided for the following efforts.			

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L70: *Night Vision Dev Ed*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: FY 2012 Base Funding supports Developed Systems Engineering plan and path forward to meet the network interoperability requirement and improving the soldier - machine interfaces for COE execution plan. ***FY 2013 Plans:*** Continued development of the Pre Planned Product Improvements (P3I) software for the Persistent Surveillance System (PSS) Program of Record (POR), to include meeting the network interoperability requirement and improving the soldier - machine interface of the POR. Resultant improvements would be implemented through maintenance upgrades to fielded systems. This effort establishes the Army Sensor Computing Environment (CE) effort in support of the Common Operating Environment (COE) vision. ***FY 2014 Plans:*** FY 2014 Base Funding supports continued development of meeting the network interoperability requirement and improving the soldier - machine interface. Resultant improvements would be implemented through upgrades to fielded systems, or informing future programs. This effort continues the Army Sensor Computing Environment (CE) effort in support of the Common Operating Environment (COE) vision.			
Accomplishments/Planned Programs Subtotals	9.900	11.116	6.669

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
• GCV (PE 0605625A FC8): *Ground Combat Vehicle (PE 0605625A FC8)*	434.977	639.874	592.201		592.201	953.081	948.718	718.000	550.037	Continuing	Continuing
• ABRAMS Tank Improvement Program: *Abrams Tank Improvement Program (PE 0203735A)*	9.347	97.278	101.319		101.319	135.228	110.917	90.042	34.115	Continuing	Continuing
• BRADLEY Improvement Program: *Bradley Improvement Program (PE 0203735A)*	11.858	82.586	76.213		76.213	84.709	59.010	40.539		0.000	354.915
• LRAS3 (K38300): *Long Range Advanced Scout Surveillance System (LRAS3) (K38300) OPA2*	102.334		5.183		5.183					0.000	107.517

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L70: *Night Vision Dev Ed*

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

Remarks

Comment: Above figures reflect PB14 budget.

D. Acquisition Strategy

The development programs in this project are currently based on competitive awards and under cost reimbursement type contracts. Following approval of the I-FLIR CDD planned activities include I-FLIR B-Kit component and sensor integration assessments, as well as milestone and solicitation preparation activities. Additional activities include continued development of meeting the network interoperability requirement and improving the soldier - machine interface in support of the Army's vision of the Common Operating Environment (COE).

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 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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L70: *Night Vision Dev Ed*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management	C/FP	PM, NV/RSTA:Ft. Belvoir, VA	8.239	0.216	Apr 2012	0.616	Sep 2013	0.229	Mar 2014	-		0.229	0.000	9.300	9.454
		Subtotal	8.239	0.216		0.616		0.229		0.000		0.229	0.000	9.300	9.454

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SGS/RAID	C/CPIF	Sarnoff:Princeton, NJ	4.913	-		-		-		-		-	0.000	4.913	4.913
FY 2009 - FY 2011: Thermal Imaging - Design and Demonstration	C/FP	Various:Various	13.478	-		-		-		-		-	0.000	13.478	13.478
FY 2010-FY 2011: Thermal Imaging - Source Risk Reduction	C/CPAF	Various:Various	1.361	-		-		-		-		-	0.000	1.361	1.361
FY 2012-FY 2013: Develop, Fab, and Qual of a common Ground Platform Engine with Block II EOCCM	TBD	Various:Various	0.000	0.049	Jun 2012	2.918	Mar 2013	-		-		-	0.000	2.967	7.535
Improved-Forward Looking Infrared (I-FLIR) B-Kit	TBD	Various:Various	0.000	4.461	Sep 2012	-		3.249	Mar 14	-		3.249	0.000	7.710	0.000
Gunshot Detection Systems	RO	ARDEC:Aberdeen Proving Grounds (APG)	2.211	-		-		-		-		-	0.000	2.211	2.211
PSS P3I	C/FP	TBD:TBD	0.000	2.244	Sep 2012	3.591	Mar 2013	-		-		-	0.000	5.835	8.904
Standoff Suicide Bomber Detection System (SSBDS)	C/CPFF	CACI:Lorton, VA	2.000	-		-		-		-		-	0.000	2.000	2.000
FOB S2S (Forward Operating Base Sensor to Shooter)	C/CPFF	CACI:Lorton, VA	0.500	-		-		-		-		-	0.000	0.500	0.500

