

**UNCLASSIFIED**

Exhibit R-2, PB 2011 Army RDT&E Budget Item Justification									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research				R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	Base FY 2011 Estimate	OCO FY 2011 Estimate	Total FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	45.329	50.877	40.228	0.000	40.228	57.438	56.521	48.075	46.640	0	385.336
H95: Night Vision and Electro-Optic Technology	25.361	26.753	40.228	0.000	40.228	57.438	56.521	48.075	46.640	Continuing	Continuing
K90: NIGHT VISION COMPONENT TECHNOLOGY (CA)	19.968	24.124	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
A. Mission Description and Budget Item Justification											
Efforts in this program element (PE) design, and develop core night vision and electronic sensor technologies to improve the Army's capability to operate in all battlefield conditions. Technologies pursued in this PE have the potential to provide the Army with new, or enhanced, capabilities to detect and identify targets farther on the battlefield, operate in obscured conditions, and maintain a higher degree of situational awareness (SA). Project H95 researches new infrared (IR) Focal Plane Array (FPA) technologies, assesses and evaluates sensor materials, designs advanced multi-function lasers for designation and range finding, and develops modeling and simulation for advanced sensor technologies. Project K90 funds congressional special interest items.In FY11 and beyond investments in advanced IR FPA technologies are increasing to expand research in novel FPA designs to maintain the technological and competitive IR sensor advantage. Work in this PE is related to and fully coordinated with PE 0602705A (Electronics and Electronic Devices), PE 0602712A (Countermine Technology), and PE 0603710A (Night Vision Advanced Technology).The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan. Work in this PE is performed by the Army Research, Development, and Engineering Command (RDECOM)/Communications-Electronics Research, Development, and Engineering Center (CERDEC)/Night Vision and Electronic Sensors Directorate (NVESD), Fort Belvoir, VA.											

**UNCLASSIFIED**

R-1 Line Item #19

Page 1 of 20

636 of 1536

**UNCLASSIFIED**

Exhibit R-2, PB 2011 Army RDT&E Budget Item Justification				DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research		R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY			
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	46.691	26.893	27.659	0.000	27.659
Current President's Budget	45.329	50.877	40.228	0.000	40.228
Total Adjustments	-1.362	23.984	12.569	0.000	12.569
• Congressional General Reductions		-0.266			
• Congressional Directed Reductions					
• Congressional Rescissions		0.000			
• Congressional Adds		24.250			
• Congressional Directed Transfers					
• Reprogrammings	-0.569	0.000			
• SBIR/STTR Transfer	-0.793	0.000			
• Adjustments to Budget Years	0.000	0.000	12.569	0.000	12.569
Change Summary Explanation					
FY10 Congressionally directed increases.FY11 funding increased for IR Focal Plane Array technology efforts.					

**UNCLASSIFIED**

R-1 Line Item #19

Page 2 of 20

637 of 1536

**UNCLASSIFIED**

<b>Exhibit R-2A, PB 2011 Army RDT&amp;E Project Justification</b>								<b>DATE:</b> February 2010			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 2: <i>Applied Research</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0602709A: <i>NIGHT VISION TECHNOLOGY</i>				<b>PROJECT</b> H95: <i>Night Vision and Electro-Optic Technology</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2009 Actual</b>	<b>FY 2010 Estimate</b>	<b>Base FY 2011 Estimate</b>	<b>OCO FY 2011 Estimate</b>	<b>Total FY 2011 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>
H95: <i>Night Vision and Electro-Optic Technology</i>	25.361	26.753	40.228	0.000	40.228	57.438	56.521	48.075	46.640	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

