Supporting Data FY 2007 Supplemental Budget Estimate
February 2007

DESCRIPTIVE SUMMARIES OF THE

RESEARCH, DEVELOPMENT, TEST AND EVALUATION

ARMY APPROPRIATION

Department of the Army

Office of the Secretary of the Army (Financial Management and Comptroller)

Persuasive in Peace, Invincible in War

**DESCRIPTIVE SUMMARIES FOR PROGRAM ELEMENTS
OF THE
RESEARCH, DEVELOPMENT, TEST AND
EVALUATION, ARMY
FY 2007
SUPPLEMENTAL BUDGET ESTIMATE**

FEBRUARY 2007

**Department of the Army
Office of the Assistant Secretary of the Army (Financial Management and Comptroller)**

Department of the Army
FY 2007 RDT&E Program
Supplemental Budget Estimate Submission
Summary

Exhibit R-1

September 2006

Thousands of Dollars

Summary Recap of Budget Activities	FY 2007 Base	FY 2007 Amended (Bridge)	FY 2007 Supplemental	FY 2007 Total
Basic research	0	0	0	0
Applied Research	0	0	0	0
Advanced Technology Development	109,952	0	3,560	113,512
Advanced Component Development and Prototypes	2,778	0	29,000	31,778
System Development and Demonstration	68,715	0	76,958	145,673
Management Support	88,740	0	5,430	94,170
Operational System Development	40,085	0	25,523	65,608
Total RDT&E, Army	310,270	0	140,471	450,741

Department of the Army
FY 2007 RDT&E Program
Supplemental Budget Estimate Submission
Summary

September 2006

Thousands of Dollars

Summary Recap of Budget Activities			FY 2007 Base	FY 2007 Amended (Bridge)	FY 2007 Supplemental	FY 2007 Total
		Advanced Technology Development				
34	0603005A	03 Combat Vehicle and Automotive Advanced Technology	109,952	0	3,560	113,512
		Total: Advanced Technology Development	109,952	0	3,560	113,512
		Advanced Component Development and Prototypes				
63	0603747A	04 Soldier Support and Survivability	2,778	0	29,000	31,778
		Total: Advanced Component Development and Prototypes	2,778	0	29,000	31,778
		System Development and Demonstration				
82	0604321A	05 All Source Analysis System	7,074	0	3,400	10,474
85	0604601A	05 Infantry Support Weapons	31,748	0	8,158	39,906
91	0604642A	05 Light Tactical Wheeled Vehicles	0	0	20,000	20,000
100	0604741A	05 Air Defense Command, Control and Intel - Eng	21,757	0	38,900	60,657
102	0604746A	05 Automatic Test Equipment Development	8,136	0	6,500	14,636
		Total: System Development and Demonstration	68,715	0	76,958	145,673
		Management Support				
141	0605706A	06 Materiel Systems Analysis	16,526	0	5,410	21,936
147	0605801A	06 Programwide Activities	72,214	0	20	72,234
		Total: Management Support	88,740	0	5,430	94,170
		Operational System Development				
163	0203764A	07 Tactical Wheeled Vehicle Improvement Program	0	0	10,323	10,323
172	0303140A	07 Information Systems Security Program	23,828	0	8,300	32,128
175	0303150A	07 WWMCCS/Global Command and Control System	12,200	0	3,800	16,000
176	0303158A	07 Joint Command and Control - Army	4,057	0	3,100	7,157
		Total: Operational System Development	40,085	0	25,523	65,608
RDT&E, Army			310,270	0	140,471	450,741

Table of Contents - RDT&E

Alphabetic Listing - RDT&E

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY **3 - Advanced technology development**	PE NUMBER AND TITLE **0603005A - Combat Vehicle and Automotive Advanced Technology**				PROJECT **221**	

COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate
221　　　　COMBAT VEH SURVIVABLTY			24194				

A. Mission Description and Budget Item Justification: This project matures and demonstrates combat vehicle survivability technologies essential for Future Combat Systems (FCS) and the Future Force as well as provides technical solutions for enhancing the survivability capabilities of the Current Force. Focus is on advanced armors, Active Protection Systems (APS), safety devices and integration of these onto FCS vehicles, future Tactical Wheeled Vehicles (TWVs) and, where practical, Current Force combat and tactical vehicles. As combat vehicle systems become smaller and lighter and tactical vehicles are more often exposed to combat conditions, one of the greatest technological and operational challenges is providing adequate crew protection without reliance on heavy passive armor. These challenges are being addressed by major efforts in integrated survivability suites comprised of APS coupled with advanced ballistic protection which provides electromagnetic (EM) armor, smart and ceramic armors integrated with advanced composite and laminate structures and advanced transparent armor formulations. The APS against Kinetic Energy (KE) threats effort conducts essential trade studies, technical evaluations and demonstrations of APS components/sub-systems including countermeasure warheads and interceptors, detectors and trackers, and fire control hardware and software required to identify, classify and defeat KE threats as defined for FCS. Technologies and performance data are transitioned to FCS for use in manned ground vehicles and potential spin-offs to Current Force combat vehicles. This effort is integrated and coordinated with efforts from Program Elements 0602624A (Weapons and Munitions Technology), 0603004A (Weapons and Munitions Advanced Technology), and 060313A (Missile and Rocket Advanced Technology). TWV Survivability focuses on maturing and demonstrating viable integrated survivability suites that can be tailored to meet current and future threats when applied to light, medium or heavy tactical wheeled vehicles. This effort provides essential underpinning data to support the mutual effort between the Army and Marines for the next generation Light Tactical Vehicle. Lightweight, integrated armor technologies, using components from Program Elements (PEs) 0602601A (Combat Vehicle and Automotive Technology), 0602618A (Ballistics Technology) and 0602105A (Materials Technology), are integrated and demonstrated through ballistic testing to validate performance versus weight against various armor protection requirements. AP systems and signature management treatments are also be integrated and evaluated to determine effectiveness and ability to counter threats in conjunction with armor treatments. Data will be provided to the Program Manager (PM) for Future Tactical Systems (FTS) as input to Technology Readiness Assessment for their next generation Light Tactical Vehicle . Modeling tools that characterize hardware performance of the survivability enhancements are matured and validated and linked to tactical vehicle virtual prototyping tools, enabling more rapid and cost effective adaptations and evaluations of effectiveness in the future. The goal of the Vision Protection effort is to mature and demonstrate treatments to optical systems that provide protection from frequency-agile laser weapons. These technologies are appropriate for transition to FCS BCT for spiral integration or to Current Force vehicles such as the Abrams, Bradley, and Stryker. Work in this PE is related to and closely coordinated with work conducted in PE 0602601A (Combat Vehicle and Automotive Technology) and in collaboration with the Army Research Laboratory's PE 0602618A (Ballistics Technologies) as well as with the U.S. Marine Corps and Office of Naval Research. The cited work is consistent with Strategic Planning Guidance, the Army Science and Technology Master Plan (ASTMP), the Army Modernization Plan, the Defense Technology Area Plan (DTAP), and the Army s TWV Fleet Modernization Strategy. Work in this project is performed by Tank Automotive Research, Development and Engineering Center (TARDEC), Warren, MI; Army Research Laboratory (ARL), Aberdeen Proving Ground, MD; and Army Research, Development and Engineering Center (ARDEC), Picatinny, NJ.

Supplemental FY07 funding in this project addresses engineering and technical development of survivability enhancements for HMMWV family of vehicles currently engaged in Operation Iraqi Freedom. Effort will be in development of lightweight behind armor debris mitigation designs to reduce casualties from IED attack at a weight and space that can be integrated onto current force vehicles. It will leverage FY06 JIEDDO counter-EFP funding that does not include behind armor debris mitigation. Scientists and engineers with specific expertise in survivability technologies will conduct assessments of current capability by observing fielded units, help develop operational needs statements, conduct demonstrations of technical maturity of technology-based solutions best able to meet immediate operational needs of fielded units. Efforts are in coordination with the Assistant

| BUDGET ACTIVITY
3 - Advanced technology development | PE NUMBER AND TITLE
0603005A - Combat Vehicle and Automotive Advanced Technology | PROJECT
221 |

Program Manager for M1114, PM Light Tactical Vehicle, and the Developmental Test Command. Work for this supplemental effort is to be performed by ARL.

