

## UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification				DATE: February 2006			
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07				R-1 ITEM NOMENCLATURE C4I for the Warrior/PE 0303149K			
COST (in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Total Program Element (PE)	20.257	6.221	6.551	6.656	6.775	6.984	7.246
Information Dissemination Management/IM01 *	5.844	0	0	0	0	0	0
Command and Control Infrastructure Modernization (C2IM)/T55 **	4.565	0	0	0	0	0	0
Network Warfare Simulation (NETWARS)/E62 ***	9.848	6.221	6.551	6.656	6.775	6.984	7.246

A. Mission Description and Budget Item Justification: This program element (PE) is the Chairman of the Joint Chiefs of Staff (CJCS) initiative that promotes joint and coalition C4I interoperability. Through it the DoD seeks to identify, prioritize, and solve C4I interoperability problems. These three overlapping phases lead the Department to global interoperability for US military forces deployed anywhere, on any mission, with maximum flexibility in force composition. Efforts under this PE provide focus and visibility into resolving C4I interoperability issues.

\* Beginning in FY 2006, development efforts for IDM capabilities are under the Net-Centric Enterprise Services (NCES) Program, PE 0303170K.

\*\* Beginning in FY 2006, Command and Control Infrastructure Modernization is realigned to the Joint Command and Control Program in PE 0303158K.

\*\*\* NETWARS (formerly Technical Integration Services) is now funded as a separate project in PE 0303149K. The Modeling and Simulation segment of Technical Integration Services was realigned to PE 0302019K beginning in FY 2006 due to its direct engineering support to that PE.

Information Dissemination Management (IDM) integrates Government-Off-the-Shelf (GOTS) and Commercial-Off-the-Shelf (COTS) advanced information management technology to provide Information Awareness, Access, and Delivery Management to C4ISR (surveillance and reconnaissance) systems to enhance their information dissemination performance. Command and Control Infrastructure Modernization provides the prototyping, development, testing, and deployment of information system mission capabilities and will use the Net-Centric Enterprise Services (NCES) infrastructure as it becomes available. These information system components will provide an improved situational awareness and analysis set of services, as required within the Global Information Grid (GIG). Messaging capabilities were engineered and

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implemented to provide continued interoperability between existing legacy systems and pending messaging system interfaces (such as for deployed and nuclear user communities and allies). In addition to providing support for the integrated information operations within the SIPRNET (the classified DoD internet), components were developed for the exchange of information with allies, coalition partners, and the Homeland Defense communities. NETWARS is a state-of-the-art C4 Modeling and Simulation (M&S) tool used by C4 planners and analysts to: (a) assess the effects of full operational combat traffic loading on current and future communications systems and networks in a joint task force, major theater of war scenario, (b) conduct quick turn-around communications planning for contingency operations including small regional conflicts and peacekeeping scenarios, and (c) evaluate the impact of new communications technologies, organizational structures, and operational concepts. This program element is under Budget Activity 07 because it involves efforts supporting operational systems development.

B. Program Change Summary:

Program Change Summary:	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>
Previous President's Budget	23.526	6.311	6.462
Current Submission	20.257	6.221	6.551
Total Adjustments	-3.269	-0.090	0.089

Change Summary Explanation:

FY 2005 change is due to below threshold reprogramming.

FY 2006 change is due to undistributed Congressional reductions to the Defense-Wide RDT&E appropriation.

FY 2007 change is due to revised fiscal guidance.

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APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		PROGRAM ELEMENT C4I for the Warrior/PE 0303149K			PROJECT NAME AND NUMBER Information Dissemination Management (IDM)/IM01		
COST (in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Information Dissemination Management/IM01	5.844	0.000	0.000	0.000	0.000	0.000	0.000

