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Exhibit R-2, PB 2011 Army RDT&E Budget Item Justification									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603008A: Electronic Warfare Advanced 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	61.192	57.199	50.359	0.000	50.359	53.896	54.932	55.855	59.409	0	443.201
TR1: TAC C4 TECHNOLOGY INT	36.435	37.344	37.862	0.000	37.862	37.882	38.415	38.497	40.354	Continuing	Continuing
TR2: Secure Tactical Information Integration	13.195	12.851	12.497	0.000	12.497	16.014	16.517	17.358	19.055	Continuing	Continuing
TR8: C3 DEMONSTRATIONS (CA)	11.562	7.004	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) mature and demonstrate technologies for secure, mobile, wireless networks that will operate reliably in diverse and complex terrain, in all environments. Technologies are matured and demonstrated to address the seamless integrated communications challenge with distributed, mobile, secure, self-organizing communications networks. A key objective is to demonstrate seamlessly integrated communications technologies across all network tiers, ranging from unattended networks and sensors through maneuver elements and airborne and space assets. To accomplish the goal, this PE investigates and leverages external communication technologies and combines technology options in a series of Command, Control, Communications, and Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) On-The-Move (OTM) demonstrations to measure the battlefield effectiveness (project TR1). This PE also provides: protection technologies for tactical wireless networks against modern network attacks; and supports collaborative technologies for information sharing between battlefield functional communities (project TR2). Several tasks are conducted in conjunction with the Defense Advanced Research Projects Agency (DARPA) and the other Services. Project TR8 funds congressional special interest items. Work in this PE is fully coordinated with PE 0602782A (Command, Control, Communications Technology), PE 0603772A (Advanced Tactical Computer Science and Sensor Technology), PE 0602120A (Sensors and Electronic Survivability) and 0602270A (EW 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 is performed by the Army Research, Development, and Engineering Command (RDECOM), Communications-Electronics Research, Development, and Engineering Center (CERDEC), Fort Monmouth, NJ and Aberdeen Proving Ground, MD.											

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APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE			
2040: Research, Development, Test & Evaluation, Army		PE 0603008A: Electronic Warfare Advanced Technology			
BA 3: Advanced Technology Development (ATD)					
B. Program Change Summary (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	62.353	50.458	50.599	0.000	50.599
Current President's Budget	61.192	57.199	50.359	0.000	50.359
Total Adjustments	-1.161	6.741	-0.240	0.000	-0.240
• Congressional General Reductions		-0.299			
• Congressional Directed Reductions					
• Congressional Rescissions		0.000			
• Congressional Adds		7.040			
• Congressional Directed Transfers					
• Reprogrammings	0.324	0.000			
• SBIR/STTR Transfer	-1.485	0.000			
• Adjustments to Budget Years	0.000	0.000	-0.240	0.000	-0.240
Change Summary Explanation					
FY10 Congressionally directed increases.					

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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
TR1: <i>TAC C4 TECHNOLOGY INT</i>	36.435	37.344	37.862	0.000	37.862	37.882	38.415	38.497	40.354	Continuing	Continuing

A. Mission Description and Budget Item Justification

Efforts in this project mature and demonstrate key communications, mobile networking technologies to enable commanders and individual Soldiers to survive and fight by providing secure, reliable, mobile communications network solutions that function in complex and diverse terrain. The efforts here concentrate on three major goals: provide a series of technology demonstrations of Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) capabilities to significantly reduce the risk associated with the networks of networks concept; provide critical links in the ability to communicate and move large amounts of information across the force structure in a seamless, integrated manner conducive to a highly mobile manned and unmanned force structure; and assess the Technology Readiness Level (TRL) of emerging network technologies in an operationally relevant environment. 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 project is performed by the Army Research, Development, and Engineering Command (RDECOM), Communications-Electronics Research, Development, and Engineering Center (CERDEC), Fort Monmouth, NJ and Aberdeen Proving Ground, MD.

