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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 0604710A: Night Vision Systems - Eng Dev							
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	96.678	57.111	52.549	0.000	52.549	32.012	24.494	19.140	19.101	Continuing	Continuing
L67: SOLDIER NIGHT VISION DEVICES	30.846	24.509	23.891	0.000	23.891	24.066	19.036	19.140	19.101	Continuing	Continuing
L70: NIGHT VISION DEV ED	57.877	9.686	5.183	0.000	5.183	5.342	5.458	0.000	0.000	Continuing	Continuing
L75: Profiler	0.000	5.403	6.014	0.000	6.014	2.604	0.000	0.000	0.000	Continuing	Continuing
L76: Dismounted Fire Support Laser Targeting Systems	7.955	17.513	17.461	0.000	17.461	0.000	0.000	0.000	0.000	Continuing	Continuing
A. Mission Description and Budget Item Justification											
<p>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 focuses on night vision electro-optical, laser, and other target identification and location equipment for a variety of Future Combat System of Systems (FCS) Units of Action/Employment and Future Force soldiers. This project includes the enhanced night vision goggle, modular HTI multi-function laser activities, and thermal upgrades to include an uncooled medium thermal weapon sight. 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, Future Combat System of Systems (FCS) 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 FCS Unattended Ground Sensors and ASTAMIDS; development of a Standard Ground Station for Persistent Surveillance Sensors (RAID and PTDS).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</p>											

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APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
2040: Research, Development, Test & Evaluation, Army		PE 0604710A: Night Vision Systems - Eng Dev			
BA 5: Development & Demonstration (SDD)					
Rangefinder (LLDR, AN/PED-1), the Mark VII-E Laser Target Locator, and future programs based on emerging Army requirements. Advanced, cooled, infrared imaging focal plane arrays are now available which, when applied to LLDR, will provide much greater range performance in a package of similar size. With an associated optical redesign, greater LLDR imaging performance can be achieved with an overall reduction in weight. This project will also integrate the next generation uncooled, 17 micron pixel-pitch FLIRs being developed for the Thermal Weapon Sight program into the Mark VII-E/LTLM, improving its imaging performance with no impact on its weight. New laser designator technology has been developed which will reduce laser designator weight by close to 50% and cut battery usage by a factor of 10. Further reductions can be gained by reducing laser designator output energy levels below currently accepted standards, which initial modeling and testing indicate will not compromise performance of laser guided munitions. A primary focus of this project will be to perform sufficient live-fire and captive-carry range tests over a wide variety of environmental conditions with all current and future laser guided munitions to build the necessary confidence that reduced designator energy levels will not adversely impact the mission. In addition, this line will support improved accuracy (reduced target location error) in support of coordinate seeking weapons, such as JDAM and Excalibur.					
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	51.537	55.410	52.819	0.000	52.819
Current President's Budget	96.678	57.111	52.549	0.000	52.549
Total Adjustments	45.141	1.701	-0.270	0.000	-0.270
• Congressional General Reductions		-0.299			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		2.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	-4.759	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Adjustments to Budget Years	0.000	0.000	-0.270	0.000	-0.270
• Overseas Contingency Operations (OCO)	49.900	0.000	0.000	0.000	0.000
Change Summary Explanation					
Change Summary Explanation: FY 2009: Increase of \$49.900 million reflects the Overseas Contingency Operations (OCO) funding for the Heterogeneous Airborne Reconnaissance team system development (\$17.000 million), Beyond Line of Sight RDA Seismic UGS development (\$6.000 million) and Airborne Wireless Mesh development (\$22.500 million), and Kabul Persistent Threat Detection System (\$4.400 million). Beyond Line of Sight RDA Seismic UGS development (\$6 million).FY2010 - Congressional Increase-\$2.000 million to project L70 for Standard Ground Station-Enhancement Program.					

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Army								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>				<b>PROJECT</b> L67: <i>SOLDIER NIGHT VISION DEVICES</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
L67: <i>SOLDIER NIGHT VISION DEVICES</i>	30.846	24.509	23.891	0.000	23.891	24.066	19.036	19.140	19.101	Continuing	Continuing
Quantity of RDT&E Articles											
<b>A. Mission Description and Budget Item Justification</b> <p>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. It focuses on adapting demonstrated technologies that can 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. The Enhanced Night Vision Goggle (Digital) ENVG(D) is a head/helmet mounted night vision system for the individual Soldier. Other efforts include a Soldier-borne gunfire detection system to determine location of sniper gunfire and the development of Sense Through The Wall (STTW) technology giving Soldiers the ability to detect threats through walls during Military Operations in Urban Terrain (MOUT). This project also develop a Family Weapon Sight (FWS) with fused electro-optical performance, and developing focal plane and high resolution micro-display technology increasing product resolution, range, and imaging performance.</p>											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
							<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Program #1							12.364	5.946	1.921	0.000	1.921
Continue the integration, testing and evaluation of demonstrated digital enhanced night vision technologies to support Engineering and Manufacturing Development (EMD) in FY12.											
<i>FY 2009 Accomplishments:</i> FY 2009											
<i>FY 2010 Plans:</i> FY 2010											

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B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #2  Complete DT/OT for multiple additional sources of PSQ-20 ( Enhanced Night Vision Goggle Optical)				0.000	0.000	2.000	0.000	2.000
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 #3  Continue the development of lightweight multi-purpose lasers with a nonlethal method of warning a vehicle operator or gaining their attention beyond 75 meters and identify friend or foe (IFF).				1.701	4.181	3.423	0.000	3.423
FY 2009 Accomplishments: FY 2009								

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #4  Continue the development of Sense Through The Wall (STTW), which provides dismounted Soldiers with the capability to detect and locate threats through walls during Military Operations on Urban Terrain (MOUT).  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  FY 2011 Base Plans: FY 2011 Base  FY 2011 OCO Plans: FY 2011 OCO		0.180	1.557	1.222	0.000	1.222
Program #5  Initiate the development of the Family Weapon Sight (FWS), which is a passive fused electro-optical sight.		0.000	2.716	4.282	0.000	4.282