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L70: *Night Vision Dev Ed*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Remotely Operated HMDS (Husky Mounted Detection System)	C/CPFF	EOIR:Fredricksburg VA	7.700	-		-		-		-		-	0.000	7.700	7.000
		Subtotal	32.163	6.754		6.509		3.249		0.000		3.249	0.000	48.675	47.902

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
I-FLIR Support	Various	Various:Various	22.244	2.658	Sep 2012	3.991	Mar 2013	2.820	Mar 14	-		2.820	0.000	31.713	27.995
COE Support	Various	Various:Various	0.000	0.272	Apr 2012	-		0.371	Mar 14	-		0.371	Continuing	Continuing	0.000
		Subtotal	22.244	2.930		3.991		3.191		0.000		3.191			27.995

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Other Test Support*	MIPR	Various:Various	15.850	-		-		-		-		-	0.000	15.850	15.850
		Subtotal	15.850	0.000		0.000		0.000		0.000		0.000	0.000	15.850	15.850

Remarks

* Includes PSDS2, UGS, STTW, 3GF, PSDS2, FCS UGS and other sensor test and evaluation activities.

	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	78.496	9.900		11.116		6.669		0.000		6.669			101.201

Remarks

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L70: *Night Vision Dev Ed*

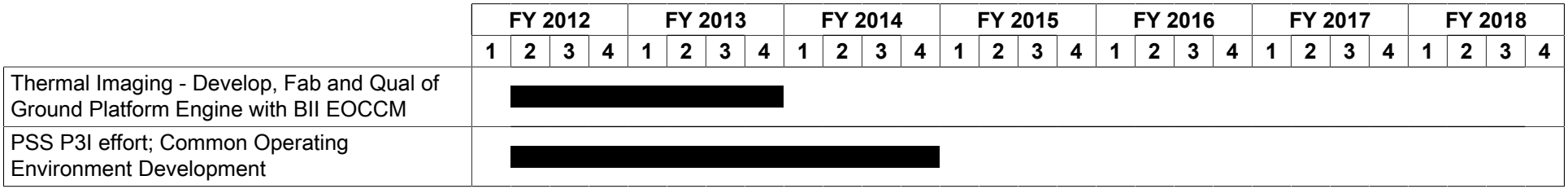

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *System Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604710A: *Night Vision Systems - Eng Dev*	**PROJECT** L70: *Night Vision Dev Ed*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Thermal Imaging - Develop, Fab and Qual of Ground Platform Engine with BII EOCCM	2	2012	4	2013
PSS P3I effort; Common Operating Environment Development	2	2012	4	2014

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L75: *Profiler*	

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
L75: *Profiler*	-	2.512	0.000	2.759	-	2.759	3.605	0.936	0.000	0.000	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

Not applicable for this item.