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

	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Program #1 Antenna Technologies: This effort matures and demonstrates low cost, power efficient, antenna technologies for terrestrial and tactical satellite ground. In FY09, matured and demonstrated a low profile Ku/Ka single beam SATCOM antenna; matured single beam low profile hybrid Ka/Q band satellite communications (SATCOM) on-the-move (OTM) antenna. In FY10, complete development of low profile Ka/Ku single beam SATCOM OTM antenna and conduct field demonstration; integrate Ka/Q band power amplifiers into a single prototype and conduct lab testing; mature and evaluate single beam low profile hybrid Ka/Q band SATCOM OTM antenna; mature small aperture Blue Force Tracking (BFT) SATCOM terminal to enable accurate position location dissemination using military satellite to replace costly commercial satellite services. In FY11, will demonstrate Ka/Q band SATCOM OTM antenna with integrated power amplifier and tracking system; will complete and demonstrate a very low profile blue force tracking (BFT) antenna system; will mature conformal and embedded antenna design; will conduct sub-system compatibility testing for a selected platform using electromagnetic	3.943	5.961	8.967	0.000	8.967

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Modeling and Simulation (M&S); and will develop mockup test bed for validation. Work related to this effort is also being accomplished under PE 0602782A/project H92. 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 Wireless Information Assurance (IA): This effort matures and demonstrates technologies to protect wireless tactical networks against computer network attacks with an emphasis on defending against attack methods not previously seen. In FY09, matured and demonstrated IA technologies enabling information exchange across activity domains ensuring survivability of tactical networks and critical information against information warfare attacks; matured and demonstrated network management/information assurance fault correlation engine that reduces the software footprint by creating an integrated suite of network operations tools. In FY10, mature and demonstrate a Mobile Ad Hoc Networking (MANET) malicious code detection service to thwart zero day attacks; demonstrate a response system that receives the root cause analysis from the correlation engine then develops and recommends a response plan to address the security problem; mature autonomous adaptive middleware and evaluate in a laboratory environment.In FY11, will develop and mature the mission generation engine to allow for dynamic reconfiguration of a subset of network parameters (e.g. topology) based on mission specifications; will demonstrate computer network protection using Mission to Policy Translation Engine and Adaptive Middleware,		3.736	9.245	9.296	0.000	9.296

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Tactical Public Key Infrastructure, and Cross Domain Solutions in a relevant environment. Work related to this effort is also being accomplished under PE 0602782A/project H92. 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 Proactive Integrated Link Selection for Network Robustness: This effort demonstrates proactive link selection algorithms to optimize use of all available networked communications link types, maximizes network throughput and simplifies network planning and maintenance. In FY09, completed implementation of deployed mode link selection algorithms; conducted final architecture, design maturation, and integration of planning and deployed mode link selection algorithms; conducted performance testing in a relevant field environment of all planning and deployed mode link selection technologies with representative hardware, and transitioned link selection optimization algorithms to PM WIN-T, Navy Office of Naval Research and Naval Research Laboratory, PEO Missiles and Space and PEO STRI. FY 2009 Accomplishments: FY 2009		8.811	0.000	0.000	0.000	0.000

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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 #4 Dismounted Communications in Urban Terrain: This effort matures and demonstrates technologies that enable dismounted soldier wireless networked communications in complex terrain such as urban environments and inside buildings. In FY09, matured communications capabilities for dismounted Soldier operating in highly complex communications environments through the use of adaptive processing, networking algorithms, and network security features such as employing random noise waveforms and policy based network management, fault correlation low probability of intercept, low probability of detection technologies to reduce communications systems vulnerability and improve reliability. In FY10, adapt and mature space time adaptive processing for use on dismounted Soldiers radio equipment; develop a tactical one-way certifiable Cross Domain information sharing device. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base		2.447	1.955	0.000	0.000	0.000

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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 #5 Applied Communications and Information Networking (ACIN): This effort adapts and matures emerging commercial wireless, networked communications technologies for military use. In FY09, matured and demonstrated commercial networking and communications technology in intelligent agents and mobile networking; provided rapid adaptation of commercial communications equipment for military use through the development of new architectures combining commercial and military unique technologies; provided modeling and simulation and planning tools for communications/network planning. In FY10, adapt and mature emerging commercial (802.16e, 802.22 and 802.11n) wireless networking technology for military use by adapting the technology for use in military frequency bands and assessing security vulnerabilities; mature radio frequency propagation modeling and simulation, and planning tools for use in urban environments and complex terrain; evaluate and adapt commercial software defined radios with cognitive radio technology. In FY11, will develop and evaluate emerging cognitive networking technologies for wireless networks including cognitive radios, cross layer network protocols, and investigate associated communications, architectures, and hardware components; will develop, digitize satellite communications (SATCOM) system technologies to reduce size, weight power and cost (SWAP-C) for strategic ground terminals. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base		1.346	1.628	1.642	0.000	1.642