Efforts in this project research and develop component technologies that enable improved situational awareness (SA) at an affordable price. Component technologies include novel focal plane arrays (FPAs), processing and electronics improvements, and modeling and simulation to predict performance and to determine operational effectiveness. This research focuses on dual band infrared (IR) FPAs necessary to search, identify and track mobile targets in all day/night visibility and battlefield conditions, and to improve standoff detection in ground-to-ground and air-to-ground operations. In addition, very large format IR FPAs are needed for sensors to simultaneously provide wide area coverage in addition to providing the resolution for situation awareness, persistent surveillance and plume/gunflash detection. With the development of multispectral and hyperspectral algorithms, advanced dual band FPAs are being developed with on-chip hyperspectral functionality, which offer the ability to perform detection, identification, and signature identification at extended ranges as well as the ability to detect targets in "deep hide". In FY11 and beyond investments in advanced IR FPA technologies are increasing to expand research in novel FPA designs to maintain the technological and competitive IR sensor advantage. Work in this project is related to and fully coordinated with PE 0602705A (Electronics and Electronic Devices), PE 0602712A (Countermeasure Technology), and PE 0603710A (Night Vision Advanced Technology). The cited work is consistent with the Director, Defense Research and Engineering Strategic Plan, the Army Modernization Strategy, and the Army Science and Technology Master Plan. Work in this PE is performed by the Army Research, Development, and Engineering Command (RDECOM)/Communications-Electronics Research, Development, and Engineering Center (CERDEC)/Night Vision and Electronic Sensors Directorate (NVESD), Fort Belvoir, VA.

**B. Accomplishments/Planned Program (\$ in Millions)**

	<b>FY 2009</b>	<b>FY 2010</b>	<b>Base FY 2011</b>	<b>OCO FY 2011</b>	<b>Total FY 2011</b>
Program #1  Distributed Aided Target Recognition (AiTR) Evaluation Center of Excellence: This effort researches a Defense-wide virtual/distributed capability to interactively process both real and generated 3-D multispectral scenes from sensors simulations for evaluation of automatic target recognition (ATR) algorithms against realistic operational scenarios in aided or fully autonomous reconnaissance, surveillance, and target acquisition (RSTA) missions to include roadside threats/explosively formed projectiles. In FY09, completed data collection and evaluation of roadside threats/explosively formed projectile efforts for assessment of algorithm performance. In FY10, continue testing of fused multiple ground-based sensors; investigate and develop hyperspectral and multi-spectral sensors.	1.221	1.289	1.288	0.000	1.288

**UNCLASSIFIED**

R-1 Line Item #19

Page 3 of 20

638 of 1536

**UNCLASSIFIED**

Exhibit R-2A, PB 2011 Army RDT&E Project Justification			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research	R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY	PROJECT H95: Night Vision and Electro-Optic Technology			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
In FY11, will research, investigate and develop algorithms for the autonomous detection and tracking of mounted and dismounted targets/threats for distributed aperture systems, targets of focus are those that emerge from hiding/defilade in an urban combat arena.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  Base FY 2011 Plans: FY 2011 Base  OCO FY 2011 Plans: FY 2011 OCO					
Program #2  Modeling, Measurements and Simulation Applied Research for Sensor Design and Evaluation: This effort develops and investigates supporting engineering models, measurement techniques, and simulations concurrently with the development and transition of core sensor technologies. In FY09, incorporated into the family of models and further studied the ability to predict the range performance benefits of advanced signal processing (turbulence reduction, contrast enhancement, super resolution, compression, dither and image fusion) as new image processing techniques were enhanced or developed; developed and validated model for laser range gated active systems, and short wave infrared passive sensors; began the development of a persistent surveillance model for air to ground systems to predict the guidance system performance parameters, resolution, frame rate, and signal-to-noise ratio for tracking both vehicles and dismounts in visible to infrared (IR) bands. In FY10, complete the development and validation of an air to ground persistent surveillance model; develop and validate sensor performance model improvements to more accurately address the search process to include: moving	4.987	5.082	5.054	0.000	5.054