Accomplishments/Planned Program:	FY 2005	FY 2006	FY 2007
FY07 Base: AP against KE - In FY07, will evaluate AP system performance with candidate warhead designs; will conduct interceptor technology field demonstration in order to select interceptor and warhead design; will mature selected interceptor and warhead through design refinement and sensor redesign as well as by conducting kill mechanism and sensor component evaluations; will conduct lab evaluation of AP system performance with selected interceptor; and will begin detailed design of mature KE interceptor concept for fabrication in support of live fire KE experiments.			17710
FY07 Base: FCS Laser Hardened Vision/ Sensor/Eye Protection from Frequency-Agile Lasers: In FY07, will integrate and evaluate nonlinear optical materials solutions that protect the sensor and eyes from laser-induced damage and begin construction of a brass-board targeting system utilizing these concepts and will design laser protected FCS navigation camera system.			2924
FY07 Supplemental: Program funding provides for engineering and technical development of survivability enhancements for HMMWV family of vehicles currently engaged in Operation Iraqi Freedom. Concentration of effort will be in development of lightweight behind armor debris mitigation designs to reduce casualties from IED attack at a weight and space that can be integrated onto current force vehicles. It will leverage FY06 JIEDDO counter-EFP funding that does not include behind armor debris mitigation. Efforts are in coordination with the Assistant Program Manager for M1114, PM Light Tactical Vehicle, and the Developmental Test Command and are communicated weekly (through the Secure VTC connections and SIPRNET) with Multi-National Corps-Iraq and Multi-National Forces-Iraq staff elements. Program is geared to assist in developing and meeting immediate operational needs statements of fielded units.			3560
Total			24194

BUDGET ACTIVITY **3 - Advanced technology development**	PE NUMBER AND TITLE **0603005A - Combat Vehicle and Automotive Advanced Technology**	PROJECT **221**

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)			20712
Current BES/President's Budget (FY 2007)			24194
Total Adjustments			3482
Congressional Program Reductions			-78
Congressional Program Rescissions			
FY 2007 Supplemental Request			3560
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			

Change Summary Explanation:
Funding: FY 07 - Anticipated FY 07 supplemental Congressional increase (+3,560).

FY 07 Base Appropriation
20,634
FY 07 Title IX (Bridge) Appropriation
0
FY 07 Main Supplemental
3,560
Total
24,194

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY **4 - Advanced Component Development and Prototypes**		PE NUMBER AND TITLE **0603747A - Soldier Support and Survivability**						PROJECT **C08**	

COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
C08　　　RAPID EQUIPPING FORCE			29219						29219

A. Mission Description and Budget Item Justification: The US Army Rapid Equipping Force (REF) was established to provide urgently needed state-of-the-art technology to Soldiers in the field to meet immediate warfighter needs under operational conditions in the current theaters. The REF Forward Teams in Iraq and Afghanistan work with Combatant Commanders and the Soldiers to identify warfighter needs while REF Rear formulates solutions and rapidly delivers/fields new equipment to the deployed units. REF solutions are rapid responses to evolving, adaptable and changing, mostly asymmetric threats, in any operational environment. Projects will be aimed at improved mission mobility/survivability including evaluating concepts and hardware/software that accomplish this with current platforms and possible new platforms and or non-platform (satellites) solutions.

The REF mission is directed by the VCSA. The REF provides operational commanders with rapidly employable solutions to enhance lethality, survivability, situational awareness, command and control and force protection through insertion of COTS-GOTS equipment and Future Force technologies to remain ahead of an adaptive enemy. Failure to fully fund will hamper the REF's ability to perform this mission.

FY07 Supplemental funding will provide for safety confirmation, capabilities and limitation testing, GOTS/COTS and near term development, and science and technology development, as described below.

Accomplishments/Planned Program:	FY 2005	FY 2006	FY 2007
FY07 Base: Development of Biodegradable Soil Pentrant Dust Palliative for Land Surfaces			1594
FY07 Supplemental: Safety confirmation, capabilities and limitation testing. Asymmetric Warfare Group (AWG) will conduct Combat Evaluation of vehicle modifications that provide increased survivability. Specifically, enhancements to turret systems and use of ballistic blankets to mitigate direct fire and blast effects. Provide RDTE flexibility for emerging research shortfalls to enhance force protection and soldier survivability. Effort will focus on emerging enhancements in body armor.			5000
FY07 Supplemental: GOTS/COTS and near term developmental items to support Soldiers in OIF/OEF. Funding will cover an array of capabilities supporting our ability to see the enemy (both active and passive systems). The existing technologies and those currently under research and development are instrumental to the AWG's mission, specifically that of AW detection, mitigation, elimination, and defeat. Categories within this line will seek capabilities that include Quick Reaction ISR technology solutions, rapid assessment of COTS as a potential solution to existing capability shortfalls, and next generation optics and counter optics. Enhanced capabilities in Intelligence Surveillance Reconnaissance (ISR) (to include ISR Distribution, Technical Surveillance Equipment, Tagging capabilities, and long range fused and infrared systems) will be fielded, assessed and recommended for transition to Army forces. Lifecycle costs are included for those applicable categories			14625
FY07 Supplemental: Science and Technology development. Provides RDTE funds to replicate enemy devices encountered during combat operations and allows for developing countermeasures to mitigate and defeat these threats through TTP and technology development. Funds allow for the internal evaluation of non standard systems that provide enhanced lethality over standard Army systems. Internal			8000

evaluation will focus on alternatives to standard systems ranging from small arms to enhanced explosives. Concepts include rifle fired grenades, obscuration, and modifications that provide user enhancement. Derived new/enhanced capabilities will provide basis for nomination and transition to the Army.			
Total			29219

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**	**C08**

	FY 2005	FY 2006	FY 2007
B. Program Change Summary			
Previous President's Budget (FY 2006)			
Current BES/President's Budget (FY 2007)			29219
Total Adjustments			29219
Congressional Program Reductions			-6
Congressional Program Rescissions			
FY 2007 Supplemental Request			27625
Congressional Increases			1600
SBIR/STTR Transfer			
Adjustments to Budget Years			

Change Summary Explanation:

Funding: FY 07 - Congressional add for Biodegradable Soil Pentrant Dust Palliative for Land Surfaces (+1,600) and an anticipated FY 07 supplemental Congressional increase (+27,625).

FY 07 Base Appropriation
1,594
FY 07 Title IX (Bridge) Appropriation
0
FY 07 Main Supplemental
27,625
Total
29,219

C. Other Program Funding Summary	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
Other Procurement, Army	170743	40637	50679	51855	47544	52502	62012		475972
Operations and Maintenance, Army	71933	60624			2	2			132561
WTCV	1091								1091

BUDGET ACTIVITY **4 - Advanced Component Development and Prototypes**	PE NUMBER AND TITLE **0603747A - Soldier Support and Survivability**	PROJECT **C08**

D. Acquisition Strategy The REF provides urgently needed, state-of-the-art technology to soldiers in the field to meet immediate requirements. REF Rear evaluates, utilizes or adapts currently available military or civilian items (COTS/GOTS) which typically have not been type classified for Army-wide use but are available and adaptable to the current Combatant Operational Commander's needs. The REF solution is a rapid response to evolving, adaptable and changing asymmetric threats in any operational environment.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
4 - Advanced Component Development and Prototypes	**0603747A - Soldier Support and Survivability**	**C08**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Base: Biodegradable Soil Pentrant Dust Palliative for Land Surfaces Development								1594			1594	
Supplemental: GOTS/COTS for Soldier Support								14625			14625	
Supplemental: Science and Tech Development								8000			8000	
Subtotal:								24219			24219	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Supplemental: ATEC- Safety Testing	MIPR				1Q		1Q	5000			5000	
Subtotal:								5000			5000	

BUDGET ACTIVITY **4 - Advanced Component Development and Prototypes**			PE NUMBER AND TITLE **0603747A - Soldier Support and Survivability**									PROJECT **C08**	
IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
Project Total Cost:								**29219**			**29219**	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604321A - ALL SOURCE ANALYSIS SYSTEM**	PROJECT **B19**

COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
B19 ASAS EVOLUTIONARY ACQ (TIARA)			6739						6739

A. Mission Description and Budget Item Justification: The All Source Analysis System (ASAS) provides US Army commanders at echelons, from Theater Army HQs through battalion level, with a standard all source intelligence processing and reporting system. ASAS provides the means for gaining a timely and comprehensive understanding of enemy deployments, capabilities, and potential courses of action. The system interfaces with selected national, joint, and theater Intelligence assets, adjacent/higher/lower military intelligence preprocessors, Distributed Common Ground Station-Army (DCGS-A), Army Battle Command System (ABCS), and organic deployed Intelligence/Electronic Warfare (IEW) teams and assets. The ASAS product set currently includes: ASAS-Light, Intelligence Fusion Station (IFS), Analysis and Control Team Enclave (ACT-E), Analysis and Control Element (ACE), and the Communications Control Set (CCS). The ASAS system uses standard joint and Army protocols and message formats to interface with forward deployed sensor/teams, intelligence preprocessors and joint/national/Army C3I systems.

The FY 2007 Supplemental funds will support the Human Terrain System (HTS) which will enable Brigade Combat Teams (BCT) to understand the human/terrain/culture in which they now operate. The HTS capability will be deployed as part of the Joint Information Operations Capability-Iraq (JIOC-I) and Joint Information Operations Capability-Afghanistan (JIOC-A) to record, map, and share in-depth cultural information of immediate tactical relevance to commanders and analysts.

