

Exhibit R-2, RDT&E Budget Item Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07					R-1 ITEM NOMENCLATURE Long Haul Communications/PE 0303126K					
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Total Program Element (PE)		1.339	10.624	1.407	1.424	1.458	1.491	1.522	Contg	Contg
DISN Systems Engineering Support/T82		1.339	1.363	1.407	1.424	1.458	1.491	1.522	Contg	Contg
Information Dissemination Management/IM01		0	9.261	*					Contg	Contg

A. Mission Description and Budget Item Justification: This program element funds system engineering for the Defense Information Systems Network (DISN) which provides defense-wide communications for the day-to-day operations of the DOD and serves as the core of DOD wartime communications for the President and Secretary of Defense, the Joint Chiefs of Staff (JCS), the Commanders-in Chief (CINCs), and other critical users. It provides for the engineering to consolidate the operational communications networks into DISN. This PE funds the critical and essential engineering required to use commercial equipment and service offerings, to implement the rapidly advancing communications technology, and to update the network design tools so as to continue providing tremendous cost savings, and to continue offering valuable new cost effective information technology capabilities and services to customers. It provides for the cost-effective development of needed information technology capabilities by targeting RDT&E efforts to DOD mission needs. This PE supports the military requirements identified by Joint Mission Needs Statement (JMNS) and Joint Capstone Requirements Document (JCRD). The program element is under Budget Activity 07 because it involves efforts supporting operational systems development.

\* Beginning in FY 2003, funding for Project IM01, Information Dissemination Management, has been realigned to PE 0303149K, C4I For The Warrior.

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<b>B. <u>Program Change Summary:</u></b>	<u>FY01</u>	<u>FY02</u>	<u>FY03</u>
Previous President's Budget (FY 2002)	1.346	10.744	8.153
Appropriated Value	1.416	10.744	
Adjustments to Appropriated Value	-.077	-.120	
Adjustments to Budget Year since FY 2002 President's Budget			-6.746
Current Budget Submission/President's Budget (FY 2003)	1.339	10.624	1.407
Change Summary Explanation:			
FY 2001 decrease due to below threshold reprogramming.			
FY 2002 change due to undistributed congressional adjustments to Defense-wide RDT&E appropriation.			
FY 2003 change due to realignment of Project IM01, Information Dissemination Management, to PE 0303149K, C4I For The Warrior.			
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Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		Long Haul Communications/PE 0303126K				DISN Systems Engineering Support/T82				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		1.339	1.363	1.407	1.424	1.458	1.491	1.522	Contg	Contg

A. Mission Description and Budget Item Justification: This project funds the critical and essential engineering to continue providing cost savings and to offer valuable new cost-effective information technology capabilities and services to customers. It funds systems engineering to reduce the risks and delays of implementing new communications technologies by performing assessments and proof of concept implementations. It also provides engineering to develop/enhance computer-aided network topology design, analysis and modeling tools to: (a) improve performance and/or reduce cost of operational networks to satisfy customer requirements at lowest cost, (b) analyze/solve problems in operational networks and (c) produce cost-efficient designs for future networks using new technologies.

FY01 Accomplishments:

- o Engineered the insertion of advanced network technology into the DISN (e.g., wave division multiplexing, ATM cell encryption, and gigabit/terabit routing) (1<sup>st</sup> Qtr - 4<sup>th</sup> Qtr; \$406K).
- o Provided engineering support for the Network Engineering Assessment Facility which provides the testbed for performing risk-reduction, integration assessments of enhanced network technologies and transitioning those capabilities into the DISN. (1<sup>st</sup> Qtr - 4<sup>th</sup> Qtr; \$225K).
- o Upgraded a portion of workstations, LAN, and WAN hardware & system software as requirements/technology dictate.
  - Provided the information systems platform for design and analysis tools applied to operational and planned DISN voice, video, data and transport networks. (1<sup>st</sup> Qtr - 4<sup>th</sup> Qtr; \$100K).
- o Developed network topology design algorithms, heuristics and software based on a government prioritized list(1<sup>st</sup> Qtr - 4<sup>th</sup> Qtr; \$608K).
- o Total \$1.339M

FY02 Plans:

- o Engineer the insertion of technology into the DISN (e.g., Wave Division Multiplexing (WDM), optical cross-connect gigabit/terabit routers, E-SONET, Voice Over IP/ATM, MPLS, VPNs, ATM cell encryption, (FASTLANE v.3), broadcast quality video) (1<sup>st</sup> Qtr -4<sup>th</sup> Qtr; \$320K).

