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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Office of Secretary Of Defense	DATE: February 2010
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APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 6: <i>RDT&E Management Support</i>				PE 0605170D8Z: <i>Support to Networks and Information Integration</i>							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	13.707	14.796	15.091	0.000	15.091	15.344	15.684	15.913	16.129	Continuing	Continuing
001: <i>Command Information Superiority Architecture</i>	5.224	5.641	5.752	0.000	5.752	5.849	5.978	6.066	6.148	Continuing	Continuing
002: <i>Defense Architecture Repository</i>	1.201	1.296	1.322	0.000	1.322	1.344	1.374	1.394	1.413	Continuing	Continuing
003: <i>Integrated Planning and Management</i>	1.933	2.086	2.128	0.000	2.128	2.164	2.212	2.244	2.274	Continuing	Continuing
004: <i>Support to NII Mission Requirements</i>	5.349	5.773	5.889	0.000	5.889	5.987	6.120	6.209	6.294	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element supports studies and analysis in the areas of networks, information integration, defense-wide command and control (C2), and communications. This program is funded under Budget Activity 6, RDT&E Management Support because it includes studies and analysis in support of RDT&E efforts.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	14.642	14.916	0.000	0.000	0.000
Current President's Budget	13.707	14.796	15.091	0.000	15.091
Total Adjustments	-0.935	-0.120	15.091	0.000	15.091
• Congressional General Reductions		0.000			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Program Adjustment	-0.935	-0.120	15.091	0.000	15.091

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APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0605170D8Z: Support to Networks and Information Integration	
<u>Change Summary Explanation</u> FY 2009: Program adjustment -0.935 million. FY 2010: FFRDC reductions -0.058 million, Economic Assumptions -0.062 million. FY 2011: Program Adjustments 15.091		

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 6: RDT&E Management Support				R-1 ITEM NOMENCLATURE PE 0605170D8Z: Support to Networks and Information Integration				PROJECT 001: Command Information Superiority Architecture			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
001: Command Information Superiority Architecture	5.224	5.641	5.752	0.000	5.752	5.849	5.978	6.066	6.148	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
The CISA program provides a structured planning process based on Information Technology (IT) best business practices to define current and objective capabilities for IT support to assigned missions in a net-centric environment. CISA is the DoD program that provides architectures in compliance with the Clinger-Cohen Act, OMB Circular A-130, E-Gov Act and other related higher level guidance from the Federal CIO Council and the Federal Enterprise Architecture Program Management Office, which mandates the development and use of architectures as validation for IT investment decisions. The CISA program develops and maintains the Global Information Grid Enterprise Architecture, the Department's enterprise architecture as directed by Title 40. It supports the development of the framework, processes, and standards for developing and maintaining a DoD federated enterprise architecture. CISA is the leading developer for the net-centric reference model, the standard evaluation guide used by DoD Program Managers at all echelons of command for transitioning DoD programs to the net-centric environment. The CISA program supports the development of architectural standard tools and systems, including the DoD Architectural Framework manual and artifacts as well as facilitating the effective use of architectures in IT portfolio management. Develop and maintain key GIG policy and guidance documents that drive the acquisition, transition to and operation of a net-centric GIG; the implementation of policy/guidance through a set of critical supporting activities such as IT standards management, and DoD transition to Internet Protocol version 6 (IPv6); Real Time Service and IP convergence and enforcing policy through key enterprise governance mechanisms. Review and assess Command and Control, Computers, Communications and Intelligence Support Plans / Information Support Plans for the DoD CIO, identifying interoperability, supportability, net-centric and integration issues.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Command Information Superiority Architectures Accomplishments and Plans							5.224	5.641	5.752	0.000	5.752
FY 2009 Accomplishments: Continued to review and revise GIG related policies to support net-centric operations.											