Accomplishments/Planned Program:	FY 2005	FY 2006	FY 2007
FY 07 Base: Conduct ASAS Light (SWB2) Continuous Evaluation			374
FY 07 Base: Resolve high priority Software Anomaly Reports (SARs), Safety, and Interoperability issues, comply with DOD mandates and provide Defense Information Infrastructure (DII) Common Operating Environment(COE)/Network Centric Enterprise Services(NCES) maintenance for ASAS Light, Analysis Control Team-Enclave (ACT-E), and ACE			2965
FY 07 Supplemental: Human Terrain System (HTS) support to OEF/OIF BCTs			3400
Total			6739

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604321A - ALL SOURCE ANALYSIS SYSTEM**	PROJECT **B19**

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)			3462
Current BES/President's Budget (FY 2007)			6739
Total Adjustments			3277
Congressional Program Reductions			-123
Congressional Program Rescissions			
FY 2007 Supplemental Request			3400
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			

Change Summary Explanation:
Funding: FY 07 - Anticipated FY 07 supplemental Congressional increase (+3,400).

FY 07 Base Appropriation
3,339
FY 07 Title IX (Bridge) Appropriation
0
FY 07 Main Supplemental
3,400
Total
6,739

C. Other Program Funding Summary	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
OPA (K28801) ASAS Modules			110631						110631
Spares (BS9704)			2300						

D. Acquisition Strategy The ASAS development program builds upon and expands the capabilities and functionality developed and produced in the ASAS Block I System including conversion to the Common Hardware Systems (CHS) and the Defense Information Infrastructure Common Operating Environment/Network Centric Enterprise Services (DII COE/NCES) and Modernized Integrated Database (MIDB). ASAS is being developed using a block upgrade evolutionary acquisition strategy.

BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604321A - ALL SOURCE ANALYSIS SYSTEM**	PROJECT **B19**

- ASAS Block I: Fielded ruggedized, tactical systems at Active Component (AC) corps, divisions, and the institutional training base.

- ASAS-Extended: Provided the rest of the AC and National Guard enhanced separate brigades with an interim ASAS capability running Block I software on commercial hardware.

- ASAS Block II: Uses common hardware and software, built on the DII COE/NCES standard. Provides open architecture, assured interoperability, and enhanced capability with room for growth. ASAS Light is the key intelligence provider for Army Battle Command Systems (ABCS).

- Army Software Blocking: ASAS Light synchronizes with Software Block 1 and 2 execution phases.

The program emphasizes multiple evolutionary deliveries, with incremental enhancements of ASAS products, integrated test, and continuous evaluation opportunities. ASAS builds upon experience and feedback gained from the fielded ASAS products and real-world operational deployments providing the soldier with improved reliability, supportability, and survivability.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604321A - ALL SOURCE ANALYSIS SYSTEM**	**B19**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
SARs, Safety and Interop	GSA D.O.	Overwatch, Austin, TX						1954	1-3Q		1954	
Human Terrain System (HTS)	TBD	TBD						3400	3-4Q		3400	
Subtotal:								5354			5354	

Remarks: --FY07 supplemental procures Human Terrain System (HTS) support for BCTs in OEF/OIF.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Facility Support	MIPR	Ft. Belvoir, VA						199	1-4Q		199	
Subtotal:								199			199	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Continuous Evaluation	MIPR	JITC						50	2Q		50	
Continuous Evaluation	MIPR	ATEC						150	2Q		150	
Subtotal:								200			200	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Contractor Spt	BPA	SYTEX, Inc. Vienna, VA						486	1-4Q		486	
Govt In House	Direct Allotment	PD IF, Ft. Belvoir, VA						500	1-4Q		500	
Subtotal:								986			986	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604321A - ALL SOURCE ANALYSIS SYSTEM**	PROJECT **B19**

Project Total Cost:						**6739**			**6739**

Schedule Profile (R4 Exhibit)

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	0604321A - ALL SOURCE ANALYSIS SYSTEM	B19

Event Name	FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
SDD and evaluation of ASAS Light (Software Blocking 2 (SWB2))																												
High priority. SARs, Saf., Interop, Dev. & Test, and maint for ASAS-L, ACE, & ACT-E																												
Human Terrain System (HTS) support																												

Schedule Detail (R4a Exhibit)

| BUDGET ACTIVITY
5 - System Development and Demonstration | PE NUMBER AND TITLE
0604321A - ALL SOURCE ANALYSIS SYSTEM | PROJECT
B19 |

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
SDD and evaluation of ASAS Light (Software Blocking 2 (SWB2))	1Q - 4Q	1Q - 4Q	1Q - 2Q				
High priority. SARs, Saf., Interop, Dev. & Test, and maint for ASAS-L, ACE, & ACT-E	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q		
Human Terrain System (HTS) support			3Q - 4Q	1Q - 3Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604601A - Infantry Support Weapons**	PROJECT **S61**

COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
S61 ACIS ENGINEERING DEVELOPMENT			10475						10475

A. Mission Description and Budget Item Justification: This project provides System Development programs with improved aviator safety, survivability, and human performance that amplify the warfighting effectiveness and facilitates full-spectrum dominance of the Army aircraft including the AH-64 Apache/Longbow, CH-47 Chinook, UH/HH-60 Blackhawk, Light Utility Helicopter, and Armed Reconnaissance Helicopter. These programs include soldier systems and equipment which are unique and necessary for the sustainment, survivability, and performance of Army aircrews and troops on the future integrated battlefield. The Air Warrior program will provide the aircrew with a systems approach to noise protection, three-dimensional audio and external audio capability, crash and post-crash survivability, concealment and environmental protection, ballistic protection, night vision capability and heads-up display, and directed energy eye protection. Air Warrior enables the Army Aviation Warfighter to meet the approved Operational Requirements Document mission length of 5.3 hours with aviators in full chemical/biological protective gear. Preplanned block improvements integrating new technologies into the Air Warrior system will continue to enhance and maximize aircrew mission performance, comfort, aircrew station interface, safety, and survivability. These funds also resource improved laser protection against emerging new threat systems and product improvement of existing helmets to improve performance and increased commonality. Maximum advantage will be taken of simulation to reduce program technical risk through early user evaluation and to reduce program design and test cost and schedules. This program does not duplicate any aircraft platform program efforts. Both joint and service independent efforts continue to be pursued under the scope of this program.

Supplemental funds are for the Landmark Program. This program is an urgent priority project involving the rapid development and/or procurement/issuing of equipment used to support Personnel Recovery operations and is executed at the direction of the VCSA/Army G3. The program currently consists of two distinct efforts: Guidepost - Personnel Locator Beacons and supporting architecture; Landmark - Blue Force Tracking Identification System.

Accomplishments/Planned Program:	FY 2005	FY 2006	FY 2007
FY 07 Base: Continue the integration of preplanned Air Warrior Block 2 improvements.			891
FY 07 Base: Aircrew wireless intercom system (AWIS) encryption certification			1426
FY 07 Supplemental: Landmark development and integration with additional platforms			8158
Total			10475

BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604601A - Infantry Support Weapons**	PROJECT **S61**

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)			2326
Current BES/President's Budget (FY 2007)			10475
Total Adjustments			8149
Congressional Program Reductions			-9
Congressional Program Rescissions			
FY 2007 Supplemental Request			8158
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			

Change Summary Explanation:
Funding: FY 07 - Anticipated FY 07 supplemental Congressional increase (+8,158).

FY 07 Base Appropriation
2,317
FY 07 Title IX (Bridge) Appropriation
0
FY 07 Main Supplemental
8,158
Total
10,475

C. Other Program Funding Summary	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
RDTE, A PE 0603827A, PROJ S51 - Adv Dev			3497						
Aircraft Procurement, Army SSN AZ3110 - ACIS			45546						

D. Acquisition Strategy The Landmark program supplemental requirement provides continuing development efforts to integrate the Landmark system with required platforms and optimize performance. These efforts are achieved through cost plus fixed fee contracts and MIPRs to other government agencies.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604601A - Infantry Support Weapons**	**S61**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Air Warrior Development	C - CPFF	Various						1705	1Q		1705	
Guidepost Development	C-CPFF	Various						500	3Q		500	
Landmark Development	MIPR	Various Government						4700	3Q		4700	
Subtotal:								6905			6905	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Air Warrior Matrix Support	MIPR and Project Order	Various Government						150	1-4Q		150	
Landmark Matrix Support	MIPR	AMRDEC						350	3Q		350	
Landmark Development Support	C-CPFF	Various						1233	3Q		1233	
Landmark Development Support	MIPR	CERDEC						568	3Q		568	
Subtotal:								2301			2301	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Air Warrior Developmental Testing	MIPR	Various						250	1-2Q		250	
Subtotal:								250			250	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

| BUDGET ACTIVITY 5 - System Development and Demonstration | | | | PE NUMBER AND TITLE 0604601A - Infantry Support Weapons | | | | | | | | PROJECT S61 |