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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 #6 C4ISR On-The-Move (OTM): In FY09, assessed the capability, functionality, and performance of the FY09 programmed increments of Joint Tactical Radio System (JTRS) Handheld Manpack Small (HMS) for dismount Soldiers, unmanned ground sensors, non-line of sight launch system and intelligent munitions systems; assessed WIN-T increment 2 and 3 functionality including enhanced quality of service architecture, information assurance solutions to enable network security across a wide area network using multiple encryption devices with minimal loss of data, and selected network operations management functions; assessed the technology readiness level (TRL) of Army S&T efforts maturing in the FY09 timeframe in an operationally relevant field environment; continued to support Future Combat System (FCS) technical evaluations to explore FY09 programmed increments of Army Battle Command. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO	10.848	0.000	0.000	0.000	0.000
Program #7	0.000	8.304	8.131	0.000	8.131

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
C4ISR On-The-Move (OTM): In FY10, assess increments of JTRS HMS and Ground Mobile Radio (GMR) for mounted & dismounted Soldiers, unmanned ground and aerial sensors, non-line of sight launch systems and intelligent munitions systems: will continue to assess WIN-T functionality including quality of service architecture, information assurance solutions to enable network security with minimal data loss, selected network operations management functions, and associated networks; will assess the TRL of S&T efforts in an operationally relevant environment; will continue to support tech evaluations to explore programmed increments of Battle Command and Unified Battle Command. In FY11, will assess the capability, functionality, and performance of network integrated architectures and emerging capabilities that support the Army Brigade Combat Team Modernization Plan; will evaluate the FY11 programmed increments of JTRS for mounted and dismounted Soldiers and platforms, unmanned ground and aerial sensors, and intelligent munitions systems in support of the Army Brigade Combat Team Modernization Plan; will evaluate WIN-T functionality, including enhanced quality of service architecture, information assurance solutions to enable network security across a wide area network using multiple encryption devices with minimal loss of data, and selected network operations management functions; will assess the TRL of Army S&T efforts maturing in the FY11 timeframe in an operationally relevant environment to facilitate Technology Transition; will continue to support research and development (R&D) of enabling Future Force capabilities and accelerate such capabilities to enhance the current force.						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
Base FY 2011 Plans: FY 2011 Base						
OCO FY 2011 Plans: FY 2011 OCO						

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Program #8		5.304	5.331	5.345	0.000	5.345
C4ISR Network Mining: This effort matures data mining that provides the link between the transaction and analytical systems on large-scale information technology. Data mining consists of five major elements: extract, transform, and load transaction data onto the data warehouse system; storing, and managing the data in a multidimensional database system; providing data access; analyzing the data by application software; and presenting the data in a useful format. In FY09, matured network data mining software to analyze security concerns and systems vulnerability, and system of systems architecture via (1) vulnerability analysis at the waveform and networking layers, and (2) development of software and/or hardware to secure systems for deployment; analyzed spectrum availability and utilization; investigated cognitive networking technologies and its impacts on current and future force networks. In FY10, conduct analysis and perform modeling and simulation (M&S) of various fidelity of intelligence, surveillance, and reconnaissance (ISR) performance over restricted bandwidth networks; examine and represent in modeling and simulation (M&S) varying fidelity carrier to noise radio and voice over Internet protocol (IP) solutions for future force networks. In FY11, will apply network mining software to analyze emerging protocols and standards for use over military networks; will evaluate commercial systems for technology insertion to programs of record and develop architecture to decrease stovepipe and proprietary network implementations.						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
Base FY 2011 Plans: FY 2011 Base						
OCO FY 2011 Plans: FY 2011 OCO						

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Program #9 Cognitive Networking: This effort matures and demonstrates technologies enabling wireless networks to sense network and spectrum conditions, and automatically adapt for more efficient use. In FY10, mature cognitive radio policy software by standardizing Dynamic Spectrum Access (DSA) policy language to allow interoperability of disparate Next Generation (XG) radio communications platforms; mature spectrum sensors interoperable with cognitive antennas to increase spectrum efficiency and allow opportunity for use of spectrum gray spaces leading to more efficient use of current spectral resources; mature wafer antenna technology and superconducting microelectronics based all digital transceiver and digital signal processing (DSP) components to provide an increase in satellite communications (SATCOM) channel and throughput capacity; mature cooperative SATCOM network routing technology to provide for SATCOM signal blockage mitigation. In FY11, will mature the cognitive network tools developed under PE 0602782A/project H92 to be able to evaluate and analyze networks with and without cognitive capabilities; will mature RF based technologies. Work related to this effort is also being accomplished under PE 0602782A/project H92. 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	3.979	4.481	0.000	4.481
Program #10 Small Business Innovative Research/Small Business Technology Transfer Programs		0.000	0.941	0.000	0.000	0.000

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
<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	36.435	37.344	37.862	0.000	37.862
C. Other Program Funding Summary (\$ in Millions) N/A					
D. Acquisition Strategy N/A					
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.					