A. Mission Description and Budget Item Justification: Information Dissemination Management (IDM) integrates Government-Off-the-Shelf (GOTS) and Commercial-Off-the-Shelf (COTS) advanced information management technology to provide Information Awareness, Access, Delivery Management, and Support services to C4ISR (surveillance and reconnaissance) systems to enhance their information dissemination performance. The goal is to provide the warfighter three critical capabilities: awareness of the existence of operationally relevant information, access to the relevant information, and delivery of relevant information in an authenticated, secure, and timely manner. The core services are defined by the "Framework for Information Dissemination Management" document distributed in April 1998 as Awareness, Access, Delivery, and Support and satisfy requirements described in the IDM Mission Needs Statement validated by the Joint Requirements Oversight Council (JROC) in July 1999, and the Capstone Requirements Document approved by the JROC in January 2001. Rather than being developed as a "system", IDM was incrementally developed and fielded as tools and services, providing a rapid insertion of technology capability to the warfighter. It supports information flow across echelons, from national centers to tactical warfighters and coalitions, by improving awareness of information holdings, access to the information, retrieval of information via smart pull, and management of information products via various communications paths.

B. Accomplishments/Planned Program:

	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>
Subtotal Cost	5.844	0.00	0.00

Content Staging - Continued to establish a Content Staging (CS) capability to support information sharing of service and agency information products by providing an awareness of and access to that information. Continued fielding IDM feature packs and maintenance releases to the Combatant Commands and to selected forward deployed sites, primarily, but not exclusively in the CENTCOM Area of Responsibility (AOR). By the end of FY 2005, all Combatant Commanders have initial/pilot IDM capabilities, with at least some presence in their AORs. Continued the integration of information sources into the IDM infrastructure to make their information holdings available to the IDM user community. Provided logistics support and sustainment of operations. Assisted in implementation of new and

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COST (in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Information Dissemination Management/IM01	5.844	0.000	0.000	0.000	0.000	0.000	0.000

enhanced IDM capabilities contained in releases 4.x, 5.x, and 6.x and incremental bands of capabilities. By the end of FY 2005, the initial transition framework from content staging to NCES was in place.

Development and Integration - Continued development and integration of improved capabilities through feature packs and maintenance release capabilities. Feature packs address improved functionality such as enhanced search and awareness features, alert notifications, message routing enhancements, improved ability to advertise information holdings, and enhanced smart pull capabilities for mission information. Incorporated patches and fixes into maintenance releases as needed. Development of enhanced capabilities beyond FY 2005 will be under the auspices of the Net-Centric Enterprise Services (NCES) Program.

Testing - Continued with a comprehensive testing and evaluation program for IDM tools and services to include Independent Verification & Validations (IV&Vs), security, performance, and operational assessments.

C. Other Program Funding Summary:

	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	<u>FY08</u>	<u>FY09</u>	<u>To Complete</u>	<u>Total Cost</u>
Operations and Maintenance, DW	11.012	7.483	0	0	0	0	18.495
Procurement, DW	3.556	0	0	0	0	0	3.556

D. Acquisition Strategy: All RDT&E work will be contracted out or funded using MIPRs.

E. Performance Metrics: Information Dissemination Management: Performance criteria consist of bandwidth utilization, accuracy of information delivery and elapsed time for delivery. Measures taken before and after implementation illustrate improvements in delivery of information using IDM. Additional operational metrics are also in place that provide a qualitative assessment of how easy IDM is to operate. Finally, on-site contractor

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Information Dissemination Management/IM01	5.844	0.000	0.000	0.000	0.000	0.000	0.000

augmentation is being used to continuously gather a wide array of user inputs regarding how well IDM is performing in meeting its functional requirements. To accurately measure customer satisfaction with IDM, a User Feedback capability on the SIPRNet IDM Web site has been established. This is used both to measure acceptance and satisfaction with IDM, and also serve as a conduit for suggestions and new requirements. Regularly scheduled follow-on visits to sites to monitor effectiveness are part of the deployment methodology. Schedule, performance, and customer satisfaction measures are compiled both as a realtime barometer as to how well IDM is doing and also to predict success in meeting future IDM objectives. The nature of this compiled data permits objective assessments as to the quality and reliability of IDM support to its customers. In FY 2005, the Content Staging program provided increasing levels of support to our warfighters. Content Staging version 4.1.3, supported the Global War on Terrorism and Homeland defense operations, and consolidated global metrics have consistently and accurately measured performance improvements with this version. Information Discovery capabilities have provided over 8 million information products a month that can be searched, accessed, and retrieved by our users. These products have been accessed, cumulatively, over 5 million times and user enterprise information search query response times are normally less than 5 seconds. Delivery capabilities have reached 5,244 gigabytes of information globally. Although dependent on varying levels of connectivity, information delivery averages 1 megabyte and 333 megabytes a minute over terrestrial and Global Broadcast Service satellite systems, respectively. Some specific performance measures include:

- Security Performance Improvement Goal- At Initial Operational Capability (IOC), provides the necessary interfaces to enable IDM directory, security, and format management operations (Resource, Status, Directory, Security, Operations, and Administration). Provides system and user administrative controls.
- Search and Retrieval Performance Improvement Goal - Information Advertisement, Search, and Retrieval capabilities to the global enterprise at IOC, the results of which are 95% relevant to the user query.
- Delivery Performance Improvement Goal: At Full Operational Capability (FOC), provides the capability to perform seamless, automated, and peer-to-peer information delivery control by tying expanded quality of service parameters to specific heterogeneous communications links. Metrics: (1) Accuracy - Percentage of data accuracy obtained during information access; (2) Timeliness - Time to receive usable information products; (3) Relevancy - Percentage of user success rating for events.

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Information Dissemination Management/IM01	5.844	0.000	0.000	0.000	0.000	0.000	0.000

- Integration Performance Improvement Goal: At FOC, integrates IDM/content staging services with appropriate data guards, Public Key Infrastructure (PKI), server certificates, and Virtual Private Networks (VPNs). IDM has migrated to an enterprise level system and the IDM services developed under this program will be a content staging (CS) service within the Net-Centric Enterprise Services (NCES). At the program level, CS/IDM employs Earned Value Management techniques and participates in DISA's Program Plan Review process quarterly. All contracts deliver monthly status reports on efforts accomplished and planned, deliverables produced, planned and actual schedule/cost/hours expended. Monthly, and in critical cases, bi-monthly or weekly Progress Status Reviews are held. Software deliverables are inspected visually for completeness and adherence to requirements, and undergo functional testing where applicable. Documentation is reviewed and accepted based on adherence to task order requirements, completeness, and technical merit. At a macro level, the IDM Build Plan is the measure for performance as it covers multiple releases and shows at a glance not only current efforts but past accomplishments. It provides an extensive historical record, along with future projections. On a micro level, the Milestone Schedule is a measure for performance for the most imminent release. The Build Plan states the requirement, the computer platforms targeted, the date for accomplishing the requirement, whether or not this requirement will be retrofitted to earlier releases, and the responsible agent. The Milestone Schedule states the requirement, the computer platforms targeted, the date for accomplishing the requirement, and the responsible agent. Customer acceptance is the greatest performance measurement tool. All IDM documentation, to include the Build Plan, will be available on the IDM homepage for constant review by the entire customer base. The two performance measures are adherence to schedule and adherence to approved Build Plan contents. Earned Value is tracked throughout the life of the contract.

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Exhibit R-3 Cost Analysis				DATE: February 2006						
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NAME AND NUMBER/				
RDT&E, Defense-Wide/07			C4I for the Warrior/PE 0303149K			Information Dissemination Management (IDM)/IM01				
<u>Cost Category</u>	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total PYs Cost</u>	<u>FY06 Cost</u>	<u>FY06 Award Date</u>	<u>FY07 Cost</u>	<u>FY07 Award Date</u>	<u>Cost To Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
Product Development	GSA	SOLERS	4.081	0	N/A	0	N/A	0	4.081	4.081
Product Fielding	GSA	BAH	.800	0	N/A	0	N/A	0	.800	.800
Product Fielding	GSA	Merlin	.292	0	N/A	0	N/A	0	.292	.292
Test & Evaluation	GSA	CSC	.600	0	N/A	0	N/A	0	.600	.600
Test & Evaluation	IASSURE	SRA	.071	0	N/A	0	N/A	0	.071	.071
Totals			5.844						5.844	