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Air Warrior PM Administration	Allotment	Various Government						212	1-4Q		212	
Landmark PM Administration	C-FFP	Various						807	3Q		807	
Subtotal:								1019			1019	
Project Total Cost:								**10475**			**10475**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	0604601A - Infantry Support Weapons	S61

Event Name	FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

- (1) High Level Ballistic Protection Prototype Dev & Test Contract Award — ▲1
- (2) Block 2 System Integrator Award — ▲2
- Block 2 Test and Evaluation — Block 2 DT/OT
- Block 2 AWIS Encryption Certification — Block 2 AWIS Encryption Certification
- (3) Block 3 System Integrator Award — ▲3
- Block 3 Test and Evaluation Qualification — Block 3 DT/OT
- Guidepost Development — Guidepost Dev
- Landmark Development — Landmark Dev

0604601A
Infantry Support Weapons

Exhibit R-4
Budget Item Justification

BUDGET ACTIVITY **5 - System Development and Demonstration**		PE NUMBER AND TITLE **0604601A - Infantry Support Weapons**				PROJECT **S61**

Schedule Detail	**FY 2005**	**FY 2006**	**FY 2007**	**FY 2008**	**FY 2009**	**FY 2010**	**FY 2011**
High Level Ballistic Protection Prototype Dev & Test Contract Award	4Q						
Block 2 System Integrator Award	1Q						
Block 2 Test and Evaluation	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 2Q			
Block 2 AWIS Encryption Certification		1Q - 4Q	1Q - 4Q	1Q - 3Q			
Block 3 System Integrator Award			1Q				
Block 3 Test and Evaluation Qualification				2Q - 4Q	1Q - 4Q	1Q - 4Q	
Guidepost Development			3Q - 4Q	1Q - 2Q			
Landmark Development			3Q - 4Q	1Q - 4Q			

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intel - Eng**	**126**

COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
126 FAAD C2 ED			49325						49325

A. Mission Description and Budget Item Justification: The Forward Area Air Defense Command and Control (FAAD C2) system collects, digitally processes, and disseminates real-time target cueing and tracking information; the common tactical air picture; and command, control, and intelligence information to all Maneuver Air and Missile Defense (MAMD) weapon systems (Avenger and Man-Portable Air Defense System (MANPADS)), and joint and combined arms systems. The FAAD C2 system provides alerting data to air defense gunners, air space battle management, and up linking of mission operations, thereby enhancing force protection against air and missile attack. Situational awareness and targeting data is provided on threat aircraft, cruise missiles, and unmanned aerial vehicles (UAVs). The FAAD C2 system provides this mission capability by integrating dynamic FAAD C2 engagement operations software with the Multifunctional Information Distribution System (MIDS), Joint Tactical Terminal (JTT), Single Channel Ground and Airborne Radio System (SINCGARS), Enhanced Position Location System (EPLRS), Global Positioning System (GPS), Airborne Warning and Control Systems (AWACS), Sentinel radar, and the Army Battle Command System (ABCS) architecture. In addition, FAAD C2 provides interoperability with Joint C2 systems and horizontal integration with PATRIOT, Theater High-Altitude Area Defense (THAAD), Medium Extended Air Defense System (MEADS), and the Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) by fusing sensor data to create a scalable and filterable Single Integrated Air Picture (SIAP) and common tactical picture. The system software is a key component of the Air Defense and Airspace Management (ADAM) Cell that is being fielded to Stryker Brigade Combat Teams (SBCTs), Brigade Combat Teams (BCTs), and Division Headquarters as part of the Army's modularity concept. The FAAD C2 software has been fielded to ADAM Cells in the 3rd Infantry Division, 101st Air Assault Division, 4th Infantry Division, 1st Cavalry Division, 25th Infantry Division, 10th Mountain Division and to the first three SBCTs. System software is able to provide target data and engagement commands/status to MAMD Battalions. FAAD C2 is also a principal air defense system within the Homeland Security Program. Soldiers from activated ARNG MAMD battalions operate the FAAD C2 systems in the National Capital Region and other locations. In support of the Global War on Terrorism (GWOT), FAAD C2 systems are in MAMD units and ADAM Cells deployed to Iraq and Afghanistan. These FAAD systems are critical in providing the local air picture to supported units and higher headquarters.

FY 2007 Supplemental funds will support the Counter-Rockets, Artillery and Mortars (C-RAM) program. FAAD C2 is the integrating software that provides target track data and weapon system control for the initial C-RAM capability being deployed to Iraq. The primary mission of the C-RAM program is to develop, procure, field and maintain a system that can detect rocket, artillery or mortar launches; warn the defended area with sufficient time for personnel to take cover; intercept rounds in flight, thus preventing damage to ground forces or facilities; and enhance response to and defeat of enemy forces. C-RAM utilizes a system of systems (SoS) approach, and is comprised of a combination of multi-service fielded and non-developmental item (NDI) sensors, C2 systems and a modified U.S. Navy intercept system, with a low cost commercial off-the-shelf (COTS) warning system and wireless local area network. The system will be fielded to various echelons, fixed or semi-fixed-site, providing them correlated air and ground pictures and linking them to the ABCS and the Joint Defense Network (JDN), via various forms of communications, to provide situational awareness and exchange of timely and accurate information to synchronize and optimize automated Shape, Sense, Warn, Intercept, Respond and Protect decisions.

BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604741A - Air Defense Command, Control and Intel - Eng**	PROJECT **126**

Accomplishments/Planned Program:	FY 2005	FY 2006	FY 2007
FY07 Baseline - Continue FAAD C2 Block III software development and engineering, including external Beyond Line of Sight/Non Line of Sight BLOS/NLOS, SINCGARS Data Looping, IFF/SIF Mode 5/S development, and SIAP Block 0 & 1 implementation. Software is being fielded to active and reserve component MAMD Battalions, to units in support of Homeland Defense, and to ADAM Cells deployed in support modularity and of OIF/OEF.			7058
FY07 Baseline - Support of FAAD C2 software development for the new AMD Composite Battalions; unique software enhancements in support of Homeland Defense, and security accreditation upgrades. As a complementary Future Combat System (FCS), continue FAAD C2 integration and interoperability with FCS Mission Applications. Consistent with DA and DoD Guidance, migrate FAAD C2 Engagement Operations software modules to the Joint Command and Control (JC2) Mission Capability Packages.			3367
FY07 Supplemental - FAAD C2 forms the backbone of C-RAM C2 and continued development is expected to support this new mission. FY07 supplemental funding will enhance C-RAM Response capability (digital clearance of fires, etc.), initiate consolidation of workstations and initiate improvements in the Shape function, and conduct system integration testing at Yuma Proving Ground (YPG).			38900
Total			49325

BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604741A - Air Defense Command, Control and Intel - Eng**	PROJECT **126**

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)			10465
Current BES/President's Budget (FY 2007)			49325
Total Adjustments			38860
Congressional Program Reductions			-40
Congressional Program Rescissions			
FY 2007 Supplemental Request			38900
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			

Change Summary Explanation:
Funding: FY 07 - Anticipated FY 07 supplemental Congressional increase (+38,900).

FY 07 Base Appropriation
10,425
FY 07 Title IX (Bridge) Appropriation
0
FY 07 Main Supplemental
38,900
Total
49,325

C. Other Program Funding Summary	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
OPA 2, AD5050 - FAAD C2			42595						42595
Spares (BS9702) - FAAD C2			917						917

D. Acquisition Strategy The FAAD C2 acquisition strategy relies on evolutionary software development to rapidly meet the demands of air defense battle management/command, control, communications, computers, and intelligence (BM/C4I) requirements, and to keep pace with automated information technologies. The concept of evolutionary software development is being followed and will be accomplished in Blocks I, II, and III. Blocks I and II have been completed. FAAD C2 Block III is currently

being developed for both the Army's Active and Reserve components.