A. Mission Description and Budget Item Justification

Profiler provides meteorological(MET) information such as wind speed, wind direction, temperature, pressure, humidity, rate of precipitation, visibility, cloud height and cloud ceiling. All of these are required for precise targeting and terminal guidance. Profiler uses this information to build a four-dimensional MET model (height, width, depth and time) that includes terrain effects. By providing more accurate MET messages, Profiler will enable the artillery to have a greater probability of a first round hit with indirect fire systems. The new capabilities will increase the lethality of field artillery systems such as Multiple Launch Rocket Systems (MLRS), Paladin, and self-propelled or towed howitzers. When analysis determined that Block I Profiler already satisfied the requirements of Block II, the decision was made to proceed directly to Block III as the next evolution of the Profiler capability. The Block I, AN/TMQ-52 Meteorological Measuring Set-Profiler (MMS-P),uses a ground tactical meteorological (TACMET) sensor and Meteorological (MET) data from communication satellites along with an advanced weather model to provide highly accurate MET data covering an operational area of 500 kilometers with a tested range of 60 kilometers. Block III CMD-P, AN/GMK-2 will provide a networked laptop configuration that will enhance system efficiencies while further reducing the system's operational and logistical footprint with the elimination of the High Mobility Multi-purpose Wheeled Vehicle (HMMWV) mounted shelter and trailer. The Block III configuration consists of one computer with a common operating system co-located within the Tactical Operation Center (TOC) with a direct interface to the TOC Local Area Network (LAN). The system will be able to autonomously generate MET messages upon request from Advanced Field Artillery Tactical Data Systems (AFATDS) eliminating the need for a dedicated MET section crew. The Army will realize a significant Operations and Support cost avoidance with the improved configuration.The Profiler Virtual Module (PVM) using the IT Box Construct concept will address emerging requirements and system long-term sustainment challenges. The PVM concept includes the following updates to the Profiler; the software architecture will be redone to create a modular framework, the weather model will be updated from Mesoscale Model version5(MM5) to Weather Research Forecast model(WRF), the weather data format for initiation data and data exchange will be updated to Gridded Binary version2 (GRIB 2), and the Graphical User Interface(GUI) made into a Common Operating Environment(COE)compliant thin client. Along with these changes, a primary goal is to recode the multiple language reuse code pieces into a common development environment. This will also be developed in conjunction with the AFATDS program. This concept is a flexible approach that will be able to support both stand alone application (on a PC), or integrated into the COE (i.e. a Slice in the TOC server).

FY2014 Base funds in the amount of $2.759M are provided for the Profiler Virtual Module to develop the new MET process and the replacement of the weather model from MM5 to WRF.

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L75: *Profiler*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Profiler Virtual Module (PVM) development ***Description:*** VM provides software architecture to create a modular framework. ***FY 2014 Plans:*** Profiler Virtual Module (PVM) development	0.000	0.000	2.759
Title: Block III Limited User Testing and Austere Testing. ***Articles:*** ***Description:*** Conduct Block III Limited User Testing and Austere Testing. ***FY 2012 Accomplishments:*** Conduct Block III Limited User Testing and Austere Testing.	2.512 0	0.000	0.000
Accomplishments/Planned Programs Subtotals	2.512	0.000	2.759

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
• Profiler OPA SSN K27900: *Profiler*	3.312	12.482	3.027		3.027	4.684	5.359			0.000	28.864

Remarks

D. Acquisition Strategy

The Profiler Block III acquisition strategy decision brief to the Milestone Decision Authority (MDA) was presented in January 2010. The Acquisition Decision Memorandum (ADM) authorizing initiation of Profiler Block III was signed by the MDA on 23 February 2010. A limited competitive Firm-Fixed Price (FFP)/Cost Plus Fixed Fee (CPFF) contract was awarded via the Strategic Services Sourcing (S3) contract to build, test and deliver the Block III software to support eight (8) Profiler Block III Production Representative Prototype Systems (PRPS). The Block III program is on schedule and entered production and fielding in the first quarter of FY13. The revised Profiler Acquisition Strategy was approved by the MDA on 28 March 2012 for a product improvement to the Profiler Block III for a Virtual Module supporting the Command Post Computing Environment of the Common Operating Environment (COE).