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Exhibit R-4 Schedule Profile														Date: February 2006														
Appropriation/Budget Activity RDT&E, Defense-Wide/07					Program Element Number and Name C4I for the Warrior/PE 0303149K										Project Number and Name Information Dissemination Mgmt (IDM)/IM01													
Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Develop IDM 4.1.3																												
Test IDM 4.1.3																												
Deploy IDM 4.1.3																												
Develop IDM 4.1.3 NCES Transition Messaging Release	△																											
Test IDM 4.1.3 NCES Transition Messaging Release	△																											
Deploy IDM 4.1.3 NCES Transition Messaging Release		△																										
Develop IDM 4.1.3 Feature Pack 2 Discovery		△	△																									
Test IDM 4.1.3 Feature Pack 2 Discovery			△																									
Deploy IDM 4.1.3 Feature Pack 2 Discovery				△																								



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<b>Exhibit R-4a Schedule Detail</b>		<b>DATE:</b> February 2006
<b>APPROPRIATION/BUDGET ACTIVITY</b> RDT&E, Defense-Wide/07	<b>PROGRAM ELEMENT</b> C4I for the Warrior/PE 0303149K	<b>PROJECT NAME AND NUMBER/</b> Information Dissemination Management (IDM)/IM01

<u>Schedule Profile</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Develop IDM 4.1.3							
Testing of IDM 4.1.3							
Deploy IDM 4.1.3							
Develop IDM 4.1.3 NCES Transition Messaging	1Q						
Testing of IDM 4.1.3 NCES Transition Messaging Release	1Q						
Deploy IDM 4.1.3 NCES Transition Messaging Release	2Q						
Develop IDM 4.1.3 Feature Pack 2 Discovery	2-3Q						
Testing of IDM 4.1.3 Feature Pack 2 Discovery	3Q						
Deploy IDM 4.1.3 Feature Pack 2 Discovery	4Q						

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RDT&E, Defense-Wide/07		C4I for the Warrior/PE 0303149K			Command and Control Infrastructure Modernization (C2IM)/T55		
COST (in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Project Cost	4.565	0	0	0	0	0	0

A. Mission Description and Budget Item Justification: This project provides for the prototyping, development, testing, and deployment of information systems-based mission capabilities and utilizes the Net-Centric Enterprise Services (NCES) Core Enterprise Services (CES) and/or NCES Evaluation Capability Modules (ECMs) as they became available. These components support Global Information Grid (GIG) requirements of the Combatant Commanders (COCOMs) and the Joint Task Forces (JTFs). Based on DoD Transformation objectives, these components provide increased real-time execution capability, through an improved situational awareness and analysis set of services, as required within the GIG and its Joint, Service, Allied, and non-DoD components. This project develops interoperability pilots, demonstrates them in appropriate evaluations or exercises (e.g., Joint Forces Command (JFCOM) evaluations, Joint Warrior Interoperability Demonstrations), with transitioning of matured components into a fielded Joint Command and Control (JC2)/next generation C2 and intelligence (C2I) capability. These capabilities are designed to use the NCES infrastructure and support interoperability and integration across multiple C4I domains. Programs supported include Navy's XTCF Project, the Global Command and Control Family of Systems, and the Family of Interoperable Operational Pictures (FIOP). C2IM capabilities supported new commercial operating systems (with increased emphasis on security). In addition to supporting integrated information operations within the SIPRNET environment, components were developed for the exchange of information with allies, coalition partners and the Homeland Defense communities.

During FY 2005, as net-centric infrastructure services evolved, this project's funds were used to develop and pilot the initial User Defined Operational Picture (UDOP) infrastructure capabilities supporting the Command and Control Community of Interest (C2 COI). Mature UDOP capabilities provided a tailored, relevant, and correlated operational picture that enable the user to share that view with a collaborative COI. Capabilities were realized within a Services-Oriented Architecture (SOA) that leveraged NCES (e.g., discovery services) and the Global Information Grid-Bandwidth Expansion (GIG-BE) to provide improved timely situational awareness for the next generation of C2I capabilities. Each user or aggregation of users determines the appropriate operational picture for their particular mission using a producer/consumer or publish/subscribe model that supports raw and processed data for Task, Post, Process and Use (TPPU) paradigm as well as smart push. More flexible and extensible than the currently deployed client-server based Common Operational Picture (COP), the loosely coupled UDOP provides increased agility for the user by generating a picture on demand as opposed to a hierarchal COP generated by a single command authority.