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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
TR2: <i>Secure Tactical Information Integration</i>	13.195	12.851	12.497	0.000	12.497	16.014	16.517	17.358	19.055	Continuing	Continuing

A. Mission Description and Budget Item Justification

Efforts in this project mature and demonstrate technologies with enhanced capabilities to analyze, plan, execute, and assess operations, at tactical and strategic operational levels, by integrating decision support and intelligence based software to provide a more comprehensive understanding of a given adversary and the environment. Efforts mature and demonstrate technologies to improve mission execution success by providing software to more tightly couple operations and intelligence, and to better facilitate collaboration between individuals and teams. Efforts in tactical cross domain solutions demonstrate software based technologies enabling information sharing across operations and intelligence security domains that replace current application specific hardware solutions. 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 project is performed by the Army Research, Development, and Engineering Command, Communications (RDECOM)-Electronics Research Development and Engineering Center (CERDEC), Fort Monmouth, NJ and Aberdeen Proving Ground, MD, and the Army Research Laboratory (ARL), Adelphi, MD.

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

	FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Program #1 Theater Effects Based Operations (TEBO) Advanced Concept Technology Demonstration (ACTD): The TEBO ACTD demonstrates an Effects-based Operations (EBO) process and provides United States Forces Korea with enhanced capabilities to analyze, plan, execute, and assess effects-based operations at the strategic-theater and operational levels by integrating a framework of processes, tools, and tactics, techniques and procedures. In FY09, initiated the sixth and final developmental spiral; participated in the two annual Korean exercises - Key Resolve (2QFY09) and Ulchi Forward Guardian (4QFY09) as well as in Pacific Command's (PACOM) Terminal Fury exercise; transitioned activities from the TEBO toolset to Defense Information Systems Agency (DISA) and Net-Centric Enterprise Services (NCES).	13.195	0.000	0.000	0.000	0.000

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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 #2 Collaborative Battle Management: This effort mature and demonstrate technologies to improve sharing and understanding of data between the intelligence and operations communities. In FY10, leverage existing net-centric data strategies and extend by adding concept-based data meta-tagging; mature portability framework and develop implementations for the Force XXI Battle Command, Brigade and Below (FBCB2), and Distributed Common Ground Station-Army (DCGS-A) environments; mature a universal collaboration bridge permitting disparate collaboration schemes such as mIRC (internet relay chat), Jabber, and SameTime to interoperate; mature a digital mission representation and its data, information and decision requirements to enable the ability to share and understand data between communities of interest (Intel/Ops/Geospatial); mature software to associate Intel requirements, geospatial data needs and collection opportunities with operational mission tasks for Intel and Battle Command (BC) communities; mature integrated Intel/Ops decision support tools to include planning and execution software support services, priority information requests management, and collection/sensor management. In FY11, will mature universal collaboration bridge to include additional capabilities, such as white boarding; will mature and demonstrate software to associate Intel requirements, geospatial data needs and collection opportunities with operational mission tasks for Intel and BC communities and allow for Warfighter modification of system information to adapt to dynamic enemy tactics; will mature Integrated Intel/Ops services		0.000	6.681	6.947	0.000	6.947

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
for collaboration/visualization across software environments; will mature and demonstrate integrated intelligence/operations decision support tools for planning and execution software support services, priority information requests management, and collection/sensor management; will mature and demonstrate multi-touch based mission collaboration. 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 Tactical Cross Domain Solutions: This effort matures and demonstrates Service Oriented Architecture (SOA) Cross Domain Solution (CDS) to enable assured sharing of information across multiple security domains. In FY10, mature and demonstrate cross domain web services on high assurance operating systems (e.g., Green Hills Integrity, Lynx Works Lynx OS) that provide trusted labeling service (applies security labeling classification and releasability labels to data), data regarding service (used to sanitize security labeled messages before they cross security domain boundaries), and domain boundary service (ensures that cross security domain requirements are fulfilled before information is released from one security domain to another). In FY11, will demonstrate one-way Position Location Information (PLI) transfer from unclassified to classified networks, and further mature guard to process two-way digital data flow; will mature the prototype and demonstrate/test a general tool to be able to be used by any program to identify malicious code both with a developed application or on the network.		0.000	5.926	5.550	0.000	5.550

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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 #4 Small Business Innovative Research/Small Business Technology Transfer Programs	0.000	0.244	0.000	0.000	0.000
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
Base FY 2011 Plans: FY 2011 Base					
OCO FY 2011 Plans: FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	13.195	12.851	12.497	0.000	12.497

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Exhibit R-2A, PB 2011 Army RDT&E Project Justification		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i>	R-1 ITEM NOMENCLATURE PE 0603008A: <i>Electronic Warfare Advanced Technology</i>	PROJECT TR2: <i>Secure Tactical Information Integration</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
D. Acquisition Strategy N/A		
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.		