**UNCLASSIFIED**

R-1 Line Item #19

Page 4 of 20

639 of 1536

**UNCLASSIFIED**

Exhibit R-2A, PB 2011 Army RDT&E Project Justification				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research		R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY		PROJECT H95: Night Vision and Electro-Optic Technology		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
targets, moving observers, and environmental effects such as glint (reflective components), and complex clutter (foliage and urban structures). In FY11, will develop and implement new sensor measurement models to include visible and short wave IR bands and systems with nonlinear image processing; will conduct analysis to define the next generation of cooled IR technology; will begin the development of next generation simulations to support wargames and engineering tradeoff studies; will develop and validate models to represent color or visible electro-optical (EO) IR sensors and distributed aperture systems.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  Base FY 2011 Plans: FY 2011 Base  OCO FY 2011 Plans: FY 2011 OCO						
Program #3  Advanced Multifunction Laser Technology: This effort investigates and evaluates laser architectures and materials required to produce multiple wavelength bands and pulse modulation formats for future laser-based systems, including laser designation, range finding, explosive detection and warning lasers. In FY09, developed and validated performance of the laser designator and laser rangefinder components in a relevant environment; tested laser energy, beam quality, pulse duration and timing jitter under relevant temperature range. In FY10, complete component testing and integrate laser components (to include optical receivers and electronics suitable for small unmanned aerial sensors and lightweight Soldier applications) into multi-function brass-board system. In FY11, will evaluate and optimize operation of individual laser segment; will select and optimize best		3.139	3.590	4.044	0.000	4.044

**UNCLASSIFIED**

R-1 Line Item #19

Page 5 of 20

640 of 1536

**UNCLASSIFIED**

Exhibit R-2A, PB 2011 Army RDT&E Project Justification				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research		R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY		PROJECT H95: Night Vision and Electro-Optic Technology		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
technique for fabrication of structure, segmented laser diode stack and segmented output coupler mirror; will evaluate candidate of laser optical bench configuration and components in the laboratory, and determine the key performance parameters of each design. Related work in this technology area is also being performed under a manufacturing technology effort in PE 0708045A  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  Base FY 2011 Plans: FY 2011 Base  OCO FY 2011 Plans: FY 2011 OCO						
Program #4  High Performance Small Pixel Uncooled Focal Plane Array (FPA): This effort researches high performance small pixel uncooled longwave infrared (LWIR), and shortwave infrared (SWIR) technology with the objective of using large format arrays to increase recognition and identification ranges. In FY10, investigate and develop high definition format uncooled FPA material structures enabling greater sensitivity, lower noise and faster time constants than current sensors. In FY11, will develop a 1920 x 1080 pixel read out integrated circuit design; will research and demonstrate the large format focal plane array packaging using an in-house developed capability; will deliver and test the leveraged Defense Advanced Research Project Agency (DARPA) SWIR array electronics; and will investigate the development of recognition and identification ranges for both large format LWIR and large format SWIR focal plane arrays.		0.000	2.479	2.830	0.000	2.830

**UNCLASSIFIED**

R-1 Line Item #19

Page 6 of 20

641 of 1536

**UNCLASSIFIED**

Exhibit R-2A, PB 2011 Army RDT&E Project Justification			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research	R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY	PROJECT H95: Night Vision and Electro-Optic Technology			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
Base FY 2011 Plans: FY 2011 Base					
OCO FY 2011 Plans: FY 2011 OCO					
Program #5  Soldier Sensor Component and Signal Processing: This effort investigates new digital image intensified (I2) components to improve maneuver and situational awareness for the dismounted and mounted Soldier, benefiting pilotage, unmanned aerial systems and unmanned ground vehicle (UGV) applications. In FY09, completed co-location of sensing and processing resources on same chip allowing for immediate feedback of processing results which enabled real-time clutter rejection for hyperspectral and multispectral applications; completed design and fabricated demonstrator of advanced pixel mosaic, high resolution, low light visible sensor display; fabricated and evaluated brass-board advanced adaptive optics. In FY10, investigate and develop a brass-board sensor, objective lens and monochrome display with field programmable gated array image processing. In FY11, will evaluate and test (laboratory, controlled environment field testing and human factors studies) the brass-board low-light camera, handsfree focus optics and monochrome display utilizing digital on-chip processing for high speed video transmission, high resolution, high dynamic range and no-focus digital filtering/closed loop control.  FY 2009 Accomplishments: FY 2009	7.778	6.760	6.815	0.000	6.815