The C2 COI Global Strike and Situational Awareness ECMs were showcased in early FY 2005 as part of Net-Centric Capability Pilot's (NCCP) Oktoberfest demonstration. C2 COI ECMs were made available to users on the SIPRNET for evaluation, maturation, and limited operational use. Additionally, they supported concept exploration and technical

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Project Cost	4.565	0	0	0	0	0	0

risk reduction for the next generation of C2I (e.g., Joint Command and Control (JC2)). C2IM's FY 2005 efforts focused on hardening and maturing previously developed capabilities. Beginning in FY 2006, C2IM has been realigned to the Joint Command and Control Program in PE 0303158K.

B. Accomplishments/Planned Program:

The major products delivered under C2IM/C2 COI UDOP were Architecture Products and Pilot/Demo Services Products. Cost detail, broken out by services (capabilities), is as follows:

	<u>FY 05</u>	<u>FY 06</u>	<u>FY 07</u>
Subtotal Cost	1.198	0	0

Runtime Services for Net-Centric Computing:

C2IM runtime services enable the discovery and integration of information published within the net-centric computing environment. These services are used to dynamically build tailored presentations of real-time situational awareness information, the C2 COI UDOP, according to user preferences and operational requirements of the Combatant Commands and JTFs. FY 2005 funds were used to harden and mature UDOP and associated interfaces to the NCCP ECMS/services.

FY 2005 funds supported:

- Common situation awareness and situation analysis support services
- Runtime search and discovery of network resources
- Network resource metadata collection, storage, management and vending
- Common Horizontal Fusion services (Horizontal Fusion provides toolsets that will enable smart pull and rapid integration of data by users.)
- Network publication service for "community spaces"
- Integrated collaborative planning supporting C2, Combat Support (CS) and Intelligence
- Net-centric Joint Warfighter portal supporting integration of C2, CS, and Intel information repositories

	<u>FY 05</u>	<u>FY 06</u>	<u>FY 07</u>
Subtotal Cost	1.249	0	0

Common Edge Services and Warfighter Visualizations:

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Project Cost	4.565	0	0	0	0	0	0

Common Edge Services enable the tailored and secure user access to NCES infrastructure services and the intelligent pull of all information available within the net-centric environment. Users are able to establish their context and seamlessly gather appropriate information for their particular mission and functions. In addition to user authentication mechanisms and the integration of NCES information discovery services, Common Edge Services enable the integration of real-time situational awareness information from multiple sensors and data sources. FY 2005 funding was used to harden and mature the common Edge User pilot services.

FY 2005 funds supported:

- Integrated information, displays, and decision aids, shared across a joint force, for collaborative situation development, crisis assessment, courses of action development/selection planning and execution.
- Provided mission-tailored JTF displays of real-time combat information to support operational and tactical decision-making across the JTF.
- Provided access to NCES user authentication and authorization services.

	<u>FY 05</u>	<u>FY 06</u>	<u>FY 07</u>
Subtotal Cost	0.706	0	0

Web Enabling Legacy Applications:

This effort supported the integration of existing information system components into the next generation C2I capability. FY 2005 funds were used to integrate web-enabled legacy applications with the Net-Centric pilot services.

FY 2005 funds supported:

- Integrated functionality from Global Command and Control System (GCCS), Global Combat Support System (GCSS), and relevant Advanced Concept Technology Demonstrations (ACTDs) into JTF headquarters capability.

	<u>FY 05</u>	<u>FY 06</u>	<u>FY 07</u>
Subtotal Cost	0.952	0	0

System Engineering for Tailorable C2 Capability Suites:

Provides the architecture supporting the deployment of net-centric services and the integration of capabilities into multiple end-user applications. Enables multiple channel distribution and integration of capabilities through the web, wireless, and handheld platforms and clients. FY 2005 funding provided engineering support for the piloting of

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COST (in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Project Cost	4.565	0	0	0	0	0	0

net-centric services.

