Exhibit R-2, RDT&E Budget Item Justification				Date: February 2005				
Appropriation/Budget Activity RDT&E Defense-Wide, BA 6				R-1 Item Nomenclature: Support to C3I, PE 0605116D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	24.621							
Command Information Superiority Architecture	4.491							
Defense Architecture Repository	.988							
Integrated Planning & Management	1.816							
Rapid Acquisition Incentives	3.201							
Support to C3I Mission Requirements	14.125							

A. Mission Description and Budget Item Justification:

The program element supports technical and analytic efforts to evaluate and improve the management oversight of DoD command and control (C2), communications, space, and information superiority programs. Support is focused on reviewing resources and acquisition issues for existing and planned space programs; exploring new command and control research concepts that exploit emerging technologies to improve DoD's understanding of the national security implications of the Information Age; integration and overarching requirements/ planning process for national and nuclear C2 capabilities; development and integration of Command Information Superiority Architectures (CISA) to better define command capabilities; oversight of information operation activities; development of the Defense Architecture Repository (formerly know as the Joint C4ISR Architecture Planning/Analysis System) an enterprise wide repository to store, retrieve, and use DoD architecture data. 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 Accomplishments and Plans:

FY 2004 Accomplishments: ($14.125 million)

- Developed a "Broad Agency Announcement" to solicit research proposals related to command and control in the context of edge organizations. Initiated a number of research projects.
- Created an "Edge Institute" at the Naval Postgraduate School. FY 2004 funded projects address development of analytic infrastructure to investigate command and control in a networked environment
- Collaborated with DoD Office of Force Transformation on the development of an Network-centric Conceptual Framework and its application to a number of case studies

- Worked with others throughout the DoD to improve the state of the art and practice of experimentation.
- Worked with US Marines to rethink aviation in light of NCW
- Chaired NATO Research Group leading study of new command concepts
- Held annual Command and Control Research and Technology Symposium that was attended by over 400 C2-related researchers and analysts.
- Co-sponsored 9th International C2 Research and Technology Symposium with the Danish Armed Forces
- Continued CCRP Publication Program including new books underway on Campaigns of Experimentation, Networked Organizations, and educational material on Transformation.
- Successfully collected, compiled and submitted the FY 2005 BES to OMB and Congressional Justification Materials
  - required a change to data collection formats for both OMB and Congress
  - required the ability to upload to OMB as an XML file
  - new Congressional requirement, required a format change in paper output
- Developed and implemented ability to upload an XML format into ITMA.
- Supported classified information operations program efforts.
- Conducted research and analysis with the goal of implementing and demonstrating a DoD and FAA-approved "equivalent level of safety" (ELOS) for unmanned aircraft, permitting routine operation in the National Airspace System.

Pacific Disaster Center

- The PDC implemented several data and information capabilities in support of regional-, state-, and county-level disaster managers. These capabilities included: the *Asia-Pacific Natural Hazards and Vulnerabilities Atlas*, an Internet-based, decision support tool providing the region's disaster management community with a dynamic geospatial framework for timely access and viewing of critical hazard information; the *Hawaii State Civil Defense Critical Infrastructure Protection Database*, a new state-level capability in support of the Hawaii homeland security effort for combating future threats, both natural and man-made, to critical facilities and infrastructure; and the *Hawaii County Remote Information Services*, a county-level, emergency management and planning capability designed to utilize emerging technologies not readily available to operational entities.
- The PDC inaugurated the *Asia Pacific Natural Hazards Information Network (APNHIN)*, a suite of applications and information services enabling disaster managers to tap into geospatial information resources for the Asia Pacific region. APNHIN can be reached at http://apnhin.pdc.org. APNHIN will support disaster management decision makers by providing convenient access to a wide spectrum of premium data resources—including remote sensing and other Geographic Information Systems data. By building collaborations with partner organizations, APNHIN will grow over time to form a community of information-sharers.
- In cooperation with the World Bank, the Asian Development Bank, U.S. Government Agencies and regional disaster management

organizations, the PDC is building upon past successes in developing mitigation plans (American Samoa, Vanuatu) and is pursuing resources (submitted several pending proposals) to continue this work in the Philippines and the Mekong River region.