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 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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L75: *Profiler*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management	SS/FP	PM Nav Sys:Various	2.150	0.473		-		0.270		-		0.270	Continuing	Continuing	Continuing
		Subtotal	2.150	0.473		0.000		0.270		0.000		0.270			

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Award efforts for s/w porting to laptop	C/FP	Mantech:Red Bank, NJ	5.495	-		-		-		-		-	Continuing	Continuing	Continuing
Initiate backup sensor effort	Various	Army Research Lab:various	1.191	-		-		-		-		-	Continuing	Continuing	Continuing
Profiler VM SW development and data gathering	MIPR	SEC, FSED:Ft. Sill, Oklahoma	0.000	-		-		1.999		-		1.999	0.000	1.999	0.000
		Subtotal	6.686	0.000		0.000		1.999		0.000		1.999			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Matrix Support	MIPR	CECOM:Aberdeen, MD	2.516	0.499		-		-		-		-	Continuing	Continuing	Continuing
Sys Engr/Technical Assistance	SS/FP	Various:Various	1.246	0.671		-		-		-		-	Continuing	Continuing	Continuing
Conversion from MM5 to WRF for PVM	MIPR	ARL, Various:WSMR, NM	1.089	0.178		-		0.490		-		0.490	Continuing	Continuing	Continuing
		Subtotal	4.851	1.348		0.000		0.490		0.000		0.490			

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L75: *Profiler*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Planning and Preparation	Various	ATEC, Various, CECOM, PRD,:Dir, APG, MD	1.557	-		-		-		-		-	Continuing	Continuing	Continuing
Limited User Test	MIPR	ATEC,:Various	1.200	0.352		-		-		-		-	Continuing	Continuing	Continuing
Conduct Block III Austere Testing	MIPR	ARL, ATEC,:Aberdeen Proving Ground, MD	0.000	0.339		-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	2.757	0.691		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	16.444	2.512		0.000		2.759		0.000		2.759			

Remarks

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L75: *Profiler*

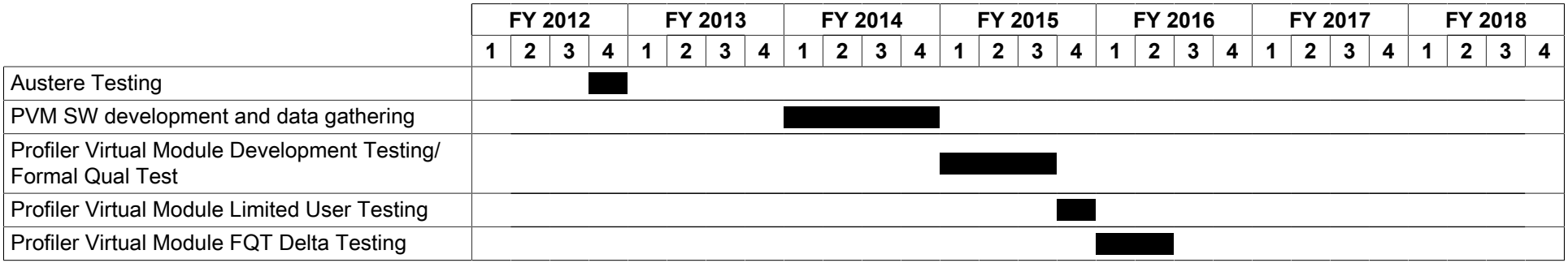

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *System Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604710A: *Night Vision Systems - Eng Dev*	**PROJECT** L75: *Profiler*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Austere Testing	4	2012	4	2012
PVM SW development and data gathering	1	2014	4	2014
Profiler Virtual Module Development Testing/Formal Qual Test	1	2015	3	2015
Profiler Virtual Module Limited User Testing	4	2015	4	2015
Profiler Virtual Module FQT Delta Testing	1	2016	2	2016

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L76: *Dismounted Fire Support Laser Targeting 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
L76: *Dismounted Fire Support Laser Targeting Systems*	-	0.000	0.000	1.100	-	1.100	1.119	1.138	1.157	1.177	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