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APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0605170D8Z: Support to Networks and Information Integration		PROJECT 001: Command Information Superiority Architecture		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
- Continued to support the evolution of GIG NetOps and configuration management concepts to improve IA, information sharing and interoperability. Incorporate, as appropriate, portfolio management into these mechanisms. - Continued to refine overall governance paradigm. Monitor and assess Component compliance with GIG policy and guidance. - Continued progression of development of Net Centric DoD Architecture Framework - Continued support of GIG NCOW Reference Models - Continued support to the CADM - Evolved the DIEA in support of net-centric objectives, interoperable infrastructure, and investment management. - Developed and published Defense Information Enterprise Transition Plan (DIETP) the enterprise-wide progress toward achieving net-centric information sharing - Published NetOps Strategic Vision document - Published DoD Instruction "NetOps for the GIG" (DoDI 8410.02) - Drafted initial NetOps Implementation Plan FY 2010 Plans: - Oversee the activities of TSEARG subgroups and boards. - Complete delivery of repeatable process for Enterprise Reference Architectures. Submit to Office of Management and Budget to support cross-Agency efforts. - Complete development of the DoD IEA, V2.0 with associated mappings to the JCSFLs, the DoD Information Enterprise Transition Plan, the DoDAF 2.0 and where appropriate the GIG 2.0. - Develop a companion Reference Architecture structure and process with net-centric patterns based upon the principles and rules of the DoD IEA. - Develop the Architecture COI vocabulary - Develop the extensions to the FEA Reference Models - Develop DoDAF 2.5 Requirements development and update. - Update Essential DoDAF for the Architect						

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
- Implement DoDAF Configuration Management (CM). - Support Universal Profile for DoDAF & Ministry of Defense Architecture Framework (MODAF) (UPDM) - Continue DoDAF 2.0 Outreach. - Continue Architecture Center of Excellence Pilot for Capability Architectures. - Web Enable DoDAF . - Develop DoDAF Web Based Training - Participate in NATO Enterprise Architecture policy development - Conduct technical reviews of allied architectural policy, projects, and standards. - Harmonization of DoD's Information Technology Standards and architectural processes with the Federal, Intelligence Community, and allied partners, will increase interoperability and aid in the attainment of an information advantage - Provide NetOps input to CYBERCOM I-Plan leading to CYBERCOM FOC - Provide input for addressing NetOps in a cyberspace QDR issue - Coordinate and ensure completion of tasks identified in the NetOps I-Plan - Provide NetOps contents for the development of the Strategic Plan & Roadmap - Update or develop guidance and policy (as required) for sharing of NetOps data to IC and mission partners - Provide input to the Enterprise Ops Oversight Committee (EOOC) - Continue to lead the development and execution of NetOps pilots to improve NetOps data sharing between DoD Components <i>FY 2011 Base Plans:</i> Continue to provide strategy, policy, oversight, and guidance for Architecture across the DoD Enterprise. - Continue to work with CC/S/As to ensure capabilities for operating and defending the GIG are acquired, managed, integrated and synchronized. - Continue to refine governance structures to address new policies and oversight requirements.						

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B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
- Continue to monitor and assess component compliance regarding new policies and guidance. - Continue refinement of the Net Centric DoD Architecture Framework to address new demands technologies and IA requirements. FY 2011 OCO Plans: N/A											
Accomplishments/Planned Programs Subtotals						5.224	5.641	5.752	0.000	5.752	
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To Complete	Total Cost
• 0902198D8Z: Command Information Superiority Architecture	4.806	4.433	4.139	0.000	4.139	4.200	4.365	4.436	4.513	Continuing	Continuing
D. Acquisition Strategy N/A											
E. Performance Metrics CISA Performance is based on the number of initiatives that transition to the net-centric environment to support operations. Measures include: - Timely development and issuance of policy, guidance, processes, and technologies to build, populate, govern, operate, and protect the Network. - Policies developed and issued for GIG design, architecture content management, implementation, and operations.											

