Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Army											DATE: April 2013	
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)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	-	67.673	50.661	40.416	-	40.416	35.523	35.161	35.874	36.373	Continuing	Continuing
TR1: *TAC C4 Technology Int*	-	35.603	30.939	29.088	-	29.088	23.964	23.480	23.766	24.212	Continuing	Continuing
TR2: *Secure Tactical Information Integration*	-	20.089	19.722	11.328	-	11.328	11.559	11.681	12.108	12.161	Continuing	Continuing
TR8: *C3 DEMONSTRATIONS (CA)*	-	11.981	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

FY14 funding realinged to higher priority efforts and to consolidate Mission Command efforts into 0603772A/101.

A. Mission Description and Budget Item Justification

This program element (PE) matures and demonstrates technologies to address the seamless integrated tactical communications challenge with distributed, secure, mobile, wireless, and self-organizing communications networks that will operate reliably in diverse and complex terrains, in all environments. Efforts demonstrate seamlessly integrated communications and information security technologies across all network tiers, ranging from unattended networks and sensors through maneuver elements using airborne and space assets. Project TR1 investigates and leverages antennas; wireless networking devices, protocols, and software; information assurance techniques and software; and network operations tools and techniques; and combines these and other technology options in a series of command, control, communications, and computers, intelligence, surveillance, and reconnaissance (C4ISR) on-the-move (OTM) network modernization demonstrations to measure their potential battlefield effectiveness. Project TR2 researches information security devices, techniques and software to protect tactical wired and wireless networks against modern network attacks; and improves collaborative software, techniques and devices for information sharing between battlefield functional communities. Project TR8 funds congressional special interest items.

Work in this PE is complimentary of PE 0602782A (Command, Control, Communications Technology), and fully coordinated with PE 0602120A (Sensors and Electronic Survivability), PE 0602270A (Electronic Warfare Technology), PE 0602783 (Computer and Software Technology), PE 0603001A (Warfighter Advanced Technology) and PE 0603772A (Advanced Tactical Computer Science and Sensor Technology).

The cited work is consistent with the Assistant Secretary of Defense for Research and Engineering Science and Technology priority focus areas and the Army Modernization Strategy.

Work is performed by the Army Research, Development, and Engineering Command (RDECOM), Communications-Electronics Research, Development, and Engineering Center (CERDEC), Aberdeen Proving Ground, MD.

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B. Program Change Summary ($ in Millions)	**FY 2012**	**FY 2013**	**FY 2014 Base**	**FY 2014 OCO**	**FY 2014 Total**
Previous President's Budget	69.852	50.661	52.353	-	52.353
Current President's Budget	67.673	50.661	40.416	-	40.416
Total Adjustments	-2.179	0.000	-11.937	-	-11.937
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.639	-			
• SBIR/STTR Transfer	-1.540	-			
• Adjustments to Budget Years	-	-	-11.937	-	-11.937

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
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COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
TR1: *TAC C4 Technology Int*	-	35.603	30.939	29.088	-	29.088	23.964	23.480	23.766	24.212	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project matures and demonstrates key communications and mobile networking technologies, such as antennas, radio components, networking software and novel techniques that provide secure, reliable, mobile network solutions that function in complex and diverse terrains. This project concentrates on three major goals: to provide a series of technology demonstrations of new and emerging Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) technology enabled capabilities to significantly reduce risk associated with the network-of-networks concept; to provide critical improvements in the ability to communicate and move large amounts of information across the force structure in a seamless, integrated manner supporting the Army's highly mobile manned and unmanned force structure; and to assess the Technology Readiness Level (TRL) of emerging network technologies in an operationally relevant environment.

This project supports Army science and technology efforts in the Command, Control, Communications and Intelligence, Ground, Air and Soldier portfolios.

The cited work is consistent with the Assistant Secretary of Defense for Research and Engineering science and technology priority focus areas and the Army Modernization Strategy.