- In support of the Department of Defense and specific regional and state agencies, the PDC participated in several major exercises dealing with natural disasters (earthquakes, floods, severe weather) and terrorism (WMD, CBR). PDC has transitioned the *Integrated Decision Support System (IDSS)* to USSOUTHCOM for implementation in the Caribbean region in support of humanitarian assistance operations.

- PDC continued to work with the State of Hawaii, as part of the Hawaii Industry Partnership, and acts as an incubator for emerging, high technology firms in Hawaii. The PDC, with support from its managing partner, the East West Center, has developed plans to move into a new, expanded facility which will allow further growth as the PDC moves towards future sustainability and community involvement.

FY 2005 Plans: N/A

FY 2006 Plans: N/A

FY 2007 Plans: N/A

C. Program Change Summary: (Show total funding, schedule, and technical changes for the program element that have occurred since the previous President's Budget Submission)

	FY 2004	FY 2005	FY 2006	FY 2007
Previous President's Budget	25.529			
Current President's Budget	24.621			
Total Adjustments	-0.908			
Congressional program reductions				
Congressional rescissions, Inflation Adjustments	-0.461			
Congressional increases	1.369			
Reprogrammings				
SBIR/STTR Transfer				

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E, Defense-Wide, BA 7				Project Name and Number: Command Information Superiority Architectures (CISA)/0605116D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Name: Command Information Superiority Architectures	4.491							

A. Mission Description and Budget Item Justification:

The CISA program continues to be a leader in the transformation of the Department of Defense (DoD). Using a common architecture planning process, CISA products have provided decision makers at all levels of the department with the knowledge and tools to make intelligent, cost effective decisions on key transformational elements and policies, to include Net-Centric Operations and Warfare (NCOW), and the Global War on Terrorism (GWOT). CISA is the prime catalyst for transforming the COCOMs to a net-centric environment. The program is focusing on architecture deliverables that focus on Net-Centric Transition Plans for the COCOMs and integrating Portfolio Management into the COCOMs information technology and capital planning processes. The CISA architecture products results will be used to determine the future DoD CIO IT issues and investment strategies for the COCOMs. In addition, the results will provide direct inputs into the COCOM Integrated Priorities Listings (IPLs), and provide rationale for Program Objective Memorandum (POM) decisions by identifying critical capability shortfalls. The CISA information technology (IT) architectures products; the tactics, techniques, and procedures (TTPs) documents; and the architecture reference models have earned an enviable reputation throughout DoD as the "ground truth". Several have resulted in directly impacting critical shifts in DoD policies which include the new capabilities process for Capital Planning and Investment under the Joint Staff Instruction 3170.01; the Unified Command Plan 2 (directs the standup of USNORTHCOM and the re-structuring of USSTRATCOM); expansion of the GWOT focusing on USSOCOM as the lead developer of a global two-tier net-centric approach; coalition interoperability through the use of USCENTCOM Combined Enterprise Regional Information Exchange System (CENTRIXS) world-wide architecture which links 60 nations in a unified effort; and lastly, Net-Centric Operations and Warfare (NCOW) through the Global Information Grid (GIG) architecture and the NCOW Reference Model (RM). CISA is a leader in supporting the DoD CIO focus on initiatives defined in the Information Technology Management Reform Act (ITMRA), (Clinger-Cohen Act) in the development of the GIG, the Department wide IT architecture. The GIG is considered the essential enabler of Information Superiority and Net-Centricity requirement expressed in the Department's Joint Vision 2020. The inputs include GIG Architecture V1.0 – the DoD baseline "as is" architecture; and GIG 2.0 approved by the DoD CIO on 9 Dec 2003 as the objective architecture for 20XX embedding NCOW transformational concepts. The NCOW RM represents the key compliance mechanism for evaluating IT-related capability, and mapping DoD acquisition programs to implement NCOW.