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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 6: <i>RDT&E Management Support</i>				R-1 ITEM NOMENCLATURE PE 0605170D8Z: <i>Support to Networks and Information Integration</i>				PROJECT 002: <i>Defense Architecture Repository</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
002: <i>Defense Architecture Repository</i>	1.201	1.296	1.322	0.000	1.322	1.344	1.374	1.394	1.413	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

DARS is the Department's enterprise registry, catalog and navigation map for enterprise architecture. It serves as the Department's primary catalog of architecture data holdings and provides users the ability to register holdings metadata and search, retrieve, and use DoD architecture data in federated architecture data repositories across DoD. DARS provides a key component of the Department's net-centric data management capability by federating enterprise architecture data across the Department. It enables alignment of program architecture components with the Federal Enterprise Architecture Business Reference Model - consistent with OMB directives for exhibit 300s - via the DoD Business Reference Model. DARS implements a federated search capability and metadata catalog that will interoperate with the Department's Net-Centric Enterprise Discovery Service and enterprise content metadata catalog. Architecture metadata is searchable using the DARS federated discovery web service. The discovery search results provide links to architecture data that is retrievable based on user roles and access permissions. Implementations are accessible on both the NIPRNET (unclassified) and SIPRNET (Collateral Classified). Key features of the DARS program focus on: (1) Making architecture data visible, accessible, trusted, understandable, and interoperable (2) enabling reuse of validated architecture data to build "composite" integrated architectures; (3) enabling architecture analysis; and, (4) integrating architecture data into the DoD mainstream decision-making processes. The Department of the Air Force, Army, and Navy CIO's are collaborating in the development of DARS federation web services via the Federated Joint Architecture Working Group under the auspices of the DoD Enterprise Architecture Summit to ensure DoD-wide access to and usability of all components of the composite DoD enterprise architecture model.

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

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
DARS Accomplishments and Plans <i>FY 2009 Accomplishments:</i> Continued Operation and Maintenance of DARS - Continued to implement capabilities required to meet changes to the DoD Architecture Framework (DoDAF)	1.201	1.296	1.322	0.000	1.322

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
- Continued integration of DARS data services into “Core Enterprise Services” - Continued integration of DARS data harvesting capabilities into a Federated Data-Centric environment <i>FY 2010 Plans:</i> Provide for and continue enterprise-level operational support for the DoD Architecture Registry System. - Continue the development of the Core Architecture Data Model (CADM) providing common vocabulary for architecture information. - Enforce transition to a complete services web-based application by expanding the current net-centric services based security and compliant met-data discovery with a collaborate environment that ensures end-to-end information assurance of validated architecture data. - Work with DoD Component to refine requirements and processes to effectively expose existing architectures for reuse. - Continue to expand and refine DARS to accommodate registration /federation requirements as defined by the Federated Joint Architectures Working Group. - Continue integration of DARS data services into the “Core Enterprise Services”. <i>FY 2011 Base Plans:</i> Continue enterprise-level operational support for the DoD Architecture Registry System. - Continue to work with DoD Component to refine requirements and processes to effectively expose existing architectures for reuse. - Continue to expand and refine DARS to accommodate registration /federation requirements. - Continue integration of DARS data services into the “Core Enterprise Services”. <i>FY 2011 OCO Plans:</i> N/A						
Accomplishments/Planned Programs Subtotals		1.201	1.296	1.322	0.000	1.322

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<u>C. Other Program Funding Summary (\$ in Millions)</u> N/A <u>D. Acquisition Strategy</u> N/A <u>E. Performance Metrics</u> DARS Performance Metrics: - Timely development and issuance of policy, guidance, processes, and technologies to build, populate, govern, operate, and protect the Network. - Policies developed and issued for GIG design, architecture content management, implementation, and operations.		