**UNCLASSIFIED**

R-1 Line Item #19

Page 7 of 20

642 of 1536

**UNCLASSIFIED**

Exhibit R-2A, PB 2011 Army RDT&E Project Justification				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research		R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY		PROJECT H95: Night Vision and Electro-Optic Technology		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
FY 2010 Plans: FY 2010						
Base FY 2011 Plans: FY 2011 Base						
OCO FY 2011 Plans: FY 2011 OCO						
Program #6  Advanced Structures for Cooled Infrared (IR) Sensors: This effort researches new detector materials and substrates, and develops technologies to minimize detector defects and increase reliability through new growth and substrate preparation techniques. In FY09, researched an increase in, the quantum efficiency of a 1k x 1k quantum well, infrared photodetector focal plane array (FPA); investigated dual-band mercury cadmium telluride (HgCdTe) arrays produced on alternative substrates with 99% operability. In FY10, develop and evaluate large area high performance dual color (midwave/longwave) (MW/LW) infrared (IR) FPAs grown on low cost substrates such that defective pixels are reduced to less than 1%. In FY11, will develop and test LWIR Type II Strained Layer Superlattice (SSL) 256x256 FPAs with improved material uniformity, better material and substrates structural view and lower noise levels.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  Base FY 2011 Plans: FY 2011 Base		4.913	4.313	4.250	0.000	4.250

**UNCLASSIFIED**

R-1 Line Item #19

Page 8 of 20

643 of 1536



**UNCLASSIFIED**

Exhibit R-2A, PB 2011 Army RDT&E Project Justification			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research	R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY	PROJECT H95: Night Vision and Electro-Optic Technology			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
OCO FY 2011 Plans: FY 2011 OCO					
Program #7  Compact Hyperspectral Imaging (HSI) Component Technology: This effort investigates hyperspectral focal plane arrays (FPAs) and sensors for ground and air based platforms that possess the capability to detect targets and discriminate from clutter for overwatch scenarios, while ground-based hyperspectral sensors can detect targets from clutter in close-in urban situations. In FY10, develop a HSI program to investigate advanced FPAs in the visible, near infrared (NIR) and long wave infrared (LWIR) region, incorporating on-chip multispectral capability via novel processing, to assist in identification of difficult military significant targets in urban and rural environments; investigate and select best HSI configurations for visible, NIR and LWIR HSI, including FPAs. In FY11, will characterize HSI imagers from each modality and waveband of interest to exploit sensor capability and identify targets of military significance in diverse environments; will integrate sensor hardware and software; will conduct tests on the HSI images to assess the sensor capability.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  Base FY 2011 Plans: FY 2011 Base  OCO FY 2011 Plans: FY 2011 OCO	0.000	3.043	3.447	0.000	3.447
Program #8	3.323	0.000	0.000	0.000	0.000

**UNCLASSIFIED**

R-1 Line Item #19

Page 9 of 20

644 of 1536

**UNCLASSIFIED**

Exhibit R-2A, PB 2011 Army RDT&E Project Justification				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research		R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY		PROJECT H95: Night Vision and Electro-Optic Technology		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Low Cost High Resolution Focal Plane Arrays (FPA): This effort investigates new infrared focal plane array (IR FPA) technologies for both cooled, high performance IR FPAs and uncooled, low cost IR FPAs. In FY09, integrated and refined sensor development to achieve pixel operability for 2-color midwave/longwave (MWIR/LWIR) sensor arrays on silicon substrates to greater than 95 percent/98 percent respectively; advanced current FPA design to increase image resolution for mini-unmanned air system applications for target identification and tracking at extended ranges.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  Base FY 2011 Plans: FY 2011 Base  OCO FY 2011 Plans: FY 2011 OCO						
Program #9  Digital Readout Integrated Circuit (ROIC): This effort investigates and develops new ROIC technology incorporated into affordable very large format and multiband infrared focal plane arrays (IR FPAs) used in sensors for targeting, situational awareness, and persistent surveillance that maintain performance with increasingly smaller pixel sizes. In FY11, will conduct design of small digital ROIC unit cell to meet dynamic range requirements by doing analog to digital conversion within the pixel; will improve digital ROIC sampling noise to meet signal/noise requirements through improved control of parasitic capacitances; will research and investigate innovative on-chip signal processing designs to reduce overall IR sensor size, weight and power.		0.000	0.000	2.600	0.000	2.600