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	4.491			
RDT&E Articles Quantity *(as applicable)				

FY 2004 Accomplishments: ($4.491 million)

- Completed Global Information Grid (GIG) 2.0, DoD Enterprise Architecture focusing on Homeland Defense, Counter-terrorism, Force Allocation, and Combined Forces Command - Korea
- Completed the Net-Centric Operations and Warfare (NCOW) Reference Model, 1.0.— the guide used by DoD Program Managers use for NCOW transformation
- Conducted Net-Centric assessments of key DoD Programs to include Army's Future Combat System (FCS), Navy's Economic Resource Planning (ERP)
- Established EUCOM and North Atlantic Treaty Organization (NATO) standard for establishing and maintaining a Joint Task Force (JTF)
- Drove the implementation of the Joint Task Force for the Olympics 2004
- Provided direct architectural support to the Joint Staff Functional Capabilities Boards (FCBs) allowing key acquisition programs to pass key milestones in the Joint Capabilities Integration and Development System (JCIDS)
- Drove the JFCOM Joint National Training Capability (JNTC) by implementing key Joint Tactical Tasks (JTTs) architectures designed to implement a persistent Net-Centric training capability. Developed and made capital planning and investments of over $1.4 Billion for the Joint Training Network (JTEN).
- Directly supported USCENTCOM receiving $467 Million for critical information technology upgrades over the FY 2004-2009 POM
- USPACOM Information Technology 21 Architecture provided information technology blueprint for implementing new Headquarters building and Network Operations Center (NOC)
- USCENTCOM Operation Iraqi Freedom (OIF) communications architecture was blueprint in establishing information technology requirements and upgrades necessary to support conflict and was key driver in USCENTCOM receiving funds in the FY 2004 supplemental funding bill
- USCENTCOM Combined Enterprise Regional Information Exchange System (CENTRIXS) integrated architecture resulted in achieving $1.1 Billion in additional funding for OIF operations within USCENTCOM theater
- USJFCOM architecture predictive analysis directly impacted critical leadership decisions on sovereignty transitions in OIF.

C. Other Program Funding Summary:

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
O&M, DW (PE0902198D8Z)	5.786								5.786

D. Acquisition Strategy. N/A

E. Performance Metrics: Performance is based on the number of initiatives that transition to the net-centric environment to support operations.

Measures include:

- Requirements: Business products identified in need of change
  Business products impacted or changed due to architecture analysis or products
- Acquisitions: Number of system(s) or system functions identified as duplicate
  Number an/or type of system identified as necessary to complete capability
  Number of system(s) and/or applications impacted by architecture analysis
- Portfolio Management:
  Number of systems included in portfolio
  Cost estimates provided for portfolio
  Number of duplicate systems identified in portfolio analysis
  Funds obtained as a result of portfolio analysis

Exhibit R-2a, RDT&E Project Justification						Date: February 2005		
Appropriation/Budget Activity RDT&E, Defense-Wide, BA 7				Project Name and Number: Defense Architecture Repository System (DARS)/PE 0605116D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Name: DARS	0.988							