Work in this project is performed by the Army Research, Development, and Engineering Command (RDECOM), Communications-Electronics Research, Development, and Engineering Center (CERDEC), Aberdeen Proving Ground, MD.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Antenna Technologies	11.176	4.513	2.615
Description: This effort matures and demonstrates low cost, power efficient, communications and electronic warfare (EW) antenna technologies for terrestrial and tactical satellite ground terminals. The focus is to reduce the visual signature and cost of antennas and reduce the number of antennas required on platforms by proving the capability to transmit and receive on multiple frequency bands, such as X/K/KA/Q for SATCOM and ultra-high frequency/very-high frequency (UHF/VHF) and L Band for terrestrial communications on the same antennas. Work accomplished under PE 0602782A/project H92 compliments this effort.			
FY 2012 Accomplishments: Investigated and refined embedded armor antennas; fabricate internet protocol based antenna feed demonstrators; integrated antenna apertures and feed systems into vehicle armor; supported the Tank and Automotive Research Development and Engineering Center during ballistic assessments of embedded armor antennas; demonstrated integrated K/Ka/Q band low profile			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
electronically steered SATCOM antenna; integrated single package Ka/Q band integrated power amplifier (PA) into the K/Ka/Q band SATCOM antenna; refined Blue Force Tracker (BFT) SATCOM antenna network concepts and demonstrated medium scale performance. ***FY 2013 Plans:*** Fabricate and demonstrate multifunctional armor-embedded and conformal antennas that support both communications and counter improvised explosive device (IED) missions by allowing multiple radios and jammers to use a single integrated antenna system; demonstrate K/Ka/Q band antenna integrated with the Ka/Q band PA in a relevant environment; design and fabricate artificial impedance surfaces to cover unmanned aerial system (UAS) components such as rudders, stabilizers and struts to mitigate radio frequency blockage of antennas mounted on the UAS. ***FY 2014 Plans:*** Will demonstrate conformal antenna (including antenna feed system) integrated into Army ground platform; develop and fabricate EW antennas for nontactical vehicles; develop radio frequency (RF) multiplexers to enable multiple communications systems to use a single antenna simultaneously within the same frequency bands.			
Title: Applied Commercial Communications and Information Networking technologies ***Description:*** This effort adapts, matures and assesses emerging commercially available wireless, networked communications and antenna technologies for military use. Work accomplished under PE 0602270A/project 906 and PE 0603270A/K15 compliments this effort. ***FY 2012 Accomplishments:*** Assessed emerging commercial wireless communications technologies for suitability in military wireless communications networks; adapted, matured and demonstrated commercial wireless network operations control and visualization solutions in Army tactical environments; assessed emerging 4G commercial cellular technologies (e.g., long term evolution) for future adaptation to military networks.	1.543	0.000	0.000
Title: C4ISR On-The-Move (OTM) ***Description:*** This effort provides a venue for the demonstration of new and emerging C4ISR technology-enabled capabilities. This venue performs risk mitigation and candidate assessment/selection for Army Network Integration Exercise (NIE) events by assessing the technology readiness level (TRL) of Army science and technology (S&T) and best of Industry efforts. ***FY 2012 Accomplishments:*** Assessed the capability, functionality, and performance of network integrated architectures and emerging capabilities that support the Army Brigade Combat Team Modernization Plan and Network Modernization Strategy; assessed the FY12 programmed increments of Joint Tactical Radio System (JTRS) for mounted and dismounted Soldiers and platforms, unmanned ground	9.452	9.097	9.221