**UNCLASSIFIED**

R-1 Line Item #19

Page 10 of 20

645 of 1536

**UNCLASSIFIED**

Exhibit R-2A, PB 2011 Army RDT&E Project Justification			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research	R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY	PROJECT H95: Night Vision and Electro-Optic Technology				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
Base FY 2011 Plans: FY 2011 Base						
OCO FY 2011 Plans: FY 2011 OCO						
Program #10  Enhanced IR Detector ("nBn") Technology: This effort investigates and improves a new detector structure ("nBn") that will enable very small pixel and higher operating temperatures both of which should lead to much more affordable sensor systems due to smaller system optics and cryogenic coolers. In FY11, will develop structures to improve the "nBn" detector through varying dopant levels, types and thickness of individual semi-conductors material layers; will investigate the optimal FPA design for smaller pixels, longer wavelength sensitivity and higher operating temperatures to reduce size, weight and power; will perform ("nBn") growth on Gallium Antimonide (GaSb) and/or Gallium Arsenide (GaAs) wafers to reduce defects in the "nBn" FPA.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010		0.000	0.000	4.300	0.000	4.300

**UNCLASSIFIED**

R-1 Line Item #19

Page 11 of 20

646 of 1536

**UNCLASSIFIED**

Exhibit R-2A, PB 2011 Army RDT&E Project Justification				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research		R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY		PROJECT H95: Night Vision and Electro-Optic Technology		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Base FY 2011 Plans: FY 2011 Base						
OCO FY 2011 Plans: FY 2011 OCO						
Program #11  Strained Layer Superlattices (SLS) Technology: This effort investigates and improves the recent advances in III-V material thin film crystal growth of infrared focal plane arrays (IR FPAs) using a very flexible Strained Layer Superlattice (SLS) structure which will allow multiband IR FPA's to be produced at much lower costs with improved uniformity. In FY11, will improve the performance of SLS detectors through increased sensitivity; will reduce excess noise of SLS longwave infrared detectors levels through novel side-wall passavation materials and techniques and novel diode architectures; will develop lithography suitable for high definition format, small pixel (15 micrometer), multiband SLS FPAs; will design uniform large area SLS wafers by transitioning SLS growth from 3-inch to 4 to 5-inch diameter Gallium Antimonide (GaSb) wafers or establishing new growth processes on alternative Gallium Arsenide (GaAs) substrates to reduce defects in the SLS FPA.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  Base FY 2011 Plans: FY 2011 Base  OCO FY 2011 Plans: FY 2011 OCO		0.000	0.000	5.600	0.000	5.600

**UNCLASSIFIED**

R-1 Line Item #19

Page 12 of 20

647 of 1536

**UNCLASSIFIED**

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 2: <i>Applied Research</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0602709A: <i>NIGHT VISION TECHNOLOGY</i>		<b>PROJECT</b> H95: <i>Night Vision and Electro-Optic Technology</i>	
<b><u>B. Accomplishments/Planned Program (\$ in Millions)</u></b>					
	<b>FY 2009</b>	<b>FY 2010</b>	<b>Base FY 2011</b>	<b>OCO FY 2011</b>	<b>Total FY 2011</b>
Program #12	0.000	0.197	0.000	0.000	0.000
Small Business Innovative Research/Small Business Technology Transfer Programs					
<i>FY 2009 Accomplishments:</i>					
FY 2009					
<i>FY 2010 Plans:</i>					
FY 2010					
<i>Base FY 2011 Plans:</i>					
FY 2011 Base					
<i>OCO FY 2011 Plans:</i>					
FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	25.361	26.753	40.228	0.000	40.228
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></b>					
N/A					
<b><u>D. Acquisition Strategy</u></b>					
N/A					
<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.					