The C-RAM program is primarily comprised of a combination of multi-service sensors, C2 systems, a modified U.S. Navy intercept system and two low-cost commercial systems - a warning system and a wireless LAN. All COTS hardware and software are purchased through the installation contractor. All other hardware and software are purchased from the applicable PM or other Government organization. FAAD C2 forms the backbone of C-RAM C2 and continued development is expected to support this new mission.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604741A - Air Defense Command, Control and Intel - Eng**	**126**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Baseline -Northrop Grumman/TRW, BLK III	SS/CPIF	Carson, CA						6702	1Q		6702	
Baseline -Northrop Grumman/TRW	SS/T&M	Carson, CA						234	1Q		234	
Baseline -Program Management Administration	MIPR	Various						2033	2Q		2033	
Baseline -Software Engineering	Various	Various						1234			1234	
Supplemental -C-RAM Sense, Warn & Intercept	Various	Various						38900	1Q		38900	
Subtotal:								49103			49103	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
ADATD	MIPR	Ft Bliss, TX						81			81	
RTTC	MIPR	WSMR, NM						141			141	
Subtotal:								222			222	

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604741A - Air Defense Command, Control and Intel - Eng**	PROJECT **126**

Project Total Cost:						**49325**		**49325**	

Schedule Profile (R4 Exhibit)

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	0604741A - Air Defense Command, Control and Intel - Eng	126

Event Name	FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

Materiel Release

(1) V5.2 CMR, (2) MR V5.2, (3) MR V5.4 — V5.2 CMR △1, △2, MR V5.2, △3 MR V5.4

Block III Software Deliveries

(4) V5.4b SW Drop Initial, (5) V5.4b SW Drop Final — V5.4b SW Drop Initial △4 △5 V5.4b SW Drop Final

Block III Test

V5.4a Thread Test, V5.4b Thread Test — V5.4a Thread Test ▮ ▮ V5.4b Thread Test

(6) TRR V5.4b — △6 TRR V5.4b

(7) SCT V5.4b — △7 SCT V5.4b

V5.4 Upgrades — V5.4 Upgrades

CHS Upgrades — CHS Upgrades

C-RAM Demo, C-RAM Demo, C-RAM Demo, C-RAM Demo, C-RAM Demo — C-RAM Demo ▮ ▮ C-RAM Demo C-RAM Demo C-RAM Demo C-RAM Demo

(8) MR FAAD C2/C-RAM SW — △8 MR FAAD C2/C-RAM SW

(9) FAAD/C-RAM C2 Contract Award — Contract Award △9

C-RAM Increment I Development — C-RAM Increment I Development

0604741A
Air Defense Command, Control and Intel - Eng

Exhibit R-4
Budget Item Justification

BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604741A - Air Defense Command, Control and Intel - Eng**	PROJECT **126**

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Baseline Schedule:							
Materiel Release		1Q					
MR V5.2		4Q					
MR V5.4				2Q			
Block III Software Deliveries			2Q				
V5.4b SW Drop Initial			2Q				
V5.4b SW Drop Final			3Q				
Block III Test							
V5.4a Thread Test	4Q	1Q					
V5.4b Thread Test			3Q - 4Q				
TRR V5.4b			4Q				
SCT V5.4b			4Q				
V5.4 Upgrades				2Q - 4Q	1Q - 2Q		
CHS Upgrades		3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
C-RAM Demo		1Q - 2Q					
C-RAM Demo		4Q					
C-RAM Demo				4Q			
C-RAM Demo					4Q		
C-RAM Demo			4Q				
MR FAAD C2/C-RAM SW						2Q	
Supplemental Schedule:							
FAAD/C-RAM C2 Contract Award			2Q				
C-RAM Increment I Development			3Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**	**L59**

COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
L59 DIAGNOST/EXPERT SYS DE			11930						11930

A. Mission Description and Budget Item Justification: This project funds development of and system enhancements for the Next Generation Automatic test System (NGATS). The NGATS, also known as the Base Shop Test Facility (BSTF) (V)6, is a general-purpose automatic test system that will provide the full-spectrum test and diagnostic capabilities required to support current and future weapons systems and will enable retirement of aging and obsolete test equipment that continues to impose ever-increasing operations and support costs and logistics burdens. This system will ensure the Army maintains a robust, organic and deployable automatic test capability; and it will establish a single automatic test system in the Army. This project provides for continuing efforts to upgrade and improve general-purpose automatic test equipment ensuring it has the capabilities required to support all modular brigade combat team systems from armor to aviation by incorporating the technology necessary to support and sustain those systems wherever they are deployed; development and adaptation of automatic test equipment required to take full advantage of two-level maintenance and logistics transformation initiatives by overcoming existing deficiencies and gaps in organic diagnostic capabilities and data management; development and testing of common procedures utilizing existing test program sets and software applications; and market surveys of commercially available test equipment, methods and procedures to determine applicability to Army requirements. The test and diagnostic systems and procedures developed under this project are essential for ensuring the operational readiness, accuracy and effectiveness of the Army's warfighting systems. This project also funds the Army's participation in the Agile Rapid Global Combat Support (ARGCS) Advanced Concept Technology Demonstration (ACTD) which is developing a common automatic test system architecture that will enhance portability of all Services' test program sets and reduce Defense expenditures for test equipment and personnel.

FY07 funding in this program continues development in accordance with DoD and Army policy of the Army standard NGATS which will improve deployability and mobility of test and diagnostic equipment and replace obsolete Direct Support Electrical System Test Set (DSESTS) currently supporting Heavy Brigade Combat Team (HBCT) Abrams and Bradley weapons platforms. It will also develop or significantly modify test equipment to satisfy modular force and homeland security support requirements that cannot be accommodated with test equipment currently available in the commercial marketplace.

The FY 2007 main supplemental will allow accelerated development of aviation and ground support test and diagnostic capability planned for spirals 2 and 3 to facilitate a faster replacement of obsolete automatic test equipment (ATE) essential to providing support required to maintain operational readiness of critical warfighting weapon systems.

Accomplishments/Planned Program:	FY 2005	FY 2006	FY 2007
FY07 Base: Continues development of increment one of deployable automatic test system to replace obsolete DSESTS and support all HBCT weapons platforms.			4900
FY07 Base: Supports interservice ARGCS ACTD to ensure compliance with joint automatic test specifications.			530
FY07 Supplemental: Develops and integrates electro-optics testing capability in NGATS to support Apache, Kiowa Warrior and critical ground combat systems.			3000
FY07 Supplemental: Tests integration of test program sets for vital weapons platforms engaged in ongoing GWOT combat operations.			3500
Total			11930

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604746A - Automatic Test Equipment Development**	PROJECT **L59**

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)			5451
Current BES/President's Budget (FY 2007)			11930
Total Adjustments			6479
Congressional Program Reductions			-21
Congressional Program Rescissions			
FY 2007 Supplemental Request			6500
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			

Change Summary Explanation:
Funding: FY 07 - Anticipated FY 07 supplemental Congressional increase (+6,500).

FY 07 Base Appropriation
5,430
FY 07 Title IX (Bridge) Appropriation
0
FY 07 Main Supplemental
6,500
Total
11,930

C. Other Program Funding Summary	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
OPA3, MB4000, Integrated Family of Test Equipment (IFTE)			173362						173362

Comment: Reference C above: MB4000 includes baseline and main supplemental for MB4002, MB4003, MB4004 and MB4005.

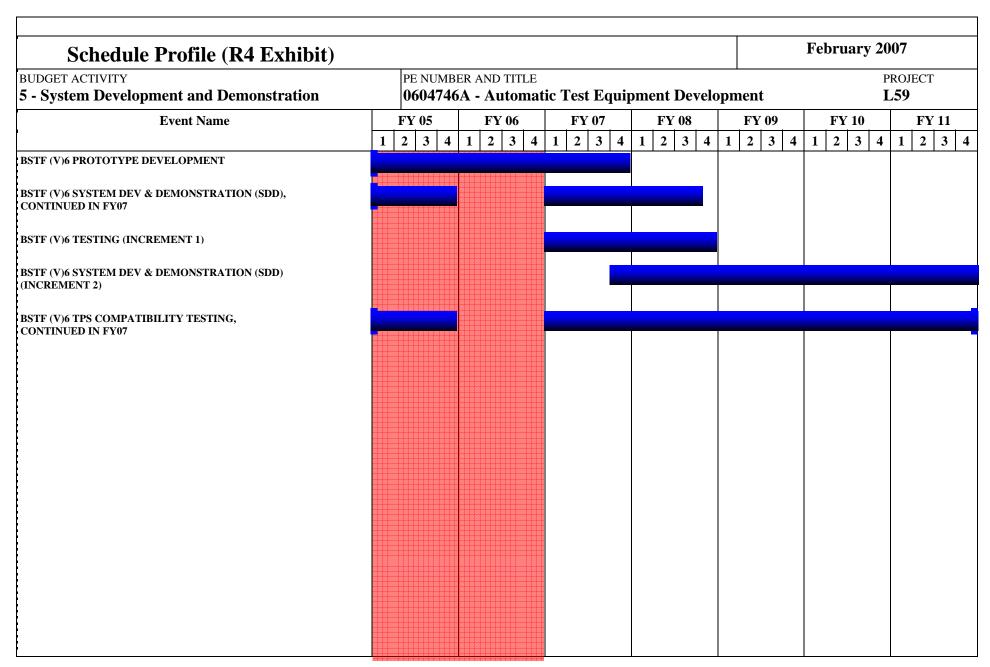| BUDGET ACTIVITY **5 - System Development and Demonstration**	PE NUMBER AND TITLE **0604746A - Automatic Test Equipment Development**	PROJECT **L59**

D. Acquisition Strategy This developmental project consists of cooperative in-house and competitive and sole-source contractual actions. When the necessary expertise and capability are available within the Department of Defense, services required for the individual development projects are ordered from the government source; otherwise commercial contracts are used. Equipment required for developmental projects is obtained by contract from the commercial supplier. Developmental efforts for the Next Generation Automatic Test System (NGATS) are being completed under a sole-source contract awarded to the prime contractor for the Integrated Family of Test Equipment off-platform testers. NGATS will follow an evolutionary acquisition strategy using spiral development. The NGATS Increment 1 will replace the Direct Support Electrical Systems Test Set (DSESTS). Increments 2 and 3 will replace the BSTF (V) 3 and BSTF (V) 5 systems respectively.