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
and aerial sensors, and intelligent munitions systems in support of the Army Brigade Combat Team Modernization Plan; assessed Warfighter Information Network-Tactical (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 TRL of Army science and technology (S&T) efforts maturing in the FY12 timeframe in a operationally relevant environment to facilitate technology transition. ***FY 2013 Plans:*** Assess the capability, functionality, and performance of network integrated architectures and emerging capabilities that support the Army Brigade Combat Team Modernization Plan and Network Modernization Strategy; finalize the evaluation of Capability Sets 13/14, hybrid/bridging architectures and conduct initial assessments of Capability Sets 15/16 and the associated programmed increments of JTRS (Mounted & Dismounted), WIN-T Inc 3, and NETT Warrior programs of record; provide a system of systems environment/venue to evaluate technical progress, assess the next generation of technologies, facilitate technology transition, and perform risk mitigation and candidate assessment/selection for future Army NIE events by assessing the TRL of Army S&T and best of Industry efforts maturing in the FY13 timeframe; continue to support research and development (R&D) of enabling Future Force capabilities and accelerate such capabilities to enhance and modernize the current force. ***FY 2014 Plans:*** Will assess the capability, functionality, and performance of network integrated architectures and emerging capabilities that support the Army Brigade Combat Team Modernization Plan and Network Modernization Strategy; finalize the evaluation of hybrid/bridging architectures for Capability Sets 14/15 and conduct initial assessments of Capability Sets 16/17 architectures to support the associated programmed increments of WIN-T and Nett Warrior; provide a system of systems environment/venue to evaluate technical progress, assess the next generation of Army technologies and facilitate transition of S&T efforts; perform risk mitigation and TRL assessment of Army S&T programs and best of Industry efforts maturing in the FY14 timeframe for selection/ inclusion as systems under evaluation for future Army NIEs; and continue to support R&D of enabling Future Force capabilities and accelerate capabilities to enhance the current force such as Technology Enabled Capability Demonstrations.			
Title: C4ISR Network Mining ***Description:*** This effort matures data mining that provides the link between the transactions to be analyzed and analytical systems on large-scale information technology. Data mining consists of five major elements: 1. extract, transform, and load transaction data onto the data warehouse system; 2. store and manage the data in a multidimensional database system; 3. provide data access; 4. analyze the data using application software; and 5. present the data in a useful format. ***FY 2012 Accomplishments:***	3.105	0.000	0.000

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Applied network mining software to determine how a military software applications (Apps) store can be efficiently deployed on the network; coded and assessed advanced spectrum management software tools to facilitate network operations where various types of networks converge using multiple transmission media.			
Title: Wireless Mobile Networking	5.976	12.954	8.316
Description: This effort matures and demonstrates components, software, algorithms and services that enable wireless networks to operate more efficiently in both the use of RF spectrum and networking resources for terrestrial and SATCOM systems. This effort matures and demonstrates software to improve performance of wireless tactical networks in austere and hostile RF spectrum environments by composing and coding algorithms and protocols that sense network and spectrum conditions, to automatically adapt network node behaviors to make more efficient use of available resources. Efforts target improving RF communications performance in complex terrain, enabling communications while simultaneously operating electronic protection devices. Additionally this effort defines a reference architecture for a modular, open systems approach for military communications devices. Efforts also include adapting commercial wireless technology for use in the tactical environment. Work accomplished under PE 0602782A/project H92 and 0603008A TR2 compliments this effort.			
FY 2012 Accomplishments: Matured all-digital strategic ground terminal architecture to enable improved tactical responsiveness to changing network needs and enable SATCOM to be responsive to cognitive ground networks; matured digital transmitter and receiver interfaces and subsystem integration; matured and demonstrated all-digital receiver; demonstrated configurable baseband processor for increased SATCOM throughput and integrated with digital receiver for proof of concept; defined requirements and architecture for digital transmitter; demonstrated government off-the-shelf (GOTS) applique to enable operation of commercial wireless third generation (3G) communications in Army tactical environments with the addition of WiFi mesh, multicast routing and automated frequency, sensing and control.			
FY 2013 Plans: Mature, integrate and assess all-digital strategic ground terminal, consisting of digital transmitter and receiver interfaces, all-digital receiver and baseband signal processor; fabricate all-digital transmitter; integrate and mature GOTS applique with commercial-off-the-shelf (COTS) 3G network software applications and algorithms to apply enhanced, military grade security and network management functionality that enables tactical use of COTS hand held computing devices such as smart phones and tablets, and enables the Soldier to manage these devices as an edge extension for voice, data and video on existing and emerging tactical networks; demonstrate militarized smart devices in a field relevant environment.			
FY 2014 Plans: Will mature all-digital strategic SATCOM terminal components to increase SATCOM channel capacity and reduce vulnerability to interference; for Army tactical ground communications, adapt and mature directional radio networking protocols and routing			