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
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  Completed system development to reduce the size and weight of the Auto Aim Point. Auto Aim provides improved situational awareness and Soldier safety by enabling weapon sight viewing through the head mounted display.		2.000	0.000	0.000	0.000	0.000
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #7  Continue the development, testing and evaluation of improved Focal Plane Arrays (FPA), with larger array sizes, improved sensitivity, clarity and range. Also develop next generation FPA with smaller, 12 micron, pitch.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  FY 2011 Base Plans: FY 2011 Base  FY 2011 OCO Plans: FY 2011 OCO		7.978	5.348	4.869	0.000	4.869
Program #8  Continue the development of sniper fire detection and location systems, using portable sensors on Soldiers to locate gunfire.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  FY 2011 Base Plans: FY 2011 Base		2.813	2.292	2.445	0.000	2.445

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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 #9  Continue the development of laser defense capabilities for sniper detection/laser warning system with the ability to "see" threat optics in order to locate enemy snipers.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  FY 2011 Base Plans: FY 2011 Base  FY 2011 OCO Plans: FY 2011 OCO		2.428	1.032	3.729	0.000	3.729
Program #10  Completed development to improve range acceleration, reduced operating temperature and extended laser life cycle for laser devices.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010		1.382	0.000	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)								
				FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #11  Complete Clip on SNS Operational Testing.  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	0.750	0.000	0.000	0.000
Program #12  Small Business Inovative Research/Small Business Technology Transfer  FY 2009 Accomplishments: FY 2009				0.000	0.687	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010											
FY 2011 Base Plans: FY 2011 Base											
FY 2011 OCO Plans: FY 2011 OCO											
Accomplishments/Planned Programs Subtotals							30.846	24.509	23.891	0.000	23.891
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: Helmet Mounted Enhanced Vision Devices (K36400) OPA2	399.242	154.289	8.098	0.000	8.098	87.640	130.585	200.003	227.474	Continuing	Continuing
• Ord. #2: Thermal Weapon Sight (TWS) (K22900) OPA2	435.213	328.898	248.899	0.000	248.899	287.924	81.669	92.315	96.745	Continuing	Continuing
• Ord. #3: Sniper Night Sight (K41500) OPA2	17.069	14.175	12.880	0.000	12.880	15.145	7.157	14.778	14.381	Continuing	Continuing
• Ord. #4: Multi-Function Aiming Light (MFAL) (K35000) OPA2	30.964	26.040	21.434	0.000	21.434	22.311	12.001	10.689	11.762	Continuing	Continuing
• Ord. #5: Sense Throught The Wall (STTW) (KA2300) OPA2	0.000	0.000	24.939	0.000	24.939	65.522	41.368	0.000	0.000	0	131.829
• Ord. #6: Small Tactical Optical Rifle Mounted (STORM) (K35110)	0.000	24.150	8.520	0.000	8.520	10.245	3.450	3.844	3.835	Continuing	Continuing
D. Acquisition Strategy											
The various developmental programs in this project will continue to exercise competitively awarded contracts using best value source selection procedures.											

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E. Performance Metrics

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

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604710A: Night Vision Systems - Eng Dev					PROJECT L67: SOLDIER NIGHT VISION DEVICES				
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	
Enhanced Night Vision Goggles (Digital) ENVG(D)	C	CACI Technologies Chantilly VA	16.676	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Enhanced Night Vision Goggles (Digital) ENVG	C	BAE Systems Lexington MA	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Enhanced Night Vision Goggles (Digital) ENVG - 2	C	DRS Dallas TX	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Enhanced Night Vision Goggles (Digital) ENVG - 3	C	E-OIR Virginia	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Enhanced Night Vision Goggles (Digital) ENVG (D)	C/Various	TBD Location could not be determined.	0.000	4.196		1.421		0.000		1.421	Continuing	Continuing	0	
Enhanced Night Vision Goggles (Digital) ENVG - 4	C	Fibertek Herndon, VA	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Enhanced Night Vision Goggles (Digital) ENVG - 5	C	SENTEL Virginia	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Multi-purpose Laser	C	TBD Location could not be determined.	0.000	4.181		3.304		0.000		3.304	Continuing	Continuing	0	
Sense Through The Wall (STTW)	C	CERDEC - Fort Monmouth NJ	2.444	0.000		0.000		0.000		0.000	Continuing	Continuing	0	

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Product Development (\$ in Millions)														
				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Sense Through The Wall (STTW) - 2	C	TBD Location could not be determined.	0.000	1.557		1.222		0.000		1.222	Continuing	Continuing	0	
Family Weapon Sight (FWS)	C/FP	CACI Technologies, Chantilly VA	0.200	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Family Weapon Sight (FWS)	C	TBD Location could not be determined.	0.000	2.716		4.401		0.000		4.401	Continuing	Continuing	0	
Laser Detection/Laser Warning Device	C	Fibertek Herndon, VA	0.000	1.032		3.729		0.000		3.729	Continuing	Continuing	0	
Enhanced Aim Display	C	Equinox Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Focal Plane Arrays (FPA)	C	DOI - Ft Huachuca AZ	17.543	5.348		4.869		0.000		4.869	Continuing	Continuing	0	
Focal Plane Arrays (FPA) - 2	C	DRS Dallas, TX	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Focal Plane Arrays (FPA) - 3	C	BAE Lexington, MA	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Focal Plane Arrays (FPA) - 4	C	Raytheon Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Focal Plane Arrays (FPA) - 5	C	CACI Technologies, Chantilly VA	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	

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**Product Development (\$ in Millions)**

				FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Sniper Fire Detection and Location Technology Development	C	ARDEC Picatinny Arsenal, NJ	7.576	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Sniper Fire Detection and Location Technology	C/Various	Fibertek Herndon, VA	0.000	2.292		2.445		0.000		2.445	Continuing	Continuing	0
STORM Diode Development	C	Fibertek Herndon, VA	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
<b>Subtotal</b>			44.439	21.322		21.391		0.000		21.391			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	NVESD Fort Belvoir, VA	0.604	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Small Business Innovative Research/ Small Business Technology Transfer Programs.	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.687		0.000		0.000		0.000	Continuing	Continuing	0
<b>Subtotal</b>			0.604	0.687		0.000		0.000		0.000			0.000