Exhibit R-2a, RDT&E Project Justification									DATE: February 2002	
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT				PROJECT NAME AND NUMBER				
RDT&E, Defense-Wide/07		Long Haul Communications/PE 0303126K				DISN Systems Engineering Support/T82				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		1.339	1.363	1.407	1.424	1.458	1.491	1.522	Contg	Contg

FY02 Plans (cont'd):

- o Engineering support for the Network Engineering Assessment Facility which provides the testbed for performing risk-reduction, integration assessments of enhanced network technologies and transitioning those capabilities into the DISN. (1<sup>st</sup> Qtr - 4<sup>th</sup> Qtr; \$300K).
- o Upgrade a portion of workstations, LAN, and WAN hardware & system software as requirements/technology dictate. - Provides the information systems platform for design and analysis tools applied to operational and planned DISN voice, video, data and transport networks. (1<sup>st</sup> Qtr - 4<sup>th</sup> Qtr; \$100K).
- o Develop network topology design algorithms, heuristics and software based on a government prioritized list (1<sup>st</sup> Qtr - 4<sup>th</sup> Qtr; \$643K).
- o Total \$1.363M

FY03 Plans:

- o Engineer the insertion of technology into the DISN (e.g., Wave Division Multiplexing (WDM), gigabit/terabit routers, SONET LITE, Voice Over IP/ATM, MPLS, Quality of Service, VPNs, IP/ATM encryption (TACLANE), broadcast quality video) (1<sup>st</sup> Qtr - 4<sup>th</sup> Qtr; \$320K).
- o Engineering support for the Network Engineering Assessment Facility which provides the testbed for performing risk-reduction, integration assessments of enhanced network technologies and transitioning those capabilities into the DISN. (1<sup>st</sup> Qtr - 4<sup>th</sup> Qtr; \$341K).
- o Upgrade a portion of workstations, LAN, and WAN hardware & system software as requirements/technology dictate. - Provides the information systems platform for design and analysis tools applied to operational and planned DISN voice, video, data and transport networks. (1<sup>st</sup> Qtr - 4<sup>th</sup> Qtr; \$100K).
- o Develop network topology design algorithms, heuristics and software based on a government prioritized list (1<sup>st</sup> Qtr - 4<sup>th</sup> Qtr; \$646K).
- o Total \$1.407M

<b>Exhibit R-2a, RDT&amp;E Project Justification</b>									<b>DATE:</b> February 2002	
<b>APPROPRIATION/BUDGET ACTIVITY</b> RDT&E, Defense-Wide/07			<b>PROGRAM ELEMENT</b> Long Haul Communications/PE 0303126K				<b>PROJECT NAME AND NUMBER</b> DISN Systems Engineering Support/T82			
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		1.339	1.363	1.407	1.424	1.458	1.491	1.522	Contg	Contg

B. Other Program Funding Summary: N/A

C. Acquisition Strategy: General Services Administration, Washington, DC; SETA Corporation, McLean, VA.

D. Schedule Profile:

FY01 4<sup>th</sup> Qtr Future technology design, analysis, modeling tools, and technology insertion into the DISN (e.g., wavelength multiplexing, ATM cell encryption, and gigabit/terabit routing).

FY02 4<sup>th</sup> Qtr Future technology design, analysis, modeling tools, and technology insertion into the DISN(e.g., Wave Division Multiplexing (WDM), Optical cross-connects, gigabit/terabit routers, E-SONET, Voice Over IP/ATM, MPLS, VPNs, ATM cell encryption (FASTLANE v.3) optical cross connect, broadcast quality video).

FY03 4<sup>th</sup> Qtr Future technology design, analysis, modeling tools, and technology insertion into the DISN(e.g., Wave Division Multiplexing (WDM), optical switching, gigabit/terabit routers, SONET LITE, Voice Over IP/ATM, MPLS, Quality of Service, VPNs, IP/ATM Encryption (TACLANE), broadcast quality video).

FY04 - FY07 4<sup>th</sup> Qtr Future technology design, analysis, modeling tools, and technology insertion into the DISN(e.g., Wave Division Multiplexing (WDM), Optical Switching, gigabit/terabit routers, IP over LAMBDA, Video Over IP/ATM, MPLS, Quality of Service, VPNs, IP/ATM Encryption (TACLANE), broadcast quality video).