| BUDGET ACTIVITY
5 - System Development and Demonstration | PE NUMBER AND TITLE
0604746A - Automatic Test Equipment Development | PROJECT
L59 |

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Prototype Development	SS/CPFF	Northrop Grumman, Rolling Meadows, IL						679	2Q		679	
Prototype Development	SS/CPFF	Northrop Grumman, Rolling Meadows, IL						5849	4Q		5849	
Hardware Development	Various	Various						861	2Q		861	
Software Development - IFTE	Various	Various						861	2Q		861	
Subtotal:								8250			8250	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Project Management		Various						1398	1-4Q		1398	
Other Direct		Various						497	1-4Q		497	
Subtotal:								1895			1895	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Operational Testing	Various	Various						579	4Q		579	
Developmental Testing	Various	Various						1206	1Q		1206	
Subtotal:								1785			1785	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	**0604746A - Automatic Test Equipment Development**	**L59**

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												
Project Total Cost:								**11930**			**11930**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
5 - System Development and Demonstration	0604746A - Automatic Test Equipment Development	L59

Event Name	FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
BSTF (V)6 PROTOTYPE DEVELOPMENT																												
BSTF (V)6 SYSTEM DEV & DEMONSTRATION (SDD), CONTINUED IN FY07																												
BSTF (V)6 TESTING (INCREMENT 1)																												
BSTF (V)6 SYSTEM DEV & DEMONSTRATION (SDD) (INCREMENT 2)																												
BSTF (V)6 TPS COMPATIBILITY TESTING, CONTINUED IN FY07																												

0604746A
Automatic Test Equipment Development

Exhibit R-4
Budget Item Justification

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY
5 - System Development and Demonstration

PE NUMBER AND TITLE
0604746A - Automatic Test Equipment Development

PROJECT
L59

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
BSTF (V)6 PROTOTYPE DEVELOPMENT	1Q - 4Q	1Q - 4Q	1Q - 4Q				
BSTF (V)6 SYSTEM DEV & DEMONSTRATION (SDD)	1Q - 4Q						
CONTINUED IN FY07			1Q - 4Q	1Q - 4Q			
BSTF (V)6 TESTING (INCREMENT 1)			1Q - 4Q	1Q - 4Q			
BSTF (V)6 SYSTEM DEV & DEMONSTRATION (SDD) (INCREMENT 2)			4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
BSTF (V)6 TPS COMPATIBILITY TESTING	1Q - 4Q						
CONTINUED IN FY07			1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
BSTF (V)6 PROTOTYPE DEVELOPMENT	1Q - 4Q	1Q - 4Q					
BSTF (V)6 SYSTEM DEV AND DEMO (SDD) (INCREMENT 1)	1Q - 4Q	1Q - 4Q	1Q - 3Q				
BSTF (V)6 TESTING (INCREMENT 1)		1Q - 4Q	1Q - 4Q				
BSTF (V)6 TPS COMPATIBILITY TESTING	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	
BSTF (V)6 SYSTEM DEV AND DEMO (SDD) (INCREMENT 2)			4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY **6 - Management support**	PE NUMBER AND TITLE **0605706A - MATERIEL SYSTEMS ANALYSIS**				PROJECT **541**	

COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate
541 MATERIEL SYS ANALYSIS			21874				

A. Mission Description and Budget Item Justification: This program element funds Department of the Army (DA) civilians at the Army Materiel Systems Analysis Activity (AMSAA) to conduct its mission of materiel systems analysis.

AMSAA is the Army's center for item/system level performance analysis and certified data. In accomplishing its materiel systems analysis mission, AMSAA analyzes the performance and combat effectiveness of conceptual, developmental, and existing systems. Unique models and methodologies have been developed to predict critical performance variables, such as weapon accuracy, target acquisition, rate of fire, probability of inflicting catastrophic damage, and system reliability. AMSAA is responsible for the generation of these performance and effectiveness measures and for ensuring their standard use across major Army and Joint studies. AMSAA conducts and supports various systems analyses, such as: Analyses of Alternatives (AoAs), system cost/performance tradeoffs, early technology tradeoffs, weapons mix analyses, and requirements analyses. These analyses are used by Army and Department of Defense (DoD) leadership in making acquisition, procurement, and logistics decisions in order to provide quality equipment and procedures to the soldiers.

AMSAA's modeling and simulation (M&S) capabilities support the development, linkage, and accreditation of live, virtual, and constructive simulations, and provide unique tools that support systems analysis of individual systems and the combined-arms environment. AMSAA has resident and maintains a significant number of models and simulations, most of which were developed in-house to address specific analytical voids. This M&S infrastructure provides a hierarchical modeling process that is unique to AMSAA and allows for a comprehensive performance and effectiveness prediction capability that can be utilized to make trade-off and investment decisions prior to extensive and expensive hardware testing. AMSAA is the Army's executive agent for the verification, validation, and accreditation (VV&A) of item/system level performance models. In this role, AMSAA assists model developers with the development and execution of verification and validation (V&V) plans to ensure new models and simulations faithfully represent actual systems.

AMSAA serves as the Army's Executive Agent for reliability and maintainability standardization improvement by developing and implementing reliability and maintainability acquisition reform initiatives. AMSAA develops and applies reliability-engineering approaches that assess the reliability of Army materiel and recommends ways to improve reliability, thereby reducing the logistics footprint, reducing life cycle costs, and extending failure free periods for deployed equipment. AMSAA's electronic and mechanical Physics of Failure (PoF) program pioneered the Army's involvement in utilizing computer-aided engineering tools in the analysis of root-cause failure mechanisms at the component level during the system design process.

As the Army's center for materiel systems analysis, AMSAA provides the technical capability to support Army and DoD decision-makers throughout the entire materiel acquisition process in responding to analytic requirements across the full spectrum of materiel. It is critical that the Army have access to AMSAA's integrated analytical capability that provides timely, reliable, and high quality analysis on which Army leadership can base the complex decisions required to shape the Future Army. AMSAA has developed an integrated set of skills and tools focused on its core competencies to be responsive to the breadth and depth of systems analysis requirements critical in supporting Army Transformation decisions.

This Project funds the salaries of civilian employees assigned to the materiel systems analysis mission.

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY **6 - Management support**	PE NUMBER AND TITLE **0605706A - MATERIEL SYSTEMS ANALYSIS**	PROJECT **541**

The FY07 RDTE GWOT Supplemental requirements will fund two distinct projects; 1) Improvised Explosive Device (IED) Detection and Lethality Analysis, and 2) Fusion Oriented C4ISR Utility Simulation (FOCUS). The IED Supplemental Project is required to further the analytical capability to address the detectability and lethality of various IED configurations. Although some initial experiments and analyses have been conducted, they were accomplished with limited scope in terms of sensor types, sensor orientations, IED types, and IED configurations. This effort will extend the scope and knowledge base in this area provide the analytical community with a comprehensive set of IED data and corresponding detection and lethality analyses to present to senior defense leaders to properly address TTPs, guide decisions for mitigation strategies and technologies, and supply data for Army M&S. This project will include efforts in the following areas; experimentation and data collection on IED detection, characterization of selected IED lethality and crew compartment vulnerability, development and implementation of methodology focused on the relationship between ISR assets and IED threats, effect that IED jammers may have on communications, develop survivability metrics to support personnel casualty estimates, enhance current model capabilities to portray the IED threats and vulnerabilities with greater fidelity, and incorporate the data collected and observed effects into models to analyze the effectiveness of IED TTPs. The FOCUS Supplemental Project is required to fill an essential gap in the Army's M&S capabilities. There is currently no Army model capable of serving as an investigative tool for C4ISR and fusion issues. Although initial development of FOCUS has begun at AMSAA and advanced extremely well, the complexity has grown to the point that extensive model development and a formal Verification and Validation (V&V) effort is required. The supplemental funds will ensure timely completion of the model and its V&V so that the results can be used to impact future force decisions. This effort will include the following; development and implementation of Signals Intelligence methodology, the integration of Measurement and Signature Intelligence modeling, improved representation of communications, implementation of improved entity behaviors similar to the insurgency environment, developing methodology to represent perceived characteristics such as an entity's affiliation, and finally the V&V effort.