This project matures technologies and capabilities which benefit, and may be inserted into, the Lightweight Laser Designator Rangefinder (LLDR, AN/PED-1) and other precisioning targeting systems. These precision targeting systems are used by dismounted Soldiers to locate, identify, and target enemy assets. This project focuses on reducing weight, improving imaging performance, and increasing targeting accuracy. Development also focuses on affordable, non-magnetic, high accuracy, Azimuth and Vertical Angle Measurement (AVAM) devices with reduced size, weight and power characteristics.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Azimuth and Vertical Angle Measurement (AVAM) devices ***Description:*** AVAM is a non-magnetic based inertial navigation materiel solution for targeting devices. This AVAM effort improves azimuth accuracy leading to reduced collateral damage and improved engagement efficiency. ***FY 2014 Plans:*** Will fund the integration and testing of emerging smaller, lightweight, low cost AVAMs that can be inserted into the legacy Lightweight Laser Designator Rangefinder.	0.000	0.000	0.900
Title: Laser development ***Description:*** Development of lightweight, low cost, multi-spectral, and more efficient lasers. ***FY 2014 Plans:*** Will investigate the integration of emerging high accuracy capabilities into the current portfolio of laser targeting systems.	0.000	0.000	0.200
Accomplishments/Planned Programs Subtotals	0.000	0.000	1.100

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L76: *Dismounted Fire Support Laser Targeting Systems*	

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
• LLDR (SSN K31100): *Lightweight Laser Designator Rangefinder (LLDR) (SSN K31100)*	67.929									0.000	67.929
• LLDR Mod-of-In-Service (SSN KA3100): *Lightweight Laser Designator Rangefinder (LLDR) MOD-of-In-Service (SSN KA3100)*		22.403	26.037		26.037	48.163	49.000	54.600		0.000	200.203
• JETS (SSN K32101): *Joint Effects Targeting System (JETS) (SSN K32101)*						95.894	91.695	77.443	79.452	905.332	1,249.816
• PE 654710/DL79: *Joint Effects Targeting System (JETS) (PE 654710 Project DL79)*	20.367	21.505	21.606		21.606	10.051	7.318	1.651	1.679	0.000	84.177

Remarks

D. Acquisition Strategy

Not applicable for this item

E. Performance Metrics

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

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L76: *Dismounted Fire Support Laser Targeting Systems*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AVAM Development and Integration	TBD	Various:TBD	0.000	-		-		0.900	Apr 2014	-		0.900	0.000	0.900	0.000
Laser Development	TBD	Various:TBD	0.000	-		-		0.200	Dec 2013	-		0.200	0.000	0.200	0.000
		Subtotal	0.000	0.000		0.000		1.100		0.000		1.100	0.000	1.100	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		1.100		0.000		1.100	0.000	1.100	0.000

Remarks

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L76: *Dismounted Fire Support Laser Targeting Systems*

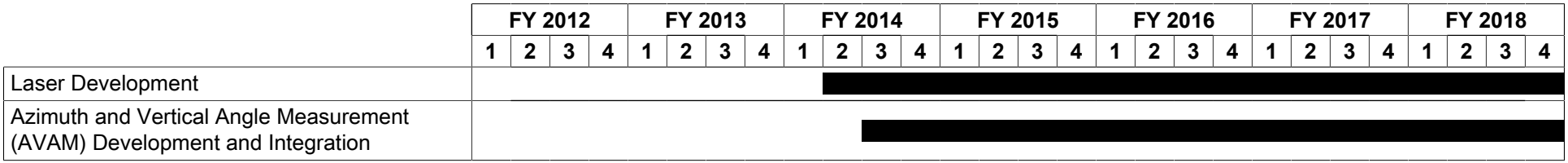

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *System Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604710A: *Night Vision Systems - Eng Dev*	**PROJECT** L76: *Dismounted Fire Support Laser Targeting Systems*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Laser Development	2	2014	4	2018
Azimuth and Vertical Angle Measurement (AVAM) Development and Integration	3	2014	4	2018