**UNCLASSIFIED**

R-1 Line Item #19

Page 13 of 20

648 of 1536

**UNCLASSIFIED**

Exhibit R-2A, PB 2011 Army RDT&E Project Justification									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research				R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY				PROJECT K90: NIGHT VISION COMPONENT TECHNOLOGY (CA)			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	Base FY 2011 Estimate	OCO FY 2011 Estimate	Total FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
K90: NIGHT VISION COMPONENT TECHNOLOGY (CA)	19.968	24.124	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
<u>A. Mission Description and Budget Item Justification</u> Congressional Interest Item funding for Night Vision Component Technology applied research.											
<u>B. Accomplishments/Planned Program (\$ in Millions)</u>											
							FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Program #1  Miniaturized Sensors for Small and Tactical Unmanned Aerial Vehicles (MINISENS): In FY09, this Congressional Interest Item investigated cost effective miniaturized sensor technologies for small and tactical Unmanned Aerial Systems.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  Base FY 2011 Plans: FY 2011 Base  OCO FY 2011 Plans: FY 2011 OCO							1.199	0.000	0.000	0.000	0.000
Program #2							5.592	0.000	0.000	0.000	0.000

**UNCLASSIFIED**

R-1 Line Item #19

Page 14 of 20

649 of 1536

**UNCLASSIFIED**

Exhibit R-2A, PB 2011 Army RDT&E Project Justification			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research		R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY		PROJECT K90: NIGHT VISION COMPONENT TECHNOLOGY (CA)	
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Small Business Infrared Materials Manufacturing - Silicon Alternatives: In FY09, this Congressional Interest Item supported the development of large, low-cost, silicon substrates by a U.S. merchant supplier for the production of advanced low-cost infrared detectors. Developed and continued to refine growth and device processing capabilities that leveraged earlier success with silicon.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  Base FY 2011 Plans: FY 2011 Base  OCO FY 2011 Plans: FY 2011 OCO					
Program #3  Next Generation Communications System: In FY09, this Congressional Interest Item developed fiber optic based sensor network into the existing expeditionary sensor platform for persistent surveillance.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010	1.199	0.795	0.000	0.000	0.000

**UNCLASSIFIED**

R-1 Line Item #19

Page 15 of 20

650 of 1536

**UNCLASSIFIED**

Exhibit R-2A, PB 2011 Army RDT&E Project Justification			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research	R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY	PROJECT K90: NIGHT VISION COMPONENT TECHNOLOGY (CA)			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Base FY 2011 Plans: FY 2011 Base					
OCO FY 2011 Plans: FY 2011 OCO					
Program #4  Uncooled Metal-Oxide Semiconductor Field-Effect Transistor (MOSFET) Embedded Micro-cantilevers: In FY09, this Congressional Interest Item investigated an innovative electronic transduction technology for a focal plane array made of a two-dimensional microcantilever array, each element (pixel) of which has an embedded high sensitivity stress sensing MOSFET.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  Base FY 2011 Plans: FY 2011 Base  OCO FY 2011 Plans: FY 2011 OCO	2.395	0.000	0.000	0.000	0.000
Program #5  Night Vision Technology Research: In FY09, this Congressional Interest Item developed advanced infrared (IR) focal plane array (FPA) components to improve the capability to rapidly search for targets in clutter and provided wide area persistent surveillance. Developed materials and building blocks for IR FPA product development that	9.583	8.207	0.000	0.000	0.000