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
003: <i>Integrated Planning and Management</i>	1.933	2.086	2.128	0.000	2.128	2.164	2.212	2.244	2.274	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification The Integrated Planning and Management Project encompasses the National and Nuclear Command Capabilities (N2CC) Management Office's (NMO) responsibilities for establishing overall DoD policy with respect to the capability development, interoperability, standards, and architecture for National and Nuclear Command Capabilities for our National Leadership. The NMO serves as the single point of contact within the Department for policy, long-range plans, programs, integrated mission advocacy, and management of decision-maker capabilities. The objective of the NMO is to ensure capabilities are in place to provide complete and timely situational awareness and decision tools for senior decision-makers. Additionally, the NMO assists the ASD NII/DoD CIO as the Executive Agent and primary OSD advocate for the White House Military Office with oversight of a wide range of DoD command and control (C2) and communications assets and oversees the efforts of the Services and Agencies in the design, integration, and deployment of critical and sensitive C2 capabilities. Three overall areas of focus include: 1) National Senior Leader C3 System to include Emergency Preparedness and DoD support to Civil Authorities; 2) Global Nuclear C2 and Nuclear Strike plus Integrated Missile Defense and Tactical Warning; and 3) Continuity of Government (COG) in conjunction with Mission Assurance (MA).											
B. Accomplishments/Planned Program (\$ in Millions)											
						FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
Integrated Planning and Management						1.933	2.086	2.128	0.000	2.128	
<i>FY 2009 Accomplishments:</i> Initiated efforts with UARC/FFRDCs and industry to help identify shortfalls and promising technologies that provide needed enhancements, mitigate risk, and posture requirements for the long-term Completed a comprehensive classified analysis that defined concepts for executing distributed command capabilities, answering the question of how we should best distribute command assets, identified the most promising concept, and proposed an implementation strategy											

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
- Initiated the establishment of a systems engineering team and system engineering processes for core Leadership Command Information Systems (L-CIS) that will eventually increase in scope to incorporate all L-CIS programs, systems, networks, and applications - Initiated development of a Continuity of Government concept of operations (CONOP) to enable compliance with Sec 18 of NSPD 51/HSPD 20 - Worked with Defense Laboratories and industry partners to fast-track promising technologies and to posture requirements for the long-term - Initiated analysis assessing the issues associated with recovering and restoring large complex IT networks following a catastrophic event - Initiated the identification and measurement of metrics for systems and technologies considered of primary importance to defense and national leadership capabilities - Investigated capabilities and deficiencies in the ground-based infrastructure used by the national senior leadership airborne platforms <i>FY 2010 Plans:</i> Manage efforts that aim to identify, minimize, or eliminate shortfalls or deficiencies in programs that support White House and DoD senior leaders - Continue efforts with Defense Laboratories and partners to fast-track promising technologies and to posture requirements for the long-term - Finalize a comprehensive plan for developing capabilities to support information and mission assurance capabilities - Investigate performance and capabilities of candidate or representative command systems and technologies through focused experimentation - Conduct experimentation and identify appropriate technologies that will advance the capabilities needed to support COOP/COG/ECG requirements - Develop prototype applications and services to fully populate the national leader capabilities experiment						

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B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
- Continue the development and refinement of capability-based metrics; conduct experimentation and analysis to validate FY 2011 Base Plans: Continue to minimize or eliminate any deficiencies and risks to L-CIS programs, systems, networks, and applications - Continue efforts with Defense Laboratories and industry partners to better understand threats and risks to national leadership C2 capabilities - Continue to evolve software tools for semi-automated integration of dispersed program and budget data into a capability management tool that facilitates informed decision making for NLCC capabilities - Continue efforts with UARC/FFRDCs and industry partners to fast-track promising technologies and to posture requirements for the long-term - Continue to investigate performance and capabilities of candidate or representative C2 systems and technologies via focused experimentation - Continue experimentations to identify promising technologies that will advance the capabilities needed to support COOP/COG/ECG requirements - Continue the development of prototype applications and services to fully populate the national leader capabilities experiments - Continue the identification and measurement of metrics and technical performance criteria; conduct experimentation and analysis to validate FY 2011 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	1.933	2.086	2.128	0.000	2.128

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<u>C. Other Program Funding Summary (\$ in Millions)</u> N/A <u>D. Acquisition Strategy</u> N/A <u>E. Performance Metrics</u> C2 Integrated Planning & Management Performance Metrics: - Successfully develop, coordinate, and publish DOD C2 policies and operational concepts. - Establishment of an information integration and decision portfolio of C2 services and applications to demonstrate selected capabilities. - Development of Dynamic Operational Communities of Interest services based on the capabilities provided by the NCES Program. Establishment of an ontological framework and XML data model to permit the meta-tagging of information integration decision portfolio data at the strategic and national C2 level in a manner consistent with other DoD data strategies and modeling efforts.		