FY 2005 funds supported:

- Common JTF HQ architecture with architectural compliance guidelines and validation mechanisms
- Software capabilities that require nominal hardware/software platforms
- Piloting tailored C2 capability suites

	<u>FY 05</u>	<u>FY 06</u>	<u>FY 07</u>
Subtotal Cost	0.460	0	0

Information Interoperability and Security for Homeland Defense and Coalition Partners:

This effort provided the tools needed for the integration of information between security domains and supported the secure transfer of information between SIPRNET and other external networks as required by the JTFs. FY 2005 funds were used to provide assessments of effectiveness and military utility of the security and information exchange pilot services.

FY 2005 funds supported:

- C2 capability to coordinate force protection and homeland defense operations
- Prototype coalition communication mechanisms (includes provisions for intermittent network access)
- Extensible Mark up Language (XML) based message transformation and translation into common formats and vocabularies
- Assessment of effectiveness and military utility for security services and information exchange services

C. Other Program Funding Summary: N/A

D. Acquisition Strategy:

Made use of MITRE support and the DISA Next Generation Contractual vehicle.

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Project Cost	4.565	0	0	0	0	0	0

E. Performance Metrics: The performance metrics for the software include capacity (number of messages communicated), portability, extensibility, and architectural scalability (number of clients and number of track objects).

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Exhibit R-3 Cost Analysis					DATE: February 2006					
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<u>Cost Category</u>	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total PYs Cost</u>	<u>FY 06 Cost</u>	<u>FY 06 Award Date</u>	<u>FY 07 Cost</u>	<u>FY 07 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
System Engineering	OTF&O	MITRE, FFRDC McLean, VA	2.248	0	N/A	0	N/A	0	2.248	2.248
Engineering Support	MOA	JPL, FFRDC San Diego, CA	1.750	0	N/A	0	N/A	0	1.750	1.750
NCCP / (UDOP) Pilot Integration	Various	Various	0.850	0	N/A	0	N/A	0	0.850	N/A
C2IM UDOP JDEP Testing	MOA	SSC-SD GOVT San Diego, CA	0.890	0	N/A	0	N/A	0	0.890	0.890
UDOP SW Dev & Tech Suppt	F&O	NGMS, FGM, Polaxis Reston, VA	13.596	0	N/A	0	N/A	0	13.596	13.596
UDOP Visualization/Portal SW	F&O	NGMS, FGM, Polaxis Reston, VA	3.425	0	N/A	0	N/A	0	3.425	3.425
UDOP Engineering Support	F&O	NextGen	2.950	0	N/A	0	N/A	0	2.950	2.950
UDOP Architecture/Engineering	F&O	S&T Assoc. Reston, Va	4.200	0	N/A	0	N/A	0	4.200	4.200
Engineering/Tech Svcs	Various	Various	2.650	0	N/A	0	N/A	0	2.650	N/A
	Total		32.559						32.559	

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Exhibit R-4 Schedule Profile																Date: February 2006															
Appropriation/Budget Activity RDT&E, Defense-Wide/07					C4I for the Warrior/PE 0303149K																Command and Control Infrastructure Modernization(C2IM)/T55										
Fiscal Year	2005				2006				2007				2008				2009				2010				2011						
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
Architecture/Integ/ Dev.																															
UDOP/NCCP Integration &Test	△																														
UDOP Software Dev	△																														
UDOP Portlet Dev	△																														
Pilots / Demonstrations																															
NCCP/UDOP Spring Demonstration	△																														
NCCP/UDOP Fall Demonstration	△	△	△																												



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Exhibit R-4a Schedule Detail		Date: February 2006						
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NAME AND NUMBER						
RDT&E, Defense-Wide/07	C4I for the Warrior/PE 0303149K	Command and Control Infrastructure Modernization (C2IM)/T55						
<u>Schedule Profile</u>		<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Architecture / Integr / Development UDOP/NCCP Integration Test	1Q							
UDOP Software Development	1Q							
UDOP Portlet Development Pilots / Demonstrations	1Q							
NCCP/UDOP Spring Demonstration	1Q							
NCCP/UDOP Fall Demonstration Architecture, Development, Integration & Test Demo/Pilot Exercise	1Q-3Q							

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Exhibit R-2a, RDT&E Project Justification				DATE: February 2006			
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		PROGRAM ELEMENT C4I for the Warrior/PE 0303149K			PROJECT NAME AND NUMBER NETWARS (Formerly Technical Integration Services) /E62		
COST (in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Project Cost	9.848	6.221	6.551	6.656	6.775	6.984	7.246