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Exhibit R-2A, PB 2011 Army RDT&E Project Justification									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 3: Advanced Technology Development (ATD)				R-1 ITEM NOMENCLATURE PE 0603008A: Electronic Warfare Advanced Technology				PROJECT TR8: C3 DEMONSTRATIONS (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
TR8: C3 DEMONSTRATIONS (CA)	11.562	7.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
A. Mission Description and Budget Item Justification Congressional Interest Item funding for C3 Demonstrations.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Program #1 Portable Mobile Emergency Broadband Systems (PMEBS): In FY09, this Congressional Interest Item developed rapidly deployed wireless ad-hoc portable communications system, that is self-configuring, self-healing and multi-hopping (AES -256 mesh capable) to meet low cost, near-term, off-the shelf solutions which can supplement existing technology gaps for the last mile communications. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO							3.987	3.184	0.000	0.000	0.000
Program #2							1.197	0.000	0.000	0.000	0.000

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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 3: Advanced Technology Development (ATD)		R-1 ITEM NOMENCLATURE PE 0603008A: Electronic Warfare Advanced Technology		PROJECT TR8: C3 DEMONSTRATIONS (CA)		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	Base FY 2011	OCO FY 2011	Total FY 2011
Advanced Wireless Technologies: In FY09, this Congressional Interest Item developed a radio technology engine, which combined individual radio transmitter and receiver chipsets into a one piece radio transceiver chipset design that could be integrate on any wireless communication device platform or Personal Communications Device (PCD). 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 Applied Communications and Information Networking (ACIN): In FY09, this Congressional Interest Item matured and demonstrated commercial networking and communications technology in intelligent agents and mobile networking; provided rapid adaptation of commercial communications equipment for military use through the development of new architectures combining commercial and military unique technologies; provided modeling and simulation and planning tools for communications/network planning. FY 2009 Accomplishments: FY 2009		3.189	3.024	0.000	0.000	0.000

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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 3: Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603008A: Electronic Warfare Advanced Technology	PROJECT TR8: C3 DEMONSTRATIONS (CA)			
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 #4 Maritime C4ISR System: In FY09, this Congressional Interest Item developed the ability to deploy a sensor platform that does not require significant local infrastructure support. FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010 Base FY 2011 Plans: FY 2011 Base OCO FY 2011 Plans: FY 2011 OCO	0.797	0.000	0.000	0.000	0.000
Program #5 Networked Dynamic Spectrum Access Investigation Enhanced MBITR: In FY09, this Congressional Interest Item researched and developed dynamic spectrum access (DSA) scalability and evaluated all DSA functionality.	2.392	0.000	0.000	0.000	0.000

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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 3: Advanced Technology Development (ATD)	R-1 ITEM NOMENCLATURE PE 0603008A: Electronic Warfare Advanced Technology	PROJECT TR8: C3 DEMONSTRATIONS (CA)			
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 #6 Cybersecurity in Tactical Environments. This is a Congressional Interest Item.	0.000	0.796	0.000	0.000	0.000
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
Base FY 2011 Plans: FY 2011 Base					
OCO FY 2011 Plans: FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	11.562	7.004	0.000	0.000	0.000

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Exhibit R-2A, PB 2011 Army RDT&E Project Justification		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY 2040: <i>Research, Development, Test & Evaluation, Army</i> BA 3: <i>Advanced Technology Development (ATD)</i>	R-1 ITEM NOMENCLATURE PE 0603008A: <i>Electronic Warfare Advanced Technology</i>	PROJECT TR8: <i>C3 DEMONSTRATIONS (CA)</i>
C. Other Program Funding Summary (\$ in Millions) N/A		
D. Acquisition Strategy N/A		
E. Performance Metrics Performance metrics used in the preparation of this justification material may be found in the FY 2010 Army Performance Budget Justification Book, dated May 2010.		

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