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Army</b>											<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>				<b>PROJECT</b> L67: <i>SOLDIER NIGHT VISION DEVICES</i>					
<b>Support (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<u>Remarks</u>													
<b>Test and Evaluation (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Government Test Support Activity	C	Various Activities Location could not be determined.	10.491	2.500		2.500		0.000		2.500	Continuing	Continuing	0
<b>Subtotal</b>			10.491	2.500		2.500		0.000		2.500			0.000
<u>Remarks</u>													
			<b>Total Prior Years Cost</b>	<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			55.534	24.509		23.891		0.000		23.891			0.000
<u>Remarks</u>													

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2011 Army		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>	<b>PROJECT</b> L67: <i>SOLDIER NIGHT VISION DEVICES</i>

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Army			<b>DATE:</b> February 2010
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Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
ENVG (D) EMD	4	2011	1	2014
ENVG (D) - MS C	1	2014	1	2014
ENVG (D) - P3I	3	2013	3	2015
STTW - EMD	4	2009	4	2010
STTW - MS C	1	2011	1	2011
STTW - P3I	2	2011	3	2015
Family Weapon Sight (FWS) - Increment I-MS C	3	2014	3	2014
GFDS - MS C	2	2011	2	2011
GFDS- P3I	2	2011	2	2012
Enhance aim Development	3	2009	3	2011
Small Tactical Optical Rifle Mounted (STORM) (P3I)	2	2009	2	2010

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Army								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>				<b>PROJECT</b> L70: <i>NIGHT VISION DEV ED</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
L70: <i>NIGHT VISION DEV ED</i>	57.877	9.686	5.183	0.000	5.183	5.342	5.458	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
<b>A. Mission Description and Budget Item Justification</b> <p>This project performs System Development and Demonstration (SDD) 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 transitions Advanced Thermal Imaging Technology from an Advanced Technology Objective to the development of a thermal engine intended to be common among all US Army FLIR sensor systems. This program will initiate and continue the development and qualification of the thermal Engine to meet schedule requirements of Next Gen FLIR (AN/ZSQ-2/Q-3) aviation system and Army Combat and reconnaissance systems. The thermal imaging engine provides Mid Wave Infrared and Long Wave Infrared digital video. This technology enhances the war-fighters' survivability and lethality through increased identification range performance when used in current sensor packages, while enabling detection of difficult or obscured target as well as faster threat detection through automated processes. The thermal imaging engine can also be used to enhance mobility by maintaining current range performance in significantly smaller and lighter sensor packages. This project provided Program Office technical support of the FCS Unattended Ground Sensors (UGS) hardware and software development, demonstration and test for a family of UGS systems for Intelligence, Surveillance and Reconnaissance (ISR). This will provide FCS and the Army a networked Unattended Ground Sensor capability for ISR and physical security. This project develops the Standard Ground Station (SGS) for PM NV/RSTA sensor systems. Leveraging the success in theater of the Persistent Surveillance and Dissemination System of Systems (PSDS2) Quick Response Capability (QRC), this effort takes the 3D visualization capability from PSDS2 and applies it to the Operator's station for RAID tower systems, aerostats and other RSTA Sensor systems. This effort was prioritized and performed on an accelerated schedule to support fielding in October 2008 as part of the RAID tower systems in response to the Base Expeditionary Target and Surveillance Systems - Combined (BETSS-C) JUONS. This SGS improves the effectiveness of RSTA systems by combining sensor videos, sensor cues and Battle Command information into a geo-registered 3D visualization of the terrain. FY 2010 Congressional add is for development of SGS enhancements. Common Remote Stabilized Sensor System (CRS3) is a remote operator's station and a stabilized pan and tilt for the LRAS3 and FS3 systems, allowing the effective employment of these sights while protected and with the vehicle moving, significantly increasing survivability and effectiveness. This is a Congressional plus up which is a follow on to efforts funded in FY03 with DL76 funds. This effort completed in FY09 and transitioned to PM KNIGHT for final integration of fire support platforms. FY 2009 Overseas Contingency Operations (OCO) Request - At the direction of the OSD Intelligence, Surveillance and Reconnaissance (ISR) Task Force (TF), the Army is sponsoring:</p> <p>1. The development of Heterogeneous Airborne Reconnaissance Technology (HART). This HART effort will develop a platform neutral system capable of tasking, coordinating and managing semi-autonomously underutilized sensor capability on multiple platforms and provide a logically organized storage system for utilization by the current and future ISR network. The effort will also develop a system for evaluation and use by deployed forces at the Brigade level. The developed system will provide FMV geo-registration capability, FMV and intelligence exploitation and storage tools, and semi-autonomous sensor management.</p> <p>2. The development of an ISR Net capability. It will</p>											

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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 0604710A: Night Vision Systems - Eng Dev		PROJECT L70: NIGHT VISION DEV ED		
provide a high capacity (up to three megabit per second), two-way, secure Information Processing (IP) based network between ground forces and aerial assets for rapid integration of ISR sensors and servers, enabling real time access to ISR information across the battlefield. 3. The development of Beyond Line of Sight for the Remote Detection of Activity (RDA) Seismic Unattended Ground Sensors (UGS). RDA UGS will be employed by Soldiers and Marines for force protection and situational awareness. RDA UGS will provide a low cost and long endurance (two to four month battery life) capability to provide seismic detection of vehicles and human footsteps for monitoring of critical operational areas and extended perimeters at forward operating bases.FY 2011 funding supports continuation of efforts for Advanced Thermal Imaging Engine Development.						
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1		0.510	0.000	0.000	0.000	0.000
FY 09 Base: Unattended Ground Sensors (UGS) - Developed ISR, Chemical, Biological, Radiological, Nuclear (CBRN) and Urban UGS for FCS and other Army customers. Demonstrated viability and technical feasibility of employing a networked Unattended Ground Sensors (UGS) system from various delivery platforms. FY09 continued providing support for the FCS UGS SDD effort and FCS IBCT Spin-Out 1 activities including addressing 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		6.862	7.471	5.183	0.000	5.183
FY 09-11 Base: Thermal Imaging: System Development and Demonstration (SDD) of Thermal Imaging Engine. Upon MS B approval in FY08, initiated SDD efforts. Development of the Thermal Imaging Engine for the Next						