A. **Mission Description and Budget Item Justification:** This effort supports the successful deployment of DoD information systems by performing a broad spectrum of activities in support of C4I programs. DISA supports the development of C4I programs and systems through analytical and technical integration activities including application performance assessments; cross-domain network solutions; contingency planning; network capacity planning and diagnostics; system architecture development and evaluation; technical and operational assessment of emerging technologies; and systems-level modeling and simulation. DISA provides systems engineering and technical integration support dedicated to solving problems for, and meeting the unique engineering, integration and analysis needs of its customers (Combatant Commands (COCOMs), Services, Defense Agencies, Office of the Secretary of Defense, and the Joint Staff).

The Network Warfare Simulation (NETWARS) is a state-of-the-art C4 modeling and simulation (M&S) tool that can be used by C4 planners and analysts to: (a) assess the effects of full operational combat traffic loading on current and future communications systems and networks in a joint task force major theater of war scenario, (b) conduct quick turn-around communications planning for contingency operations including small regional conflicts and peacekeeping scenarios, and (c) evaluate the impact of new communications technologies, organizational structures, and operational concepts. NETWARS supports the acquisition process by conducting end-to-end analyses of networks with new C4 systems and C2 applications applied, reducing new system testing costs and risks, and providing empirical support for C4 acquisition decisions. NETWARS also provides C4 measures of performance to the Joint Warfare Simulation (JWARS) tool and fulfills the M&S requirements of the Joint Network Management System (JNMS). Ultimately, NETWARS makes it possible for communications planners and analysts to validate their C4 support plans and assess their ability to execute them, thus enabling the warfighter to achieve network-centric warfare operations.

\* Beginning in FY 2006, only the NETWARS part of this project will remain in PE 0303149K. The other portion has been realigned to Modeling and Simulation/Project E65 under PE 0302019K because it directly supports DISA's Engineering and Integration tasks under that program element.

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Exhibit R-2a, RDT&E Project Justification				DATE: February 2006			
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		PROGRAM ELEMENT C4I for the Warrior/PE 0303149K			PROJECT NAME AND NUMBER NETWARS (Formerly Technical Integration Services) /E62		
COST (in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Project Cost	9.848	6.221	6.551	6.656	6.775	6.984	7.246

B. Accomplishments/Planned Program:

	<u>FY 05</u>	<u>FY 06</u>	<u>FY 07</u>
Subtotal Cost	1.826	0	0

FY 2005 - Warfighter & Combatant Commands Support provided network traffic analysis for warfighter architectures end-to-end system engineering issues.

	<u>FY 05</u>	<u>FY 06</u>	<u>FY 07</u>
Subtotal Cost	4.779	6.221	6.551

FY 2005 - C3 Community Support continued to provide the C3 Community M&S tools to evaluate software development of communication and related systems for OSD and COCOMs to determine communications effects on combat outcome.

FY 2006 - Enhance the NETWARS program by establishing communication plans for tactical networks, based on traffic generated by Net-Centric Enterprise Services (NCES) Core Enterprise Services.

FY 2007 - Enhance the NETWARS Program to increase usability for the warfighter through: 1. addition of models of new and emerging communications technology. 2. expansion of the organization library to include new doctrinal structures. 3. inclusion of additional application traffic.

	<u>FY 05</u>	<u>FY 06</u>	<u>FY 07</u>
Subtotal Cost	1.946	0	0

FY 2005 - DISA Program Support provided performance assessments for existing and transitioning networks, applications, and technology; and develop recommendations for network performance improvement, survivability and reliability.

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Exhibit R-2a, RDT&E Project Justification				DATE: February 2006			
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		PROGRAM ELEMENT C4I for the Warrior/PE 0303149K			PROJECT NAME AND NUMBER NETWARS (Formerly Technical Integration Services) /E62		
COST (in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Project Cost	9.848	6.221	6.551	6.656	6.775	6.984	7.246

	<u>FY 05</u>	<u>FY 06</u>	<u>FY 07</u>
Subtotal Cost	1.297	0	0

FY 2005 - Key Interface Point Architectures provided architecture baselines for key DISA communication interfaces to satisfy joint information flow requirements.