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
algorithms to improve spectral efficiency, network robustness and resistance to radio frequency (RF) interference; adapt and integrate spatial diversity signal processing to improve wireless communications performance in complex (e.g. urban, forested) terrain; design modular waveform components and mature algorithms that support simultaneous communications and blue force jamming; design radio reference architecture, specification and application program interfaces (API) to standardize radio modules and minimize life cycle cost of Army tactical communications devices; continue to investigate, adapt and develop techniques to allow use of commercial cellular and smart devices in Army communications bands and environments.			
Title: Network Operations (NetOps) ***Description:*** This effort matures network operations tools (network management, information dissemination management and cyber security) to simplify the planning, management and troubleshooting of complex tactical communications networks. Focus is on network visualization, incident correlation and decision aids that assist soldiers with managing the complexity inherent with wireless, On-the-Move communications networks. ***FY 2012 Accomplishments:*** Demonstrated interoperability among disparate NetOps tools and technologies, leveraging existing GOTS/COTS tools being used in the field; took advantage of NetOps tools that make sense while reducing the overall number of tools to significantly improve the network planning, management, configuring and monitoring of tactical networks; research and improve tactical NetOps visualization capabilities and techniques based on how the Warfighter can best interpret the information; consolidated and demonstrated NetOps tools (network management, information assurance, information dissemination management and signals management) into an intuitive multi-touch (touch screen) user environment to produce a more collaborative and centralized NetOps management capability. ***FY 2013 Plans:*** Mature and code software that integrates network visualization tools on touch-screen environments with network information correlation tools that enhance interoperability among disparate NetOps tools; assess the accuracy and usability of visualization and correlation tools in the laboratory and through user feedback, and modify the software to improve the effectiveness of the new tool set; mature a software engine that translates network information sources to any format for use by network correlation tools. ***FY 2014 Plans:*** Will develop and demonstrate software for automating the decision and implementation processes for configuring and re-configuring network components; develop a collaborative execution environment in an effort to provide a decision enhancing capability enabling unit signal officers to collaborate when managing tactical communication resources.	4.351	4.375	3.936
Title: Networking technologies for Wireless Personal Area Networks (WPAN)	0.000	0.000	5.000

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Description: This effort develops and matures wireless personal area network (WPAN) technology for the Soldier in a manor approved by the National Security Agency (NSA) for up to Secret data traffic. This effort is coordinated with PE 0603001A/Project J50. ***FY 2014 Plans:*** Will design and analyze networking architectures, frameworks and protocols to link devices into individual WPANs while allowing multiple WPANs to operate concurrently without interference; design and code a tactical standard waveform and protocols for up to Secret short range wireless communication between WPAN nodes that meet NSA security requirements; mature, integrate and demonstrate wireless hardware components for integration onto Soldier-borne equipment such as hand held computing platforms, radios, weapon sites, information displays and Soldier-borne sensors to develop a WPAN without impacting the SWAPC of these devices.			
Accomplishments/Planned Programs Subtotals	35.603	30.939	29.088

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

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.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
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COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
TR2: *Secure Tactical Information Integration*	-	20.089	19.722	11.328	-	11.328	11.559	11.681	12.108	12.161	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This project matures and demonstrates software, algorithms and services with enhanced capabilities to analyze, plan, execute, and assess operations, at tactical and strategic levels, by integrating decision support and intelligence based software to provide a more comprehensive understanding of adversaries and environments. Efforts mature and demonstrate collaboration and decision support software to potentially improve mission execution success by more tightly coupling operations and intelligence functions, and better facilitate collaboration between individuals and teams. This project codes, optimizes and demonstrates software-based tactical cross domain solutions that enable operations and intelligence information sharing across security domains to replace current application-specific hardware solutions. This project also codes, optimizes and demonstrates cyber security software to proactively defend wireless networks against cyber attack using nontraditional methodologies.