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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 0604710A: Night Vision Systems - Eng Dev		PROJECT L70: NIGHT VISION DEV ED		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Gen FLIR (AN/ZSQ-2/Q-3) aviation systems and Army Combat and reconnaissance systems, and fabricates 16 prototypes. Contractor qualification Testing and support for system integration activities are conducted with FY10 funding. FY11 will complete Qualification Testing; support system-level test activities, complete production preparation activities, and prepare for MS C, scheduled for 2QFY12. Funding in FY09-11 supports promoting competition to establish additional sources and reduce risk.  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 #3  FY 09 Base: Development of an advanced payload technology for manned and unmanned systems in accordance with TRADOC priorities for aerial systems in the Current and Future Force. This effort provided enhanced EO/IR/LD technology for ER/MP, ARH, Kiowa Warrior and FCS. This effort is a joint program with PM Close Combat Support (CCS), expanding the capability of the Airborne Surveillance Target Acquisition and Minefield Detection System (ASTAMIDS) by adding the designator. FY09 supported the management and conduct of Government Developmental Testing.  FY 2009 Accomplishments: FY 2009		0.481	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604710A: Night Vision Systems - Eng Dev	PROJECT L70: NIGHT VISION DEV ED			
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 #4  FY 09 Base: Common Remote Stabilized Sensor System (CRS3). CRS3 FY09 completed hardware environmental qualification testing and transition to production. The Armored Knight Program will integrate the CRS3 capability into their vehicles.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  FY 2011 Base Plans: FY 2011 Base  FY 2011 OCO Plans: FY 2011 OCO	2.800	0.000	0.000	0.000	0.000
Program #5	17.000	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604710A: Night Vision Systems - Eng Dev	PROJECT L70: NIGHT VISION DEV ED			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 09 OCO: Heterogenous Airbone Reconnaissance Team (HART). Funds will continue to be executed by DARPA for the ISR Task Force. FY09 formulated Concept of Operations (CONOPS) and Tactics Techniques and Procedures (TTP) with integration of technologies with Shadow, Warrior, C-12, using the TAIS and Distributed Common Ground Station (DCGS) exploitation systems. Initial Operational Capability (IOC) will be achieved by 4th QTR FY10 and Full Operational Capability (FOC) by 1st QTR FY11. \$19000 was issued as OPA in B00303.  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  FY 09 OCO: Beyond Line of Sight Development and Design of Seismic Expendable RDA UGS. RDA UGS will have Cueing/Interoperability with CF UGS and hand held display device. It will develop Beyond Line of Site Communications.  FY 2009 Accomplishments: FY 2009	3.324	0.000	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604710A: Night Vision Systems - Eng Dev	PROJECT L70: NIGHT VISION DEV ED			
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 #7  FY 09 OCO: ISR Net Development. Funds will continue to be executed by DARPA for the ISR Task Force. FY09 formulated Concept of Operations (CONOPS) and Tactics Techniques and Procedures (TTP) to coordinate with HART development and fielding. Integration and manpower will be accomplished 2nd QTR FY10. Initial Operational Capability (IOC) will be achieved by 4th QTR FY10 and Full Operational Capability (FOC) by 1st QTR FY11 in order to provide the wireless communications for HART IOC and FOC.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  FY 2011 Base Plans: FY 2011 Base  FY 2011 OCO Plans: FY 2011 OCO	22.500	0.000	0.000	0.000	0.000
Program #8	0.000	0.215	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604710A: Night Vision Systems - Eng Dev		PROJECT L70: NIGHT VISION DEV ED		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Small Business Innovative Research / Small Business Technology Transfer Program						
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 #9		4.400	0.000	0.000	0.000	0.000
FY09 OCO: Development and Design of PTDS Enhancements. Funds will be used to improve PTDS survivability, sustainability and dissemination capabilities.						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						

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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 0604710A: Night Vision Systems - Eng Dev				PROJECT L70: NIGHT VISION DEV ED			
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Program #10  FY10 Base: Standard Ground Station enhancement work (Congressional Add) focuses on Sensor networking, interoperability, plug-and-play and other enhancements.  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	2.000	0.000	0.000	0.000	
Accomplishments/Planned Programs Subtotals						57.877	9.686	5.183	0.000	5.183	
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: Night Vision Advanced Development PE 0603774A	2.508	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• Ord. #2: K38300 Long Range Advanced Scout Surveillance System (LRAS3) OPA2	210.766	133.413	255.641	0.000	255.641	62.395	0.000	0.000	0.000	0	662.215
• Ord. #3: Next Gen FLIR for Army Special Operations Aviation Fleet - (AN/ZSQ-2/3): RDTE	0.000	9.138	3.818	0.000	3.818	0.000	0.000	0.000	0.000	0	12.956