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COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
004: <i>Support to NII Mission Requirements</i>	5.349	5.773	5.889	0.000	5.889	5.987	6.120	6.209	6.294	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification This program supports studies and analyses in the areas of networks, information integration, defense-wide command and control (C2), and communications.											
B. Accomplishments/Planned Program (\$ in Millions)											
							FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Support to NII Mission Requirements <i>FY 2009 Accomplishments:</i> - \$3.500 million transferred from the Air Force for Global Positioning System (GPS) User Equipment Synchronization to conduct OASD/NII oversight of Global Positioning System (GPS) management and planning activities required for the National Space-Based Positioning, Navigation and Timing Executive Committee. This funding supported the following efforts: -Full time on-site staff support to ASD(NII)/DoD CIO Space Programs and Policy (3 STE) -Full time PNT liaison officer for OASD(NII)/DoD CIO at US STRATCOM (1 STE) -Updated and coordinated the GPS Security Policy DODI 4650.0x -Authored and coordinated the Navigation Warfare Concept of Operations DODI 4650.0x with US STRATCOM -Authored and coordinated Next Generation Air Transport System (NextGen) DODI 5030.x in concert with Air Force and Federal Aviation Administration (FAA) -Authored and coordinated Security Control of Navigation Aids DODI 5030.x in concert with NORAD, NORTHCOM, Department of Homeland Security (DHS), and FAA							5.349	5.773	5.889	0.000	5.889

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
- Authored and coordinated DoD/Department of Transportation (DOT)/DHS MOA to define responsibilities for biennially updating the Federal Radio-Navigation Plan (FRP) - Drafted Red Key Sundown Policy in support of GPS Security Policy DODI 4650.0x - Provided staff support, perform research and conduct studies as directed by DEPSECDEF in his role as co-chair of the National Executive Committee for Space-Based PNT and for ASD(NII)/DoD CIO in his role as co-chair of the Executive Steering Group - Performed annual update of National Five-year Plan for Space-Based Positioning, Navigation and Timing (PNT) - Participated in transition planning for the National PNT Architecture with DOT and the National Space Security Office (NSSO) and prepare a PNT Architecture Transition Plan for use by the DoD and the civil agencies - Performed biennial update of the DoD PNT Science and Technology Roadmap using the PNT Architecture recommendations - Conducted study to identify and catalog DoD and allied GPS users in support of developing GPS Security Policy DODI and Navigation Warfare DODI - Conducted study to explore the plausibility of DoD using civil and foreign PNT services in support of developing a Navigation Warfare Concept of Operations (CONOP) with US STRATCOM and the Joint Navigation Warfare Center (JNWC) - \$1.849 million - Command and Control Research: - Enhanced the tools and instrumented environments that support C2-related research - Continue to pursue research on new approaches to military and civil-military command and control suitable for 21st Century coalition operations including stability and reconstruction. - Continued to fund the Edge Institute at the Navy Post Graduate School (NPS) and selected research efforts at other universities and research centers. - Continued to support the Network Science Center at the USMA at West Point to engage faculty and cadets in network-centric C2 related projects.						