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L79: *Joint Effects Targeting Systems (JETS)*	

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
L79: *Joint Effects Targeting Systems (JETS)*	-	19.732	21.505	21.606	-	21.606	10.051	7.318	1.651	1.679	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 Joint Effects Targeting System (JETS) is an Army program with joint interest (Air Force and Marine Corps). JETS provides individual dismounted forward observers and Joint Terminal Attack Controllers (JTAC) the means to call for fire and control delivery of air, ground and naval surface fire support using precision munitions and effects (both lethal and non-lethal). The JETS provides the observers and controllers the ability to conduct surveillance, acquire and accurately locate targets, designate targets for attack by laser seeking munitions, mark targets for aviation and ground-based targeting systems, and transmit targeting data to existing Forward Entry Systems for each Service.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Joint Effects Targeting System (JETS)	19.732	21.505	21.606
Articles:	0	0	
Description: JETS is a lightweight mission equipment set for the dismounted forward observers and Joint Terminal Attack Controllers (JTAC). JETS provides observers and controllers the means to call for fire and control delivery of air, ground and naval surface fire support, including using precision munitions and effects (both lethal and non-lethal). ***FY 2012 Accomplishments:*** Tested Prototype Systems and Azimuth and Vertical Angle Measurement (AVAM) devices, conducted developmental and early user testing, initiated source selection preparation / process for the Engineering and Manufacturing Development (EMD) phase. ***FY 2013 Plans:*** Complete Full and Open EMD source selection, award two prime contracts, and begin EMD development of JETS prototype systems from the vendors. The prototypes will include integration with precision AVAM solutions. ***FY 2014 Plans:*** Will continue EMD phase development. Will complete initial build of up to 30 prototypes and begin early user assessment (EUA) and development testing (DT) of prototypes at White Sands Missle Range (WSMR) and Aberdeen Proving Ground (APG). Will develop supportability products and initiate production planning.			
Accomplishments/Planned Programs Subtotals	19.732	21.505	21.606

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L79: *Joint Effects Targeting Systems (JETS)*

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
• Fire Support Laser Targeting Sys: *Dismounted Fire Support Laser Targeting Systems (PE 654710 / DL76)*			1.100		1.100	1.119	1.138	1.157	1.177	Continuing	Continuing
• Joint Effects Targeting System: *Joint Effects Targeting System (SSN K32101)*						95.894	91.695	77.443	79.452	905.332	1,249.816

Remarks

DL76 supports technology development and integration efforts applicable to multiple programs (e.g. JETS, Lightweight Laser Designator Rangefinder (LLDR).

D. Acquisition Strategy

This project continues to exercise competitively awarded contracts using best value source selection procedures.

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 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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L79: *Joint Effects Targeting Systems (JETS)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Completed JETS TLDS Tech Development (TD) prototype development, integration, and test	C/T&M	Various:Various	0.000	3.844	Dec 2011	-		-		-		-	0.000	3.844	0.000
AVAM Development	C/T&M	Various:Various	0.000	7.810	Dec 2011	-		2.600	Mar 2014	-		2.600	0.000	10.410	0.000
JETS TLDS EMD prototype development, integration, and test - Contractor 1 year 2	C/TBD	TBD:TBD	0.000	-		8.122		6.734	Mar 2014	-		6.734	0.000	14.856	0.000
JETS TLDS EMD prototype development, integration, and test - Contractor 2 year 2	C/TBD	TBD:TBD	0.000	-		8.122		6.734	Apr 2014	-		6.734	0.000	14.856	0.000
		Subtotal	0.000	11.654		16.244		16.068		0.000		16.068	0.000	43.966	0.000