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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 0604710A: Night Vision Systems - Eng Dev				PROJECT L70: NIGHT VISION DEV ED			
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. #4: Next Gen FLIR for Army Special Operations Aviation Fleet - (AN/ZSQ-2/3): PROC	0.000	0.000	0.000	0.000	0.000	7.015	9.544	13.000	11.149	Continuing	Continuing
D. Acquisition Strategy											
The development programs in this project are currently based on competitive awards and under cost reimbursement type contracts. The FY09 Congressional increase was a CRS3 sole source award.											
E. Performance Metrics											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604710A: Night Vision Systems - Eng Dev				PROJECT L70: NIGHT VISION DEV ED				
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
DVE Development	C/CPIF	Various Location could not be determined.	21.831	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Modular HTI Multifunction Laser Activities	C	Insight Technologies Londonderry, NH & DRS Technologies, Torrence, CA	3.868	0.000		0.000		0.000		0.000	Continuing	Continuing	0
LLDR RAPT	C	Various Location could not be determined.	4.253	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Light Forward Observer Optics	C	Various Location could not be determined.	1.258	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Thermal Upgrades for DVE (Dual wavelength) and competition	C	Kaiser Electric San Diego CA, Various	3.608	0.000		0.000		0.000		0.000	Continuing	Continuing	0
LLDR Advanced Demonstration System	C	Litton Laser Apopka, FL	2.556	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Sensor Architecture/Digital RSTA/SLP	C	Various Location could not be determined.	11.962	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Various Prototypes and Studies	C/CPIF	Various Location could not be determined.	2.947	0.000		0.000		0.000		0.000	Continuing	Continuing	0
	C	Raytheon	5.811	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604710A: Night Vision Systems - Eng Dev					PROJECT L70: NIGHT VISION DEV ED				
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	
Thermal Upgrades for TWS (target location)		El Segundo, CA, Various												
HTI Laser Trade Studies	C	Various Location could not be determined.	1.020	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Enhanced NVG Analysis & Design (TX to DL67)	C	Various Location could not be determined.	4.782	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
HTI Laser MFS3 design and prototype activities	C/CPIF	Raytheon Dallas,TX	0.565	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
MANTECH Focal Plane Array and optics	C	Raytheon Dallas, TX	1.500	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Digital MELIOS Design & Fabrication	C/FP	Litton Lasers Inc.	1.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
AN/TMQ-41 Trade Studies and related activities	C	Various Location could not be determined.	1.232	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Image Fusion for DVE	C	Raytheon Dallas, TX	1.274	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Digital RSTA SDD	C	Booz-Allen Hamilton Tysons Corner, VA	2.190	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
CIRISS Efforts	C	Various Location could not be determined.	1.500	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
LLDR Vehicle applications	C	Litton Laser	3.487	0.000		0.000		0.000		0.000	Continuing	Continuing	0	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Product Development (\$ in Millions)													
				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
		Apopka, FL Various											
FLIR develop/integrate	C/Various	Various Location could not be determined.	1.731	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Uncooled B-Kit	C/Various	Various Location could not be determined.	10.354	0.000		0.000		0.000		0.000	Continuing	Continuing	0
EO/IR/LD UAV Payloads	C	Northrop Grumman Melborne, FL	5.087	0.000		0.000		0.000		0.000	Continuing	Continuing	0
LLDR EMD	C	Litton Lasers Apopka, FL	19.873	0.000		0.000		0.000		0.000	Continuing	Continuing	0
GMTI Radar	C	General Atomics Location could not be determined.	2.792	0.000		0.000		0.000		0.000	Continuing	Continuing	0
UGS	C/FFP	Various Location could not be determined.	0.708	0.000		0.000		0.000		0.000	Continuing	Continuing	0
FCS UGS / UGS	C	FCS Boeing/ Textron/Various/ TBD Location could not be determined.	5.099	0.000		0.000		0.000		0.000	Continuing	Continuing	0
PSDS2 Efforts	C/CPFF	Various Location could not be determined.	11.751	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army											DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)					R-1 ITEM NOMENCLATURE PE 0604710A: Night Vision Systems - Eng Dev					PROJECT L70: NIGHT VISION DEV ED				
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	
LRAS3 Netted Sensor	SS	Raytheon McKinney Texas	9.065	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
DVD (DVE Light)	C	CACI Location could not be determined.	0.572	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
Thermal Imaging	C/CPIF	Various Location could not be determined.	1.532	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
SGS/RAID	C	Sarnoff Princeton, NJ	4.913	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
FY 09 & 10 & 11 Base: Thermal Imaging	C/CPIF	Raytheon Santa Barbara, CA	4.637	3.061		2.769		0.000		2.769	Continuing	Continuing	0	
FY 10 & 11 Base: Thermal Imaging Source Risk Reduction	C/CPIF	VARIOUS Location could not be determined.	0.000	2.100		0.441		0.000		0.441	Continuing	Continuing	0	
FY 09 Base: CRS3	SS	DRS St. Louis, MO	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	
SBIR/STTR	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.215		0.000		0.000		0.000	Continuing	Continuing	0	
FY 09 OCO: Heterogeneous Airborne Reconnaissance Team (HART) system development	C/TBD	TBD Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0	

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Army</b>											<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>				<b>PROJECT</b> L70: <i>NIGHT VISION DEV ED</i>					
<b>Product Development (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
FY 09 OCO: Beyond Line of Sight Development and Design of Seismic Expendable RDA UGS.	C/TBD	TBD Location could not be determined.	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
FY 09 OCO: ISR Net Development	C	Rockwell Collins Cedar Rapids, IA	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
FY 09 OCO: Development and Design Of PTDS Enhancements.	C	Sarnoff Princeton, NJ	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
FY 09 OCO: Development and Design Of PTDS Enhancements. - 2	C/CPFF	Raytheon Falls Church, VA	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
FY 09 OCO: Development and Design Of PTDS Enhancements. - 3	C	Lockheed Martin Akron, OH	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
FY 10 Base: Standard Ground Station Enhancement (Congressional Add)	C	Sarnoff Princeton, NJ	0.000	2.000		0.000		0.000		0.000	Continuing	Continuing	0
<b>Subtotal</b>			154.758	7.376		3.210		0.000		3.210			0.000
<b>Remarks</b>													

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Army</b>											<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>				<b>PROJECT</b> L70: <i>NIGHT VISION DEV ED</i>					
<b>Support (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Matrix Support	C	Various Location could not be determined.	19.904	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Matrix Support - 2	C	NVESD Location could not be determined.	0.720	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Matrix Support - 3	C	TRADOC Location could not be determined.	0.400	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Matrix Support - 4	C	Various Location could not be determined.	0.231	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Thermal Imaging Support	C	Various Location could not be determined.	16.810	1.819		1.753		0.000		1.753	Continuing	Continuing	0
EO/IR/LD(ASTAMIDS) Support	C	Various Location could not be determined.	0.047	0.000		0.000		0.000		0.000	Continuing	Continuing	0
LRAS3 Netted Sensor Support	C	Various Location could not be determined.	0.500	0.000		0.000		0.000		0.000	Continuing	Continuing	0
UGS Matrix	C	Various Location could not be determined.	0.403	0.000		0.000		0.000		0.000	Continuing	Continuing	0
<b>Subtotal</b>			39.015	1.819		1.753		0.000		1.753			0.000
<b>Remarks</b>													