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
- Continued, in collaboration with allies and NATO partners, the development and testing of a maturity model for network-enabled coalition command and control and the development of related metrics - Support DoD organizations in the design and conduct of C2-related experimentation - Continued to work with the DoD community and international partners to improve the understanding of Information Age command and control related concepts, technologies, and experiments. - Conducted 13th International Command and Control Research and Technology Symposium. - Conducted workshops to explore command and control related issues. - Continued to develop manuscripts for widely read and respected C2 publications and outreach program. - Maintained and expanded C2 research community website - Continued campaign of experimentation related to information sharing, collaboration, and trust. <i>FY 2010 Plans:</i> \$3.500 million - Global Positioning System (GPS) User Equipment Synchronization to conduct OASD/ NII oversight of Global Positioning System (GPS) management and planning activities required for the National Space-Based Positioning, Navigation and Timing Executive Committee. Funding supports: -Full time on-site staff support to ASD(NII)/DoD CIO Space Programs and Policy (3 STE) -Full time PNT liaison officer for OASD(NII)/DoD CIO at US STRATCOM (1 STE) -Author and coordinate International Supplement to GPS Security Policy DODI 4650.0x -Author and coordinate Information Assurance/COMSEC Supplement to GPS Security Policy DODI 4650.0x -Finalize and execute the GPS Security Policy DODI 4650.0x -Finalize and implement Navigation Warfare Concept of Operations DODI 4650.0x with US STRATCOM -Finalize and implement Next Generation Air Transport System (NextGen) DODI 5030.x in concert with Air Force and FAA -Finalize Security Control of Navigation Aids DODI 5030.x in concert with NORAD, NORTHCOM, DHS, and FAA						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense				DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 6: RDT&E Management Support		R-1 ITEM NOMENCLATURE PE 0605170D8Z: Support to Networks and Information Integration		PROJECT 004: Support to NII Mission Requirements		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
-Develop NextGen interfaces with the GPS Wing, Joint Program Development Office (JPDO), Air Force, and Policy Board for Federal Aviation (PBFA) -Conduct biennial update of the Federal Radio-Navigation Plan (FRP) during CY 2010 -Coordinate and implement Red Key Sundown Policy -Provide staff support, perform research and conduct studies as directed by DEPSECDEF in his role as co-chair of the National Executive Committee for Space-Based PNT and for ASD(NII)/DoD CIO in his role as co-chair of the Executive Steering Group -Perform annual update of National Five-year Plan for Space-Based Positioning, Navigation and Timing (PNT) -Author DoD portion, conduct interagency coordination and submit the GPS Biennial Report to Congress for signature by the ASD(NII)/DoD CIO -Oversee and coordinate execution of U.S National PNT Architecture Transition Plan within DoD and in the interagency forum -Conduct study to identify and catalog civil/commercial GPS uses, requirements, service benefits and augmentation dependencies to inform implementation and execution of Navwar CONOP, Security Control of Navaids, the National PNT Architecture, and NextGen - \$2.273 million - Command and Control Research: - Continue to enhance the tools and instrumented environments that support C2-related research - Continue to pursue research on new approaches to military and civil-military command and control suitable for 21st Century coalition operations including stability and reconstruction. - Continue to fund the Edge Institute at the Navy Post Graduate School (NPS) and selected research efforts at other universities and research centers. - Continue to support the Network Science Center at the USMA at West Point to engage faculty and cadets in network-centric C2 related projects. - Continue, in collaboration with allies and NATO partners, the development and testing of a maturity model for network-enabled coalition command and control and the development of related metrics - Support DoD organizations in the design and conduct of C2-related experimentation						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense			DATE: February 2010			
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