C. Other Program Funding Summary: (\$M)

	<u>FY 05</u>	<u>FY 06</u>	<u>FY 07</u>	<u>FY 08</u>	<u>FY 09</u>	<u>FY 10</u>	<u>FY 11</u>	<u>Total Complete</u>	<u>Total Cost</u>
RDT&E, DW (PE0302019K)	0	2.817	2.902	3.062	5.284	6.292	6.503	Contg	Contg
O&M, DW	1.510	0.660	1.179	1.345	1.423	1.463	1.500	Contg	Contg

D. Acquisition Strategy: Uses a number of contractors for modeling support. The level of support includes network model development; software installation and maintenance; software revisions or patches; and software upgrades. These companies are uniquely qualified to provide the necessary level of technical support and services to ensure DISA uses leading edge communication technologies.

E. Performance Metrics:

This project is measured by its impact on the DoD communications planning and investment strategy, with criteria based on the performance of a broad spectrum of technical activities. These include application assessments; contingency planning; network capacity planning and diagnostics; system architecture evaluation; technical and operational assessments of emerging technologies; and systems-level modeling and simulation. In FY 2006 and thereafter, NETWARS will be evaluated based on its ability to provide DoD decision makers with the impact on Net-Centric Enterprise Services prior to conflict.

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Exhibit R-3 Cost Analysis					DATE: February 2006					
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT		PROJECT NAME AND NUMBER					
RDT&E, Defense-Wide/07			C4I for the Warrior/PE 0303149K		NETWARS (Formerly Technical Integration Services) /E62					
Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Technical Integration Services System Engineering and Integration	CPFF/Comp	OPNET Tech, Inc. Bethesda, MD	7.389	3.501	01/06	3.685	01/07	Contg	Contg	14.575
Com modeling and simulation	FFRDC	RAND Tysons Corner, VA	.555	0	N/A	0	N/A	N/A	.555	.555
	CPFF/Comp	Northrop Grumman Reston, VA	1.750	0	N/A	0	N/A	N/A	1.750	1.750
	CPFF/Comp	SAIC Seven Corners, VA	1.630	0	N/A	0	N/A	N/A	1.630	1.630
	FFRDC	MITRE Seven Corners, VA	.597	0	N/A	0	N/A	N/A	.597	.597
	CPFF/Comp	Verizon/BBNT McLean, Va	.853	0	N/A	0	N/A	N/A	.853	.853
	CPFF/8A	CNS, Inc Springfield, Va	.800	0	N/A	0	N/A	N/A	.800	.800
	CPFF/Comp	Pragmatics, McLean, Va	.733	0	N/A	0	N/A	N/A	.733	.733
	CPFF/Comp	Booz, Allen & Hamilton, McLean, Va	5.922	2.720	12/05	2.866	12/06	Contg	Contg	11.508
		Various Contracts	.599	0	N/A	0	N/A	N/A	.599	N/A
Subtotal Product Development			20.828	6.221		6.551				
TOTAL			20.828	6.221		6.551				

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Exhibit R-4 Schedule Profile																Date: February 2006												
Appropriation/Budget Activity RDT&E, Defense-Wide/07					Program Element Number and Name C4I for the Warrior / PE 0303149K												Project Number and Name NETWARS (Formerly Technical Integration Services)/E62											
Fiscal Year	2005				2006				2007				2008				2008				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Support to DISA Ops	△	△	△	△																								
Warfighter Support	△	△	△	△																								
C3 Community Support	△	△	△	△		△				△				△				△				△				△		
DISA Program Support	△	△	△	△																								
KIP architectures		△																										

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Exhibit R-4a Schedule Detail		DATE: February 2006					
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT	PROJECT NAME AND NUMBER					
RDTE&E, Defense-Wide/07	C4I for the Warrior/PE 0303149K	NETWARS (Formerly Technical Integration Services) /E62					
<u>Schedule Profile</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>
Support to DISA Ops	1-4Q						
Warfighter Support	1-4Q						
C3 Community Support	1-4Q	2Q	2Q	2Q	2Q	2Q	2Q
DISA Program Support	1-4Q						
KIP architectures	2Q						