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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 0604710A: Night Vision Systems - Eng Dev				PROJECT L70: NIGHT VISION DEV ED			

**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
DT/IOT&E*	C	ATEC Location could not be determined.	8.769	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Other Test Support*	C	Various Location could not be determined.	6.351	0.000		0.000		0.000		0.000	Continuing	Continuing	0
SGS/RAID C&L	C	ATEC/DTC Location could not be determined.	0.730	0.000		0.000		0.000		0.000	Continuing	Continuing	0
<b>Subtotal</b>			15.850	0.000		0.000		0.000		0.000			0.000

**Remarks**

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

**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
Project Management	C	PM NV/RSTA, Fort Belvoir, VA & Ft. Monmouth, NJ	6.531	0.491		0.220		0.000		0.220	Continuing	Continuing	0
SGS Management	C	BAH	0.498	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Army</b>											<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>					<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>					<b>PROJECT</b> L70: <i>NIGHT VISION DEV ED</i>			
<b>Management Services (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
		Location could not be determined.											
<b>Subtotal</b>			7.029	0.491		0.220		0.000		0.220			0.000
<b>Remarks</b>													
			<b>Total Prior Years Cost</b>	<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>			216.652	9.686		5.183		0.000		5.183			0.000
<b>Remarks</b>													

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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 0604710A: Night Vision Systems - Eng Dev												PROJECT L70: NIGHT VISION DEV ED			
</																											

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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 0604710A: Night Vision Systems - Eng Dev		PROJECT L70: NIGHT VISION DEV ED
Schedule Details				
	Start		End	
Event	Quarter	Year	Quarter	Year
Thermal Imaging Milestone C	1	2012	1	2012
FY 09 Overseas Contingency Operation efforts HART, WiMesh	4	2009	1	2010
Sense Through The Wall (STTW) Effort	4	2012	3	2013
FY09 OCO RDA Expendable UGS Sensor Design and Development	4	2009	3	2010
FY09 OCO PTDS Enhancements Design and Development	4	2009	3	2010
Sensor Netting / Networking	1	2010	3	2013

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Army								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>				<b>PROJECT</b> L75: <i>Profiler</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
L75: <i>Profiler</i>	0.000	5.403	6.014	0.000	6.014	2.604	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
<b>A. Mission Description and Budget Item Justification</b> <p>The AN/TMQ-52 Meteorological Measuring Set-Profiler (MMS-P) is a replacement for the current Meteorological Measuring Set (MMS), AN/TMQ-41. Profiler uses a suite of meteorological (MET) sensors and 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. The current MMS relies upon a balloon-borne radiosonde to measure and transmit MET conditions such as wind speed, wind direction, temperature, pressure and humidity. It is considered accurate to 20 kilometers from the balloon launch site and cannot provide target area MET data. Profiler provides the same MET information MMS does and adds 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. Profiler Block III 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 provide Gridded MET along with autonomously generated 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.</p>											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	
Program #1						0.000	1.121	0.000	0.000	0.000	
Initiate Block III backup sensor effort.											
FY 2009 Accomplishments:											
FY 2009											

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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 0604710A: Night Vision Systems - Eng Dev	PROJECT L75: Profiler			
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 #2  Continue Block III backup sensor effort.  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	0.245	0.000	0.245
Program #3  Award effort for software porting to laptop.	0.000	2.424	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604710A: Night Vision Systems - Eng Dev	PROJECT L75: Profiler			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
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  Continue effort for software porting to laptop.	0.000	0.000	5.201	0.000	5.201
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 #5	0.000	0.775	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)		R-1 ITEM NOMENCLATURE PE 0604710A: Night Vision Systems - Eng Dev		PROJECT L75: Profiler		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Reduction of physical configuration, build and test of four 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						
Program #6  Continue Reduction of physical configuration, build and test of four 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		0.000	0.000	0.568	0.000	0.568

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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 0604710A: Night Vision Systems - Eng Dev	PROJECT L75: Profiler			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #7  Conduct migration effort to a common operating system hosted on one computer.  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	0.932	0.000	0.000	0.000
Program #8  SBIR/STTR  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	0.151	0.000	0.000	0.000

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Army							<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>			<b>PROJECT</b> L75: <i>Profiler</i>				
<b><u>B. Accomplishments/Planned Program (\$ in Millions)</u></b>											
							<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
Accomplishments/Planned Programs Subtotals							0.000	5.403	6.014	0.000	6.014
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></b>											
<b><u>Line Item</u></b>	<b><u>FY 2009</u></b>	<b><u>FY 2010</u></b>	<b><u>FY 2011 Base</u></b>	<b><u>FY 2011 OCO</u></b>	<b><u>FY 2011 Total</u></b>	<b><u>FY 2012</u></b>	<b><u>FY 2013</u></b>	<b><u>FY 2014</u></b>	<b><u>FY 2015</u></b>	<b><u>Cost To Complete</u></b>	<b><u>Total Cost</u></b>
• Ord. #1: <i>Profiler K27900</i>	8.990	4.766	0.000	0.000	4.434	4.369	12.507	12.355	7.356	0	54.777
<b><u>D. Acquisition Strategy</u></b>											
The Profiler Block III acquisition strategy decision brief to the Milestone Decision Authority (MDA) is scheduled for Jan 2010. The briefing will present the business, technical and acquisition strategy analysis to enable an MDA decision to pursue either a "Make" strategy where the Block III effort is performed by a government organization or a "Buy" strategy where the effort will be competitively awarded to a contractor. The Acquisition Decision Memorandum (ADM) issued from this decision will initiate the Block III program. The award to either a Make or Buy system developer will occur in FY10 for the development, test and documentation effort that will continue into FY12. The Block III program is expected to enter production beginning in FY12.											
<b><u>E. Performance Metrics</u></b>											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
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Product Development (\$ in Millions)													
				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
SDD Contract	C/CPIF	Smiths Detection Edgewood, MD	14.999	0.000		0.000		0.000		0.000	Continuing	Continuing	14.950
SDD T&M	C	Smiths Detection Edgewood, MD	0.103	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Studies and Simulations	C	Army Research Lab White Sands Missile Range, NM	0.429	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Government Furnished Equipment	C	HQCPSQ/ZJ San Antonio, TX	0.120	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Initiate backup sensor effort	C	Army Research Lab White Sands Missile Range, NM	0.000	0.946		0.245		0.000		0.245	Continuing	Continuing	0
Reduction of Physical Configuration	C/TBD	TBD Location could not be determined.	0.000	0.870		0.000		0.000		0.000	Continuing	Continuing	0
Migration to common operating system	C/TBD	TBD Location could not be determined.	0.000	0.650		0.000		0.000		0.000	Continuing	Continuing	0
Award efforts for s/w porting to laptop	C/TBD	TBD Location could not be determined.	0.000	1.904		3.806		0.000		3.806	Continuing	Continuing	0
Subtotal			15.651	4.370		4.051		0.000		4.051			14.950
Remarks													