Accomplishments/Planned Program:	FY 2005	FY 2006	FY 2007
Funding directly pays DA civilians at AMSAA to develop and certify U.S. and foreign system performance and effectiveness data and conduct combat effectiveness analyses of materiel systems and technology base programs in support of DA, AMC, RDECOM, PEOs/PMs, TRADOC, and ATEC.			16464
FY07 GWOT Supplemental funding pays for analysis efforts in the area of IED detection, lethality, vehicle vulnerabilities, and the portrayal of these effects within the Army's force-on-force models. This program includes seven sub-categories; (1) IED Detection, (2) IED Lethality/Vehicle Vulnerability, (3) ISR Modeling Enhancements, (4) IED Countermeasure Impact on Blue Communications, (5) Personnel Survivability Data Generation Using the Modular Unixed-Based Vulnerability Estimation Suite (MUVES-S2)/Operational Requirement-Based Casualty Assessment (ORCA) Model, (6) Incorporate Integrated Casualty Estimation Methodology (ICEM)/ORCA/MUVES Model Enhancements to Assess Personnel Vulnerability to IED Attack, (7) IED Performance in the Combined Arms and Support Task Force Evaluation Model (CASTFOREM)/OneSAF Objective System (OOS) Vignettes.			5050
FY07 GWOT Supplemental request will pay for the development of Fusion Oriented C4ISR Utility Simulation (FOCUS). This PC-based test bed will be utilized for C4ISR related analyses such as determining quality of fusion algorithms, finding the best mix of sensors, effectiveness of sensor distribution, or effects of fusion on the Common Operational Picture. FOCUS will be used to test new/modified methodologies prior to implementation in Army models and simulations (i.e., CASTFOREM, CombatXXI, and OOS). This program includes the implementation of; (1) Signals Intelligence methodology, (2) Measurement and Signature Intelligence Modeling, (3) Modeling Communications, (4) Improved Behaviors, and (5) Additional perceptions to be fused. It also includes the verification and validation of the model.			360
Total			21874

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY **6 - Management support**	PE NUMBER AND TITLE **0605706A - MATERIEL SYSTEMS ANALYSIS**	PROJECT **541**

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)			16526
Current BES/President's Budget (FY 2007)			21874
Total Adjustments			5348
Congressional Program Reductions			-62
Congressional Rescissions			
FY 2007 Supplemental Request			5410
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			

Change Summary Explanation:
Funding: FY 07 - Anticipated FY 07 supplemental Congressional increase (+5,410).

FY 07 Base Appropriation
16,464
FY 07 Title IX (Bridge) Appropriation
0
FY 07 Main Supplemental
5,410
Total
21,874

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0203764A - Tactical Wheeled Vehicle Improvement Program**	**TW1**

COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
TW1 TWV PRODUCT IMPROVEMENT PROGRAM			10323						10323

A. Mission Description and Budget Item Justification: The Hardwire initiative is to provide improved vehicle protection at significantly reduced weight compared to existing armor systems, particularly for light tactical vehicles such as the High-Mobility Multipurpose Wheeled Vehicle (HMMWV) at a cost comparable to traditional steel and fiberglass compositions. The key feature of the Hardwire armor system is a steel wire-polymer composite that provides support to and significantly increases the strength of ceramic and metal layers without incurring the high costs of traditional composite materials. The goals of the program is to transition the armor production paradigm from a boutique, small-throughput operation to one similar to precision, high-throughput automotive manufacturing. By decreasing the weight of the protection system, it can possibly allow for larger cargo capacity, increased passenger weight, etc.

FY07 Supplemental funding for this program will continue the development and testing of the composite material solutions to provide armor vehicle protection at a reduced vehicle weight capability.

Accomplishments/Planned Program:	FY 2005	FY 2006	FY 2007
Supplemental: Performance and responsibilities for the manufacturing technology development of Hardwire armor technology, Phase I.			10323
Total			10323

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY **7 - Operational system development**	PE NUMBER AND TITLE **0203764A - Tactical Wheeled Vehicle Improvement Program**	PROJECT **TW1**

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)			
Current BES/President's Budget (FY 2007)			10323
Total Adjustments			10323
Congressional Program Reductions			
Congressional Rescissions			
FY 2007 Supplemental Request			10323
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			

Change Summary Explanation:
Funding: FY 07 - Anticipated FY 07 supplemental Congressional increase (+10,323).

FY 07 Base
0
FY 07 Title IX (Bridge)
0
FY 07 Main Supplemental
10,323
Total
10,323

C. Other Program Funding Summary	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
RDT&E characterization for coupon testing.			10323						10323

Comment: Coupon characterization testing, Live fire test of full up vehicle configuration, 3,000 mile vehicle performance test. 152-94-2 test standard for armor - note this is RDT&E phase not procurement

D. Acquisition Strategy Not applicable for this item.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0203764A - Tactical Wheeled Vehicle Improvement Program**	**TW1**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Product Development	CPIF	Hardwire, Pocomoke, MD						8467	2Q		8467	
Subtotal:								8467			8467	

Remarks: Effort will integrate Hardwire Armor into Army vehicles by developing materials and manufacturing capabilities to perform vehicle integration and scale up production.

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
REF Support	Direct	REF, Ft Belvoir, MD						856			856	
Subtotal:								856			856	

Remarks: Remarks: Hardwire LLC, Pocomoke, MD

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
APG, MD	MIPR	APG, MD						1000	2Q		1000	
Subtotal:								1000			1000	

Remarks: DARPA-developed Hardwire armor technology, Phase I. Materials and manufacturing research and development to scale-up production and improve performance of manufacturing technology for reduced weight armor vehicle protection systems. Coupon characterization testing, Live fire test of full up vehicle configuration, 3,000 mile vehicle performance test. 152-94-2 test standard for armor - note this is RDT&E phase not procurement. Testing will continue as materials are produced and installed on test vehicles.

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal:												

BUDGET ACTIVITY **7 - Operational system development**	PE NUMBER AND TITLE **0203764A - Tactical Wheeled Vehicle Improvement Program**	PROJECT **TW1**

Project Total Cost:						**10323**		**10323**	

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY **7 - Operational system development**	PE NUMBER AND TITLE **0303140A - Information Systems Security Program**	PROJECT **50B**

COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
50B BIOMETRICS			23805						23805

A. Mission Description and Budget Item Justification: Secretary of the Army (SA) is the Executive Agent for the DoD Biometrics (automated methods of human recognition) Program. The DoD Biometrics program consists of the DOD biometric Management Office (BMO), DoD Biometric Fusion Center (BFC), and Product Director (PD)-Biometrics, supports biometric research, testing, evaluation, and related activities. The BMO provides oversight, guidance, policy and standards support. The BFC provides technical expertise, early assessment of biometric capabilities, as well as industry and academia interface. PD-Biometrics provides acquisition support, repository management, DoD Automated Biometric Identification Support (ABIS) operations and maintenance, lifecycle management, and material development. The DoD Biometric program focuses on an enterprise approach, emphasizing interoperability and utilizing tested biometric technologies for incorporation into DoD business processes.

The FY 2007 Supplemental funds will move the biometrics program towards an enterprise solution, providing a multi-modal biometric capability to include local watch list synchronization, secure web portal access, and service-oriented architecture.

Accomplishments/Planned Program:	FY 2005	FY 2006	FY 2007
FY 2007 Base: Conduct test and evaluation of biometric commercial hardware and software to determine suitability for use within DoD. Conduct modeling and simulation efforts to support operational evaluation. Conduct DoD-wide working groups to synthesize enterprise biometric requirements and abilities into biometrics technology demonstrations and pilot activities. Support biometric integration in existing command and control and MIS systems.			15505
FY 2007 Supplemental: Move the biometrics program towards an enterprise solution, providing a multi-modal biometric capability to include local watch list synchronization, secure web portal access, and service-oriented architecture. Multi-modal biometric capability will include fingerprint, face, and iris as well as planning/provisions for future such as DNA, hand geometry, and palm prints.			8300
Total			23805

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0303140A - Information Systems Security Program**	**50B**

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)			14564
Current BES/President's Budget (FY 2007)			23805
Total Adjustments			9241
Congressional Program Reductions			-59
Congressional Program Rescissions			
FY 2007 Supplemental Request			8300
Congressional Increases			1000
SBIR/STTR Transfer			
Adjustments to Budget Years			

Change Summary Explanation:
Funding: FY 07 - Congressional add for Retinal/Iris Multimodal biometrics Technology (+1,000) and an anticipated FY 07 supplemental Congressional increase (+8,300).

FY 07 Base Appropriation
15,505
FY 07 Title IX (Bridge) Appropriation
0
FY 07 Main Supplemental
8,300
Total
23,805

C. Other Program Funding Summary	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
TA0600 - Information Systems Security Program			1465						
432144 - Operations and Maintenance Army			11821						

D. Acquisition Strategy The objective of this project is to develop the DoD Automated Biometrics Identification System (ABIS) and biometric capability that will be managed at the enterprise level. ABIS currently provides a biometric matching capability that can identify national security threats in support of the Global War on Terrorism for a variety of functions. Primary focus for FY06 was to establish the biometrics program of record and develop a framework for leveraging technologies and processes to facilitate better

BUDGET ACTIVITY **7 - Operational system development**	PE NUMBER AND TITLE **0303140A - Information Systems Security Program**	PROJECT **50B**

sharing of biometric data on persons of interest collected and forwarded to other DoD agencies and to develop a biometric implementation strategy for Homeland Security Presidential Directive (HSPD)-12. The program will also continue to support the testing and evaluation of products and other analysis and evaluation of applicable technologies as well as finalize and synthesize an interoperable biometric enterprise approach. FY07 and beyond will continue to support technology, pilot test and evaluation activities and the deployment of biometric devices and systems used for biometric data collection and processing, physical access, logical access, identity proofing, intelligence exploitation, and law enforcement. A board selected Program Manager will be appointed at PEO EIS to ensure that biometric activities continue to serve the DoD communities that use biometric technology.