This project supports Army science and technology efforts in the Command, Control, Communications and Intelligence, Ground, Air and Soldier portfolios.

Note: In FY14 funding for Mission Command (MC) efforts previously conducted in in this Project has been moved to PE/Project 0603772/101 to consolidate MC efforts into a single PE/Project.

The cited work is consistent with the Assistant Secretary of Defense for Research and Engineering Science and Technology priority focus areas and the Army Modernization Strategy.

Work in this project is performed by the Army Research, Development, and Engineering Command, Communications (RDECOM)-Electronics Research Development and Engineering Center (CERDEC), Aberdeen Proving Ground, MD.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Collaborative Battle Management	6.815	6.563	0.000
Description: This effort matures and demonstrates MC software to improve sharing and understanding of data between the intelligence and operations communities. In FY14 funding for this effort has been moved to PE/Project 0603772/101 to consolidate Mission Command efforts into a single PE/Project.			
FY 2012 Accomplishments:			

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Developed collaboration services to include browser-based components for visualization of strategic battle command data feeds and communications status; developed software environment permitting applications to execute on different operating systems (e.g., Windows, LINUX); completed multi-touch (MT)-based mission collaboration software including information link analysis tools and Tactical Ground Reporting System (TiGR)-compatible MT display; developed and matured general device-independent MT application framework; complete Geo terrain analytical tools and transition these efforts to PM Mission Command and PM Commercial Joint Mapping Toolkit. ***FY 2013 Plans:*** Code, assess and demonstrate collaboration and interoperability services such as the ability to interface Joint Battle Command Platform (JBC-P) vehicle variable message format chat with DISA-standard Extensible Messaging and Presence Protocol text chat in support of the Army Common Operating Environment; fabricate/code and assess multi-touch mission command (MC) applications such as an electronic sand table that streamline and improve the ability to plan, wargame and monitor Army missions; code, assess and integrate software information assurance techniques into MC software to reduce vulnerabilities; mature and validate software design techniques that present information to users more intuitively and easier to understand to help cognitively unburden the Soldier using MC applications at all echelons.			
Title: Tactical Cross Domain Solutions ***Description:*** This effort matures and demonstrates service oriented architecture (SOA) cross domain solutions (CDS) to enable assured sharing of information across multiple security domains. ***FY 2012 Accomplishments:*** Improved the one-way position/location information data transfer and two-way digital data flow cross-domain software, integrated it with a military-hardened, tactical (small size, weight, and power) hardware platform complete with the necessary embedded security features to undergo NSA security certification and accreditation and demonstrate it on Ground Soldier equipment in a field environment.	5.015	0.000	0.000
Title: Information Assurance ***Description:*** This effort matures and demonstrates cyber security technologies that create new methods for proactively defending wireless networks against cyber attack using nontraditional methodologies. Work being performed under PE /project 0602782/H92 complements this effort. ***FY 2012 Accomplishments:*** Integrated improved detection and automated response capabilities into Intrusion Detection System (IDS) that resides on tactical host platforms, providing maximum protection to the host system with minimal resource usage; design an IDS response component that collaborates with an Information Operations (IO) response component to use intelligence threat information to	8.259	13.159	11.328