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

**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	CECOM Fort Monmouth NJ	2.063	0.072		0.381		0.000		0.381	Continuing	Continuing	0
Sys Engr/Technical Assistance	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.378		0.490		0.000		0.490	Continuing	Continuing	0
OGA	C	Various Location could not be determined.	1.089	0.000		0.000		0.000		0.000	Continuing	Continuing	0
<b>Subtotal</b>			3.152	0.450		0.871		0.000		0.871			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
Test Planning and Preparation	C	ATEC Various, CECOM, PRD Dir, Ft. Monmouth	0.942	0.000		0.615		0.000		0.615	Continuing	Continuing	0
Developmental Testing	C	ATEC Various	1.049	0.000		0.000		0.000		0.000	Continuing	Continuing	0

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Army</b>											<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>				<b>PROJECT</b> L75: <i>Profiler</i>					
<b>Test and Evaluation (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Initial Operational Test & Evaluation	C	ATEC Various	1.200	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Conduct Block II Testing	C	ARL ATEC	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
<b>Subtotal</b>			3.191	0.000		0.615		0.000		0.615			0.000
<b>Remarks</b>													
<b>Management Services (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Project Management	C	PM Nav Sys/TIMS Fort Monmouth, NJ	0.993	0.432		0.477		0.000		0.477	Continuing	Continuing	0
SBIR/STTR	C/TBD	TBD Location could not be determined.	0.000	0.151		0.000		0.000		0.000	Continuing	Continuing	0
<b>Subtotal</b>			0.993	0.583		0.477		0.000		0.477			0.000
<b>Remarks</b>													

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2011 Army							<b>DATE:</b> February 2010					
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>			<b>PROJECT</b> L75: <i>Profiler</i>					
		<b>Total Prior Years Cost</b>	<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>		22.987	5.403		6.014		0.000		6.014			14.950
<b>Remarks</b>												

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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2011 Army		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>	<b>PROJECT</b> L75: <i>Profiler</i>

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2011 Army			<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>	<b>PROJECT</b> L75: <i>Profiler</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
Decision Review	1	2010	1	2010
Block III Met Sensor Effort	1	2010	3	2010
Award Software Porting to Laptop Effort	2	2010	1	2011
Migration to Common Operating System hosted on one computer	2	2010	1	2011
Reduction of Physical Configuration and Build Four Systems	2	2010	4	2010
Conduct Block III Testing	3	2010	4	2011

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Army								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>				<b>PROJECT</b> L76: <i>Dismounted Fire Support Laser Targeting Systems</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>FY 2011 Base Estimate</b>	<b>FY 2011 OCO Estimate</b>	<b>FY 2011 Total Estimate</b>	<b>FY 2012 Estimate</b>	<b>FY 2013 Estimate</b>	<b>FY 2014 Estimate</b>	<b>FY 2015 Estimate</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
L76: <i>Dismounted Fire Support Laser Targeting Systems</i>	7.955	17.513	17.461	0.000	17.461	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles											
<b>A. Mission Description and Budget Item Justification</b> <p>This project will adapt demonstrated technologies for insertion into Laser Target Locators and Laser Designators to improve overall performance of those systems and reduce weight. Technologies selected under this project will benefit the Lightweight Laser Designator Rangefinder (LLDR, AN/PED-1), the Laser Target Locator Systems, and JETS. This project will integrate the next generation uncooled Forward Looking Infrared (FLIRs) into the Laser Target Locator Module (LTLM), improving its imaging performance with no impact on its weight. This project will initiate interface design for a reduced weight common laser designator to the next generation LTLM which will form a bridge to the JETS. In addition, this line will support improved targeting accuracy in support of coordinate seeking weapons, such as Joint Direct Attack Munition (JDAM), Small Diameter Bomb, and Excalibur. Development will primarily focus on affordable, non-magnetic, high accuracy, azimuth and vertical angle measurement (AVAM) devices with reduced size, weight and power characteristics. The Joint Effects Targeting System (JETS) is a Joint (Army, Air Force, Navy and Marine) program to develop a lightweight set of mission equipment for the dismounted forward observer and controllers (including Joint Tactical Air Controllers). The JETS will provide the observer and controller the means to call for fire and control delivery of air, ground and naval surface fire support, using precision, near-precision and non-precision munitions and effects (both lethal and non-lethal). The JETS will consists of two subsystems: the Target Location and Designation System (TLDS) and the Target Effects Coordination System (TECS). The TLDS will provide the observer and controller 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 the TECS. The TECS will provide access to the future joint targeting network, formats digital calls for fire and Close Air Support (CAS) 9-line requests to all joint fires platforms; will display information to the observer and controller to enable effective target engagement and integration of fires with Joint maneuver forces; and supports fire support planning functions. In order to achieve portability the total system weight of the JETS will be limited to 20 pounds. JETS weight reduction will be achieved by incorporation of improved lightweight technologies combined with range performance trades. JETS funding will continue under 654710L79, RDTE FY2012 through FY2014.</p>											
<b>B. Accomplishments/Planned Program (\$ in Millions)</b>											
						<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>	
Program #1						0.500	0.000	0.000	0.000	0.000	
Completed the analysis of alternatives for laser targeting systems.											