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JETS TLDS prototype technical maturation	SS/CPFF	Night Vision Electronics Sensors Directorate:Ft Belvoir, VA	0.000	0.500	Jan 2012	-		-		-		-	0.000	0.500	0.000
Functional Support Cost	MIPR	Night Vision Electronics Sensors Directorate:Ft. Belvoir	0.000	1.206	Apr 2012	1.837		1.819	Mar 2014	-		1.819	Continuing	Continuing	0.000
Science and Engineering Support	MIPR	Various:Various	0.000	3.829	May 2012	0.652		0.675	May 2014	-		0.675	Continuing	Continuing	0.000
Program Management Support	TBD	Various:Various	0.000	1.925		1.985		2.044	Apr 2014	-		2.044	Continuing	Continuing	0.000
		Subtotal	0.000	7.460		4.474		4.538		0.000		4.538			0.000

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L79: *Joint Effects Targeting Systems (JETS)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
All RDTE Testing and Support	MIPR	Various:Various	0.000	0.618	Apr 2012	0.787		1.000	Mar 2014	-		1.000	Continuing	Continuing	0.000
		Subtotal	0.000	0.618		0.787		1.000		0.000		1.000			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	19.732		21.505		21.606		0.000		21.606			0.000

Remarks

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 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L79: *Joint Effects Targeting Systems (JETS)*

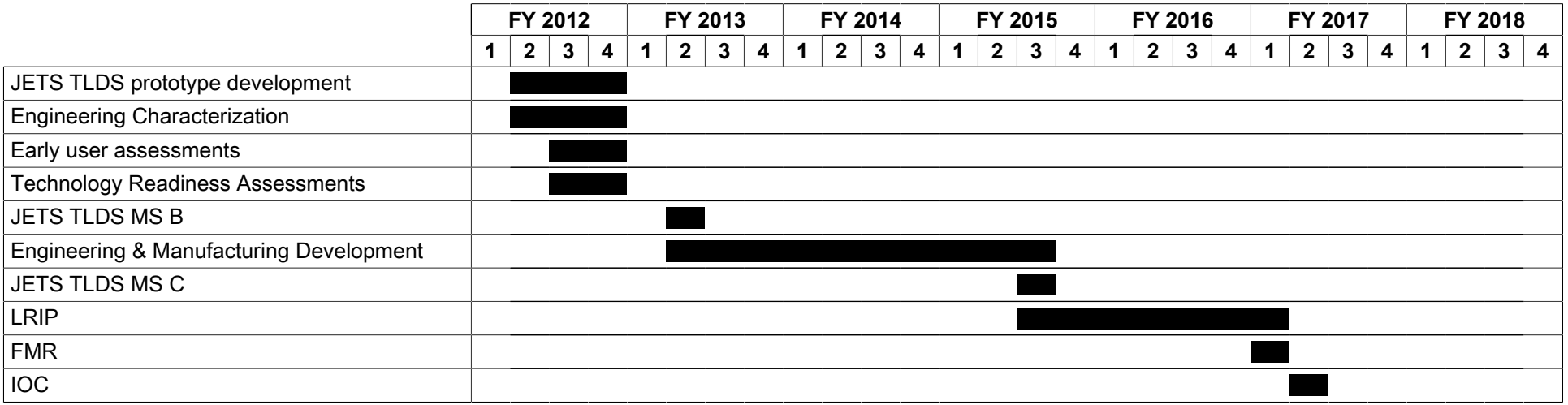

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Army		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 2040: *Research, Development, Test & Evaluation, Army* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604710A: *Night Vision Systems - Eng Dev*	PROJECT L79: *Joint Effects Targeting Systems (JETS)*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JETS TLDS prototype development	2	2012	4	2012
Engineering Characterization	2	2012	4	2012
Early user assessments	3	2012	4	2012
Technology Readiness Assessments	3	2012	4	2012
JETS TLDS MS B	2	2013	2	2013
Engineering & Manufacturing Development	2	2013	3	2015
JETS TLDS MS C	3	2015	3	2015
LRIP	3	2015	1	2017
FMR	1	2017	1	2017
IOC	2	2017	2	2017