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B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
ascertain exactly who or what is causing the cyber threat; integrated the IDS agents monitoring host platforms and the network into a common architecture; evaluated the IDS components in a lab environment to ascertain the maturity of the functionality of each component of the architecture; analyzed and assessed models of cyber attack behaviors to determine adversary objectives, attack vectors, and classes of attack to effect computer network defense (CND); coded and integrated a cyber toolkit for CND including dynamic protocols, a dynamic decentralized network remapping framework, and obfuscation (confusion) software for masking network role, system identity, and cyber security protection from potential attackers. ***FY 2013 Plans:*** Demonstrate improved detection and automated response software and algorithms that reside on Army tactical host platforms and provide maximum protection to the host system against cyber threats with minimal platform resource usage; code and demonstrate an IDS response component that collaborates with an IO response component to ascertain the source of a network attack; demonstrate IDS software agents operating on host platforms and across the network using a common network protection architecture; demonstrate a cyber toolkit for CND including dynamic protocols, a dynamic decentralized network remapping framework and software for concealing network role and system identity for cyber security protection from potential attackers; adapt and demonstrate military grade security for use on commercial smart devices like smartphones and tablets; optimize and implement security software standards on Army networks to provide a trustworthy operating environment for commercial smart devices; code and mature automated analysis functionalities to assure software is clean of malicious content and vulnerabilities introduced by poor software coding techniques; validate the feasibility of employing network morphing software that dynamically modifies aspects of networks in order to prevent potential cyber attackers from accurately mapping networks in preparation for a cyber attack. ***FY 2014 Plans:*** Will mature dynamic moving target defense internet protocol (IP) and port network hopping techniques; design and code software to dynamically modify operating systems and applications to increase an adversary's work factor to exploit Army networks; design and code moving target defense capability management software tools; demonstrate integration of IP and port hopping, with protection capabilities within the Army's CND common operating environment (COE); develop cyber attack prediction techniques to include associated consequences to help reason on adversarial intent and motivation to predict cyber related attacks on Army networks and associated consequences; utilize polymorphic and metamorphic transformation engines to develop new techniques to detect malware variants; design and code algorithms to assess software at the binary code level to detect malicious intent; demonstrate software assurance COE capability to seamlessly integrate Army software assurance tools with those developed by other DoD laboratories; design and code protection software tools for server components and design and code network security controls for the tactical cloud computing environment.			
Accomplishments/Planned Programs Subtotals	20.089	19.722	11.328

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

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.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army			DATE: April 2013
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COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
TR8: *C3 DEMONSTRATIONS (CA)*	-	11.981	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Congressional Interest Item funding for C3 Demonstrations.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
Title: Cyber Security/Information Assurance Research	11.981	0.000	0.000
Description: This is a Congressional Interest Item. This effort matures and demonstrates cyber security technologies that create new methods for proactively defending wireless networks against cyber attack using nontraditional methodologies. Work accomplished under PE 0602782A/project H92 and 0603008A TR2 compliments this effort. ***FY 2012 Accomplishments:*** Designed and demonstrated a software hardening tool for operating systems, servers and applications that enabled the rapid assessment and remediation of vulnerabilities that make them susceptible to computer network attack (CNA); developed a software framework that provides common services and communications between disparate computer network defense (CND) tools that provided near-real time cyber security situational awareness and reduced CND development time by removing CND component redundancy; designed and coded software toolkit that automates the DoD Information Assurance Certification and Accreditation Process (DIACAP) process; designed and coded key management interface (KMI) software for current (non KMI-aware) cryptographic devices to receive existing encrypted key material while leveraging the security capabilities provided by the new key management devices; enabled the secure use of low cost commercial smart devices on mobile tactical networks by designing and coding security software enabling them to comply with DoD cyber security requirements for use on mobile tactical networks; designed and coded an automated software quality assurance tool for validating source code against coding standards and performs rudimentary vulnerability analysis to provide greater confidence that software is clean of programmer error or malicious intent.			
Accomplishments/Planned Programs Subtotals	11.981	0.000	0.000

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2014 Army		DATE: April 2013
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C. Other Program Funding Summary ($ in Millions)

Remarks

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.