- Continue to work with the DoD community and international partners to improve the understanding of Information Age command and control related concepts, technologies, and experiments. - Conduct 14th International Command and Control Research and Technology Symposium. - Conduct workshops to explore command and control related issues. - Continue to develop manuscripts for widely read and respected C2 publications and outreach program. - Maintain and expand C2 research community website - Continue campaign of experimentation related to information sharing, collaboration, and trust. <i>FY 2011 Base Plans:</i> - \$3.500 million for Global Positioning System (GPS) User Equipment Synchronization to conduct OASD/NII oversight of Global Positioning System (GPS) management and planning activities required for the National Space-Based Positioning, Navigation and Timing Executive Committee. Funding will support: -Full time on-site staff support to ASD(NII)/DoD CIO Space Programs and Policy (3 STE) -Full time PNT liaison officer for OASD(NII)/DoD CIO at US STRATCOM (1 STE) -Oversee execution of International Supplement to GPS Security Policy DODI 4650.0x -Oversee execution of Information Assurance/COMSEC Supplement to GPS Security Policy DODI 4650.0x -Implement GPS Security Policy DODI 4650.0x -Tie DoD user data and populated GPS Protection Profile matrix from Navigation Warfare Concept of Operations DODI 4650.0x into Warfighting Operations Plans (OPLANS) and Contingency Plans (CONPLANS) in coordination with US STRATCOM -Author PNT Navigation Warfare Annexes to all the Operations Plans (OPLANS) and Contingency Plans (CONPLANS)in coordination with US STRATCOM -Oversee execution and conduct Analysis of Alternatives for implementation of Next Generation Air Transport System (NextGen) DODI 5030.x in concert with Air Force and FAA						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
-Oversee execution and conduct Analysis of Alternatives for Security Control of Navigation Aids DODI 5030.x in concert with NORAD, NORTHCOM, DHS, and FAA -Continue developing NextGen interfaces with the GPS Wing, Joint Program Development Office (JPDO), Air Force, and Policy Board for Federal Aviation (PBFA) -Continue implementation of Red Key Sundown Policy -Conduct studies and programmatic analysis of activities involving OCX and GPS III contract activities -Provide staff support, perform research and conduct studies as directed by DEPSECDEF in his role as co-chair of the National Executive Committee for Space-Based PNT and for ASD(NII)/DoD CIO in his role as co-chair of the Executive Steering Group -Perform annual update of National Five-year Plan for Space-Based Positioning, Navigation and Timing (PNT) -Continue oversight and Analysis of Alternatives for U.S National PNT Architecture Transition Plan within DoD and in the interagency forum -Apply Navigation Warfare Concept of Operations DODI 4650.0x via the Joint Navigation Warfare Center (JNWC) and US STRATCOM to develop Doctrine, Tactics, Techniques and Procedures, Training, Equipment Validation and Material Solutions to Navigation Warfare challenges to the Military Services and Combatant Commanders in the scenarios defined in the CONPLANS and OPLANS. - \$2.389 million - Command and Control Research: - Continue to enhance the tools and instrumented environments that support C2-related research - Continue to pursue research on new approaches to military and civil-military command and control suitable for 21st Century coalition operations including stability and reconstruction. - Continue to fund the Edge Institute at the Navy Post Graduate School (NPS) and selected research efforts at other universities and research centers. - Continue to support the Network Science Center at the USMA at West Point to engage faculty and cadets in network-centric C2 related projects. - Continue, in collaboration with allies and NATO partners, the development and testing of a maturity model for network-enabled coalition command and control and the development of related metrics						

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Office of Secretary Of Defense				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
- Support DoD organizations in the design and conduct of C2-related experimentation - Continue to work with the DoD community and international partners to improve the understanding of Information Age command and control related concepts, technologies, and experiments. - Conduct 14th International Command and Control Research and Technology Symposium. - Conduct workshops to explore command and control related issues. - Continue to develop manuscripts for widely read and respected C2 publications and outreach program. - Maintain and expand C2 research community website - Continue campaign of experimentation related to information sharing, collaboration, and trust. <i>FY 2011 OCO Plans:</i> N/A						
Accomplishments/Planned Programs Subtotals		5.349	5.773	5.889	0.000	5.889
C. Other Program Funding Summary (\$ in Millions) N/A						
D. Acquisition Strategy N/A						
E. Performance Metrics Community participation in command and control research program (CCRP) events. - Number of requests for / downloads of CCRP publications. - Number of international countries engaged in net centric discussions and collaborative research and analysis efforts. - Number of researchers using CCRP-developed models, metrics, and experimental environments and tools. - Successfully sponsored symposia/workshops to discuss command and control research initiatives.						

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