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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 0604710A: Night Vision Systems - Eng Dev	PROJECT L76: Dismounted Fire Support Laser Targeting Systems			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
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  Continue the development of Azimuth and Vertical Angle Measurement (AVAM) devices.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  FY 2011 Base Plans: FY 2011 Base  FY 2011 OCO Plans: FY 2011 OCO	4.000	4.808	4.808	0.000	4.808
Program #3	3.455	12.214	12.653	0.000	12.653

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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 0604710A: Night Vision Systems - Eng Dev	PROJECT L76: Dismounted Fire Support Laser Targeting Systems				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Continue Target Locator Improvements within LLDR/LTLM to support use of Precision Guided Weapons by dismounted Soldiers and reduce soldier load. LLDR/LTLM improvements will also support a goal of transitioning LLDR/LTLS improved technical elements to support future Army JETS system design requirements.  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  Small Business Innovative Research/Small Business Technology Transfer Program.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  FY 2011 Base Plans: FY 2011 Base		0.000	0.491	0.000	0.000	0.000

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2011 Army							<b>DATE:</b> February 2010				
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>			<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>			<b>PROJECT</b> L76: <i>Dismounted Fire Support Laser Targeting Systems</i>					
<b><u>B. Accomplishments/Planned Program (\$ in Millions)</u></b>											
							<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011 Base</b>	<b>FY 2011 OCO</b>	<b>FY 2011 Total</b>
<i>FY 2011 OCO Plans:</i> FY 2011 OCO											
Accomplishments/Planned Programs Subtotals							7.955	17.513	17.461	0.000	17.461
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></b>											
<b><u>Line Item</u></b>	<b><u>FY 2009</u></b>	<b><u>FY 2010</u></b>	<b><u>FY 2011 Base</u></b>	<b><u>FY 2011 OCO</u></b>	<b><u>FY 2011 Total</u></b>	<b><u>FY 2012</u></b>	<b><u>FY 2013</u></b>	<b><u>FY 2014</u></b>	<b><u>FY 2015</u></b>	<b><u>Cost To Complete</u></b>	<b><u>Total Cost</u></b>
• Ord. #1: <i>Lightweight Laser Designator Rangefinder (LLDR) (K31100) OPA2</i>	79.626	155.913	65.970	22.371	88.341	61.140	74.136	25.644	37.833	Continuing	Continuing
• Ord. #2: <i>Laser Target Locating System (LTLS) (B53800) OPA2</i>	62.789	67.494	29.753	5.019	34.772	33.926	27.427	32.292	11.896	Continuing	Continuing
• Ord. #3: <i>JETS EMD (654710L79) RDTE</i>	0.000	0.000	0.000	0.000	0.000	17.457	14.490	4.822	0.000	0	36.769
<b><u>D. Acquisition Strategy</u></b>											
The various development programs in this project will continue to exercise competitively awarded contracts using the best value source selection procedures.											
<b><u>E. Performance Metrics</u></b>											
Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army										DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: 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)													
				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
Analysis and Technical Evaluation	C	BAE Systems Nashua NH	1.340	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Analysis and Technical Evaluation - 2	C	Northrop Grumman Apopka FL	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Azimuth and Vertical Angle Measurement (AVAM)	C	Northrop Grumman Systems Linthicum Heights MD	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
Azimuth and Vertical Angle Measurement (AVAM) - 2	C	Johns Hopkins Applied Physics Lab Laurel MD	0.000	3.120		3.808		0.000		3.808	Continuing	Continuing	0
LTLM P3I & System Development	C	Johns Hopkins Applied Physics Lab Laurel MD	0.000	0.000		0.000		0.000		0.000	Continuing	Continuing	0
LTLM P3I & System Development - 2	C	TBD Location could not be determined.	0.000	12.214		12.653		0.000		12.653	Continuing	Continuing	0
Lighweight Desinator Size Weight and Power Reductions	C	TBD Location could not be determined.	0.000	0.438		0.000		0.000		0.000	Continuing	Continuing	0
Subtotal			1.340	15.772		16.461		0.000		16.461			0.000
Remarks													

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis: PB 2011 Army</b>											<b>DATE:</b> February 2010		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0604710A: <i>Night Vision Systems - Eng Dev</i>				<b>PROJECT</b> L76: <i>Dismounted Fire Support Laser Targeting Systems</i>					
<b>Support (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Azimuth and Vertical Angle Measurement (AVAM)	C/FP	Johns Hopkins Applied Physics Lab Laurel MD	0.000	1.000		1.000		0.000		1.000	Continuing	Continuing	0
Small Business Innovative Research/Small Business Technology Transfer Program	C	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.491		0.000		0.000		0.000	Continuing	Continuing	0
<b>Subtotal</b>			0.000	1.491		1.000		0.000		1.000			0.000
<b>Remarks</b>													
<b>Test and Evaluation (\$ in Millions)</b>													
				<b>FY 2010</b>		<b>FY 2011 Base</b>		<b>FY 2011 OCO</b>		<b>FY 2011 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Marker/Designator Low energy testing	C	Various Location could not be determined.	0.000	0.250		0.000		0.000		0.000	Continuing	Continuing	0
<b>Subtotal</b>			0.000	0.250		0.000		0.000		0.000			0.000
<b>Remarks</b>													

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army									DATE: February 2010						
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					Total Prior Years Cost	FY 2010		FY 2011 Base		FY 2011 OCO		FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals					1.340	17.513		17.461		0.000		17.461			0.000
Remarks															

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



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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 0604710A: Night Vision Systems - Eng Dev	PROJECT L76: Dismounted Fire Support Laser Targeting Systems		
Schedule Details				
	Start		End	
Event	Quarter	Year	Quarter	Year
Target Locator Improvements	2	2009	1	2010
JETS MS A	2	2010	2	2010
Technology Insertion/prototype Build	2	2010	3	2011
JETS MS B	4	2011	4	2011
JETS EMD transitions to 654710L79 in FY2012	4	2011	3	2014

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