<b>Exhibit R-3 Cost Analysis</b>		<b>DATE:</b> February 2002
<b>APPROPRIATION/BUDGET ACTIVITY</b> RDT&E, Defense-Wide/07	<b>PROGRAM ELEMENT</b> Long Haul Communications/PE 0303126K	<b>PROJECT NAME AND NUMBER</b> DISN Systems Engineering Support/T82

Support Costs:

<u>Cost Category</u>	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total Pys Cost</u>	<u>FY02 Cost</u>	<u>FY02 Award Date</u>	<u>FY 03 Cost</u>	<u>FY 03 Award Date</u>	<u>Cost To Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
Systems Engineering	CPAF/ CPFF	Multiple	1.339	1.363	01/02	1.407	01/03	Contg	Contg	N/A

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RDT&E, Defense-Wide/07		Long Haul Communications/ PE 0303126K				Information Dissemination Management/IM01				
COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		0	9.261	*					Contg	Contg

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 IDM Services are defined by the "Framework for Information Dissemination Management" document distributed by ASD (C3I) 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. The IDM Core Services are implemented as Defense Information Infrastructure Common Operating Environment (DII COE) compliant segments. Rather than being developed as a "system", IDM is being incrementally developed as tools and services that will be incorporated into and fielded as integral parts of other host systems. This RDT&E project continues the developmental efforts that produced Releases 1, 2 and 3, with the incremental development and integration of IDM tools and services via an evolving IDM Toolbox planned for FY02 and beyond.

\* Beginning in FY 2003, funding has been realigned to PE 0303149K C4I For The Warrior.

FY 2002 Plans:

o Field IDM Awareness and Delivery (A&D) capabilities to operational units. Emphasis will be on fielding to CINC locations. (1<sup>st</sup> Qtr - 4<sup>th</sup> Qtr; \$500K).

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COST (in millions)		FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost		0	9.261	*					Contg	Contg

- o Integrate the Access 1 (A1) capability into IDM tools and services and begin fielding (1<sup>st</sup> Qtr - 2<sup>nd</sup> Qtr; \$1,250K).
- o Begin the design and integration of the Operations Support (OPS) and Access 2 and Control (A2&C) capabilities of IDM (1<sup>st</sup> Qtr - 4<sup>th</sup> Qtr; \$2,719K).
- o Award competitive contract for continued incremental development of IDM tools and core services (1<sup>st</sup> Qtr - 3<sup>rd</sup> Qtr; \$1,350K).
- o Begin the evolution of the IDM Toolbox (3<sup>rd</sup> Qtr - 4<sup>th</sup> Qtr; \$3,442K).
- o Total \$9.261M

B. Other Program Funding Summary:

	<u>FY01</u>	<u>FY02</u>	<u>To Complete</u>
Operation and Maintenance,DW	5.529	0.608	Contg

C. Acquisition Strategy: All RDT&E work will be contracted out or funded using MIPRs. Product Development (Evolving IDM Toolbox): Full and Open Small Business Competition; Management Support: MITRE, GSA Schedule; Test and Evaluation: Joint Interoperability Test Command (JITC).

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COST (in millions)	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	Cost to Complete	Total Cost
Project Cost	0	0	9.261	*					Contg	Contg

D. Schedule Profile:

FY 2002

- o IDM A&D installed at various CINCs
- o IDM A1 integrated into IDM tools and services
- o Award development contract for continued development and maintenance of IDM Toolbox

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<b>Exhibit R-3 Cost Analysis</b>		<b>DATE:</b> February 2002
<b>APPROPRIATION/BUDGET ACTIVITY</b> RDT&E, Defense-Wide/07	<b>PROGRAM ELEMENT</b> Long Haul Communications/PE 0303126K	<b>PROJECT NAME AND NUMBER</b> Information Dissemination Management/IM01

Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 02 Cost	FY 02 Award Date	FY03 Cost	FY 03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Product Integration	C/CPAF	TBD	0	3.421	TBD	*	*	0	3.421	3.421
Product Development	C/CPAF	TBD	0	3.442	TBD	*	*	28.369	35.910	35.910
Management Support	Various	Various	0	1.850	Various	*	*	Contg	Contg	N/A
Test & Evaluation	MIPR	Various	0	0.548	Various	*	*	Contg	Contg	N/A
<b>Totals</b>				<b>9.261</b>						

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