A. Mission Description and Budget Item Justification:

DARS is the enterprise wide repository to store, retrieve, and use DoD architecture data. DARS provides two different types of architecture data- unstructured and structured along with key reference data. The architecture data is available to all DoD users once they have registered. Currently versions exist on both the NIPRNET (unclassified) and SIPRNET (Collateral Classified). Plans are also underway to implement DARS on the Joint World Wide Intelligence Communications System (JWICS). Key features of the DARS program focus on: (1) reuse of common validated architecture data to build integrated architectures; (2) conducting architecture analysis; and, (3) integration architecture data into the DoD mainstream decision-making processes. The DARS data structure is based on the Core Architecture Data Model (CADM), and its data structure is fully CADM compliant. This data structure is under full configuration management, and has the goal of transporting architecture data between and among diverse enterprise architecture and other tools (tool agnostic capability), allowing collaboration among users. By using a standard universal applications process interface (API) CADM XML, DARS works with multiple tool vendors to achieve the collaborative tool agnostic environment. The FY 2005 DARS program will follow the results of the FY 2004 pilot effort to prove that the CADM XML XSD will be the standard Universal API, and allow COTS tool vendors to integrate this into their tool capabilities. DARS will additionally add additional architecture products to the structured capability which may include the OV 6 a,b,c products along with SV 4,5,6,9, and 10A,b,c. Also data exchange capabilities will include the Joint Resource Allocation Module (JRAM), and other executable or modeling and simulation tools. DARS goals for FY 2005 are aggressive and include implementing DARS 3.0 in Feb 2005. DARS will also support the transfer of CADM XML to the international data exchange standard AP 233 using the CADM XML XSLT as the core driver for the transformation. The Department of the Air Force, Army, and Navy CIO's are collaborating in the development of DARS to ensure the success of all. New DARS releases are scheduled for every six months during FY 2005 (DARS 5.0 and 4.0).

Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	0.988			
RDT&E Articles Quantity *(as applicable)				

Exhibit R-2a, RDT&E Project Justification								Date: February 2005
Appropriation/Budget Activity RDT&E, Defense-Wide, BA 7				Project Name and Number: Integrated Planning and Management/PE 0605116D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Name: Integrated Planning & Management	1.816							

A. Mission Description and Budget Item Justification:

The Unified Command Structure (UCS) provides a single national C2 structure to support every echelon of command from national to tactical. UCS will provide the mechanism and construct to transform the existing set of dedicated, single purpose command and control (C2) systems into an integrated C2 framework to support the national strategy and to provide a unified, flexible, and adaptable full-spectrum command and control capability for warfighters and senior leaders within a globally connected common information environment (CIE). UCS is a new approach that unifies National/Strategic through Operational to Tactical C2 capabilities into a Unified command Capability (UCC) that defines net-centric C2 for DoD.

B. Accomplishments/Planned Program:

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	1.816			
RDT&E Articles Quantity *(as applicable)				

FY 2004 Accomplishments: ($1.816 million)

- Defined UCS Metrics
- Development of UCS/HF05 Demo Integration Plan
- Conducted Nuclear Thin-line net-centric capability Assessment

C. Other Program Funding Summary:

	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	Total Cost
O&M, DW (PE0902198D8Z)	3.000								3.000

D. Acquisition Strategy: N/A

E. Performance Metrics: N/A

Exhibit R-2a, RDT&E Project Justification							Date: February 2005	
Appropriation/Budget Activity RDT&E,DW BA #6				Project Name and Number: IT Rapid Acquisition PE0605116D8Z				
Cost ($ in millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Name: IT Rapid Acquisition	3.201							
RDT&E Articles Quantity								