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R-1 Line Item #19

Page 16 of 20

651 of 1536



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Exhibit R-2A, PB 2011 Army RDT&E Project Justification			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research	R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY	PROJECT K90: NIGHT VISION COMPONENT TECHNOLOGY (CA)			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
enable cost effective, end-system manufacturing, and sensor material production. Developed an emerging sensor technology, Strained Layer Superlattice (SLS) that may have higher operating temperatures eliminating the need for complex and expensive cryocoolers.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  Base FY 2011 Plans: FY 2011 Base  OCO FY 2011 Plans: FY 2011 OCO					
Program #6  Personal Miniature Thermal Viewer (PMTV). This is a Congressional Interest Item.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  Base FY 2011 Plans: FY 2011 Base	0.000	0.796	0.000	0.000	0.000

**UNCLASSIFIED**

R-1 Line Item #19

Page 17 of 20

652 of 1536

**UNCLASSIFIED**

Exhibit R-2A, PB 2011 Army RDT&E Project Justification			DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 2: Applied Research	R-1 ITEM NOMENCLATURE PE 0602709A: NIGHT VISION TECHNOLOGY	PROJECT K90: NIGHT VISION COMPONENT TECHNOLOGY (CA)			
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
OCO FY 2011 Plans: FY 2011 OCO					
Program #7  IR-Vascular Facial Fingerprinting. This is a Congressional Interest Item.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010  Base FY 2011 Plans: FY 2011 Base  OCO FY 2011 Plans: FY 2011 OCO	0.000	2.388	0.000	0.000	0.000
Program #8  Standoff Improvised Explosive Device Detection Program. This is a Congressional Interest Item.  FY 2009 Accomplishments: FY 2009  FY 2010 Plans: FY 2010	0.000	4.775	0.000	0.000	0.000

**UNCLASSIFIED**

R-1 Line Item #19

Page 18 of 20

653 of 1536

**UNCLASSIFIED**

<b>Exhibit R-2A, PB 2011 Army RDT&amp;E Project Justification</b>				<b>DATE:</b> February 2010	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 2: <i>Applied Research</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0602709A: <i>NIGHT VISION TECHNOLOGY</i>		<b>PROJECT</b> K90: <i>NIGHT VISION COMPONENT TECHNOLOGY (CA)</i>	
<b><u>B. Accomplishments/Planned Program (\$ in Millions)</u></b>					
	<b>FY 2009</b>	<b>FY 2010</b>	<b>Base FY 2011</b>	<b>OCO FY 2011</b>	<b>Total FY 2011</b>
<i>Base FY 2011 Plans:</i> FY 2011 Base  <i>OCO FY 2011 Plans:</i> FY 2011 OCO					
Program #9 Materials for Infrared Night Vision Equipment. This is a Congressional Interest Item.  <i>FY 2009 Accomplishments:</i> FY 2009  <i>FY 2010 Plans:</i> FY 2010  <i>Base FY 2011 Plans:</i> FY 2011 Base  <i>OCO FY 2011 Plans:</i> FY 2011 OCO	0.000	7.163	0.000	0.000	0.000
Accomplishments/Planned Programs Subtotals	19.968	24.124	0.000	0.000	0.000
<b><u>C. Other Program Funding Summary (\$ in Millions)</u></b> N/A					
<b><u>D. Acquisition Strategy</u></b> N/A					

**UNCLASSIFIED**

R-1 Line Item #19

Page 19 of 20

654 of 1536

**UNCLASSIFIED**

<b>Exhibit R-2A, PB 2011 Army RDT&amp;E Project Justification</b>		<b>DATE:</b> February 2010
<b>APPROPRIATION/BUDGET ACTIVITY</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army</i> BA 2: <i>Applied Research</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0602709A: <i>NIGHT VISION TECHNOLOGY</i>	<b>PROJECT</b> K90: <i>NIGHT VISION COMPONENT TECHNOLOGY (CA)</i>

**E. Performance Metrics**

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

**UNCLASSIFIED**

R-1 Line Item #19

Page 20 of 20

655 of 1536