ARMY RDT&E COST ANALYSIS (R3)

BUDGET ACTIVITY	PE NUMBER AND TITLE		PROJECT
7 - Operational system development	**0303140A - Information Systems Security Program**		**50B**

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Enterprise Development	Various	Various						23805	1-4Q		23805	
Subtotal:								23805			23805	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
N/A												
Subtotal:												

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
N/A												
Subtotal:												

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
N/A												
Subtotal:												

| **Project Total Cost:** | | | | | | | | **23805** | | | **23805** | |

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE		PROJECT
7 - Operational system development	**0303150A - WWMCCS/Global Command and Control System**		**C86**

COST (In Thousands)	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
C86 ARMY GLOBAL C2 SYSTEM			15954						15954

A. Mission Description and Budget Item Justification: Global Command and Control System-Army (GCCS-A): This project is the Army component system that directly supports the implementation of the Global Command and Control System-Joint (GCCS-J). GCCS-A provides automated command and control tools for Army Strategic and Operational Theater Commanders to enhance warfighter capabilities throughout the spectrum of conflict during joint and combined operations in support of the National Command Authority (NCA). The GCCS-A developed software systems will dramatically improve the Army's ability to analyze courses of action; develop and manage Army Forces; and ensure feasibility of war plans. GCCS-A will provide a client-server layered architecture and functional best-of-breed software applications to develop a totally integrated component of the Global Command and Control System-Joint (GCCS-J).

Justification for FY07 Supplemental Dollars:
Supplemental funding will support the Army's efforts to implement Oracle database applications ensuring continued interoperability between Global Command and Control System - Joint (GCCS-J) and Global Command and Control System - Army (GCCS-A). Interoperability between GCCS-J and GCCS-A is critical in providing Situational Awareness to OIF/OEF units and Commanders. Lack of interoperability will break the interface with GCCS-J and OIF/OEF deployed units, and Commands will not be provided with Situational Awareness received from the joint level nor will joint commanders receive critical data needed from GCCS-A to lead OIF/OEF operations.

Accomplishments/Planned Program:	FY 2005	FY 2006	FY 2007
Perform Systems Engineering - Base			1593
Software Development - Base			7866
Perform Data Engineering - Base			510
Conduct Test and Evaluation - Base			950
Perform Program Support and Management Efforts - Base			1235
Perform Systems Engineering - FY07 Supplemental			1140
Software Development - FY07 Supplemental			2660
Total			15954

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R2 Exhibit)

February 2007

BUDGET ACTIVITY **7 - Operational system development**	PE NUMBER AND TITLE **0303150A - WWMCCS/Global Command and Control System**	PROJECT **C86**

B. Program Change Summary	FY 2005	FY 2006	FY 2007
Previous President's Budget (FY 2006)			12200
Current BES/President's Budget (FY 2007)			15954
Total Adjustments			3754
Congressional Program Reductions			-46
Congressional Rescissions			
FY 2007 Supplemental Request			3800
Reprogrammings			
SBIR/STTR Transfer			
Adjustments to Budget Years			

Change Summary Explanation:
Funding: FY 07 - Anticipated FY 07 supplemental Congressional increase (+3,800).

FY 07 Base Appropriation
12,154
FY 07 Title IX (Bridge) Appropriation
0
FY 07 Main Supplemental
3,800
Total
15,954

C. Other Program Funding Summary	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Compl	Total Cost
BA8250 Global Command & Control System-Army (GCCSA)			28008						28008

Comment: Other Program Funding Summary includes $2,755 thousand in FY 2007 Supplemental Dollars.

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0303150A - WWMCCS/Global Command and Control System**	**C86**

D. Acquisition Strategy The GCCS-A Acquisition Decision Memorandum (ADM) dated 28 May 2002 directed development of a Block Implementation Plan (BIP), which identifies the Block 4-Operational requirements that will be developed from the GCCS-A unblocked 16 November 2000 Operational Requirement Document (ORD). GCCS-A Strategic Block 4 and the Operational Block 4 will coincide with the GCCS-J Blocks 4 and 5 [which begins the transition to Global Information Grid (GIG) Enterprise Services (GES)] Common Operating Environment (COE) 4.X, and Army Battle Command System (ABCS) 6.4 (Army Software Block 1). The next major block for GCCS-A will be Block 1 of Joint Command and Control (JC2). GCCS-A utilizes Commercial-Off-The-Shelf (COTS) and Government-Off-The-Shelf (GOTS) software products, in addition to developed software. Common Hardware (HW) platforms will be used within the Army to implement GCCS-A/GCCS-J, and include products from the Army's Common Hardware/Software-2 (CHS-2) contract. GCCS-A Block 4-Operational will be the next release and will coincide with GCCS-J Block 4.x , COE 4.7, and ABCS 6.4. GCCS-A Block 4 will coincide with GCCS-J Block V and Net-Centric Enterprise Services (NCES) Block I/II. Follow-on development of GCCS-A 4.1 and 4.2 releases maintains concurrency with GCCS-J and begins implementation of NET-CENTRIC Web Based services.

ARMY RDT&E COST ANALYSIS (R3)

February 2007

BUDGET ACTIVITY												PROJECT
7 - Operational system development			PE NUMBER AND TITLE									C86
			0303150A - WWMCCS/Global Command and Control System									

I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Software Development	HYBRID	Lockheed Martin Corp, Springfield, VA						3977	1-2Q		3977	
Software Development - FY07 Supp	HYBRID	Lockheed Martin Corp, Springfield, VA						2470	2-3Q		2470	
Matrix	MIPR	CECOM, Fort Monmouth NJ & Fort Belvoir, VA						420	1-2Q		420	
Technical Management	In House	PM Battle Command, Fort Monmouth, NJ						3469	1-4Q		3469	
Technical Management - FY07 Supp	In House	PM Battle Command, Fort Monmouth, NJ						190	1-4Q		190	
System Engineering	MIPR	Various						1593	2-4Q		1593	
System Engineering - FY07 Supp	MIPR	Lockheed Martin, Springfield, VA						1140	2-4Q		1140	
Subtotal:								13259			13259	

II. Support Costs	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Support Contractors								510	2Q		510	
Subtotal:								510			510	

III. Test And Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Government	MIPR	Various						550	2Q		550	
ATEC	MIPR	Various						400	1Q		400	
Subtotal:								950			950	

ARMY RDT&E COST ANALYSIS (R3)

February 2007

| BUDGET ACTIVITY
7 - Operational system development | | PE NUMBER AND TITLE
0303150A - WWMCCS/Global Command and Control System | | | | | | | | | PROJECT
C86 | |

IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Program Office Management	In House	PM BATTLE COMMAND, NJ						1235	1-4Q		1235	
Project Total Cost:								**15954**			**15954**	

Schedule Profile (R4 Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0303150A - WWMCCS/Global Command and Control System**	**C86**

Event Name	FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

IT - IPT — IT-OIPT Review and Family of Systems (FOS) / Client Server Certification

Software Development — CP1 and DEL ORD Updates

Software Development Block 4 — Block 4

(1) Block 4 I&T — 1

(2) Block 4 Operational Assessment/Site Test — 2

(3) Block 4 Release/Delivery — 3

Block 4 Hardware Fielding — Block 4

(4) NECC Milestone A — 4

Software Development NECC — NECC Development

(5) NECC Increment 1 MS B — 5

(6) NECC Increment 2 MS B — 6

Schedule Detail (R4a Exhibit)

February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational system development	**0303150A - WWMCCS/Global Command and Control System**	**C86**

Schedule Detail	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
IT - IPT	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Software Development	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Software Development Block 4	1Q - 4Q	1Q - 4Q	1Q - 4Q				
Block 4 I&T		2Q					
Block 4 Operational Assessment/Site Test		3Q					
Block 4 Release/Delivery		4Q					
Block 4 Hardware Fielding			1Q - 4Q	1Q - 4Q	1Q - 3Q		
NECC Concept Decision OIPT							
NECC Milestone A		2Q					
Software Development NECC				1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q - 4Q
NECC Increment 1 MS B				1Q			
NECC Increment 2 MS B						4Q	
GCCS-A Block 4 Development	1Q - 4Q	1Q - 4Q	1Q - 4Q	1Q			
NECC Milestone A		2Q					
NECC Increment 1 Development				1Q - 4Q	1Q - 4Q	1Q - 2Q	
NECC Increment 2 Development						3Q - 4Q	1Q - 4Q