A. Mission Description and Budget Item Justification:

The Department must rapidly transform its business processes with the same intensity and depth being used to transform its warfighter processes. This PE is dedicated to the Rapid Acquisition Incentives – Net Centricity (RAI-NC) initiative which serves as the only DoD initiative providing RDT&E proof-of-concept pilots exclusively targeted to advancing and moving the business domains of DoD towards Net Centricity. The PE permits accelerating business domains support processes thru rapid (under $1M and 12 months) pilot development. This PE does not support the DoD Information Technology /Enterprise Information Environment (EIE) Mission Area (EIE). The RAI-NC program provides funding for Net Centric pilot initiatives that directly support and facilitate the transformation of the DoD business enterprise. This initiative is consistent with the Department's strategic goals to: reduce costs; improve efficiency; increase effectiveness by improving the efficiency and effectiveness of process redesign; business systems modernization; strategic sourcing; infrastructure reductions; and optimal-sized inventories. The objective of the RAI-NC Initiative is to accelerate DoD's net centric business transformation in support of the warfighter. The scope of the Rapid Acquisition Incentives – Net Centricity project encompasses defense policies, processes, people, and systems that guide, perform or support all aspects of business processes within the Department. Pilots submitted by DoD Components will directly support transformed DoD business processes, which will be based on Net Centric principles. Each RAI-NC pilot provides proof of concept sustainability as well as the scalability necessary for business Domain enterprise wide implementation that will allow end-to end accessibility to net-centric based decision-making information. Successful implementation will result in more reliable, accurate and timely net centric management information upon which managers can make more effective business decisions in a timely manner for the Department. RAI-NC enables the acceleration of DoD efforts to implement a Domain network centric operational environment while providing a secure, flexible, reliable, affordable, integrated network to achieve high effectiveness in joint and combined operations. The DoD CIO maintains an overarching implementation plan that includes requirements, pilot charter, plans, criteria, oversight mechanisms as well as valid performance measures. This program employs RDT&E funds to plan, develop and oversee proof of concept pilot projects. Successful pilots will not be allowed to enter full deployment and operation without an Opportunity Analysis (business case) demonstrating the achieved goals and outcomes, in addition to Domain support and resourcing. This program is funded under BA-6, Management Support because it includes studies and analyses in support of R&D efforts.

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishment/ Effort/Subtotal Cost	3.201			
RDT&E Articles Quantity	N/A	N/A	N/A	N/A

FY 2004 Accomplishments: ($3.201 million)

Funding was used to initiate RAI-NC and develop the web enabled pilot submission process, evaluate candidates and select four RAI-NC proof of concept pilots. The Department of Navy serves as the DoD Executive Agent. The four FY 2004 pilots are delivering web-based prototypes that:

- Provide a global enterprise level business intelligence tool for integrating procurement, contract, acquisition and financial data. USD AT&L, with Military Department assistance, is developing a web-based global enterprise level business intelligence tool for integrating procurement, contract, acquisition and financial data.
- Accelerate new security capabilities using the Common Access Card (CAC). This will avoid costs of over $75,000 for each of the thousands of information systems that will need to employ the CAC. The Army is developing a set of standard enterprise services for CAC including encryption, authentication, and digital signature.
- Demonstrate that having a trusted space-based Internet server capability will dramatically improve the air, sea and land based mobility, accessibility and continuity of our information systems. Air Force Space Battlelab is developing a web based, global interface to allow warfighter access to satellite information and the ability to directly request information from a satellite via a first ever space-based router using standard internet protocol.
- Enable the acceleration of "time to deliver" for weapons systems through improved collaborative tools for engineers and test managers. Navy is developing a secure collaborative community of interest to exchange test and evaluation data to shorten time for the development of the next generation of night vision illumination goggles.

Similar high leverage outcomes are expected for the FY 2005 pilot submission process that commences June 1, 2004 with selections being announced in October 2004.

FY 2005 Plans: N/A

FY 2006 Plans: N/A

FY 2007 Plans: N/A

C. Other Program Funding Summary: N/A

D. Acquisition Strategy: N/A

F. Performance Metrics:

1. Effectively merge the visions and goals of DoD transformation and net centricity into rapidly deployed, common solutions that will accelerate the transformation of DoD business Domains.
2. Provide rapidly structured pilots, which deliver practical business case-based operational solutions within 12 months at a unit cost of under $1M, a concept that has increasing Congressional support.
3. Promote EIE and Domain teaming and help overcome existing barriers to executing the Department's transformation goals and obtaining a net centric environment.
4. Deliver up to four proven, business case based pilots capable of enterprise wide implementation.
5. Permit more efficient DoD mission support by enabling quicker fielding of both net centric information systems and weapons systems
6. Accelerate force transformation and enables business processes to be more timely and efficient (reduce cost of support), to include eBusiness solutions
7. Permit DoD to accelerate the rate of lowering the cost of doing business
8. Reduce information systems risks and costs, by speeding up proof of concept demonstrations and providing business case based implementation decisions