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Exhibit R-2, RDT&E Budget Item Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07				R-1 ITEM NOMENCLATURE Long Haul Communications PE 0303126K				
COST (in millions)		FY03	FY04	FY05	FY06	FY07	FY08	FY09
Total Program Element		1.602	1.380	11.401	1.455	1.485	1.519	1.554
DISN Systems Engineering Support/T82		1.602	1.380	1.426	1.455	1.485	1.519	1.554
Presidential and National Voice Conferencing/PC01		0	0	9.975	0	0	0	0

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 Combatant Commanders, 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 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.

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B. <u>Program Change Summary:</u>			
	<u>FY 03</u>	<u>FY 04</u>	<u>FY 05</u>
Previous President's Budget	1.364	1.401	1.430
Current President's Budget	1.602	1.380	11.401
Total Adjustments	+.238	-.021	+9.971
Change Summary Explanation:			
FY 2003 change due to below threshold reprogramming.			
FY 2004 change due to undistributed congressional adjustment to Defense-Wide RDT&E Appropriation.			
FY 2005 change due to a new initiative for Presidential and National Voice Conferencing.			
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APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	R-1 ITEM NOMENCLATURE Long Haul Communications/PE 0303126K
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COST (in millions)		FY03	FY04	FY05	FY06	FY07	FY08	FY09
DISN Systems Engineering Support/T82		1.602	1.380	1.426	1.455	1.485	1.519	1.554

A. Mission Description and Budget Item Justification: This project 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, Secretary of Defense, the Joint Chiefs of Staff (JCS), the Combatant Commanders, and other critical users. It provides for the engineering required to use rapidly advancing commercial equipment and service offerings and to update the network design tools. This engineering is essential to continue providing cost savings and to continue offering valuable new cost-effective information technology capabilities and services to customers. This PE supports the military requirements identified by Joint Mission Needs Statement (JMNS) and Joint Capstone Requirements Document (JCRD).

B. Accomplishments/Planned Program:

	<u>FY 03</u>	<u>FY 04</u>	<u>FY 05</u>
Subtotal Cost	.916	.672	.689

Systems Engineering - Provide ongoing systems engineering to reduce the risks and delays of inserting new communications technologies into the DISN by performing assessments and proof of concept implementations. Engineer the insertion of technology into the DISN (e.g., wave division multiplexing (WDM), intelligent optical networking, gigabit/terabit

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COST (in millions)		FY03	FY04	FY05	FY06	FY07	FY08	FY09
DISN Systems Engineering Support/T82		1.602	1.380	1.426	1.455	1.485	1.519	1.554

routers, virtual private networks (VPNs), converged network/integrated services, voice over IP, IP class of service/quality of service (CoS/QoS), cell encryption (Fastlane/Taclave), broadcast quality video, wireless/mobility services). Continue support of DISN/Global Broadcast System (GBS) risk reduction trials. Continue engineering support for on-going Network Engineering Assessment Facility (NEAF) testbed assessments, research, prototyping, and mission support. Provide technical leadership in implementing recommended solutions and evolving DISN services.

	<u>FY 03</u>	<u>FY 04</u>	<u>FY 05</u>
Subtotal Cost	.686	.708	.737

Network Design - Provide ongoing development of the network topology design algorithms, heuristics, and software based on a DOD prioritized list to include delivery of an IP Quality of Service modeling study relevant to future DoD converged services over IP infrastructure. Continue to upgrade approximately one half of required workstations, Local Area Network (LAN), and Wide Area Network (WAN) hardware and system software as requirements and technology dictate. Continue to provide the information systems platform for design and analysis tools applied to operational and planned DISN voice, video, data, and transport services.

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COST (in millions)		FY03	FY04	FY05	FY06	FY07	FY08	FY09
DISN Systems Engineering Support/T82		1.602	1.380	1.426	1.455	1.485	1.519	1.554

C. Other Program Funding Summary: Not Applicable

D. Acquisition Strategy: Continue with the same acquisitions which include a Small Disadvantaged contractor (SETA) under the DISN Global Services (DGS) contract and a sole-source contract.

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Exhibit R-3 Cost Analysis	DATE: February 2004
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APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	PROGRAM ELEMENT Long Haul Communications/PE 0303126K	PROJECT NAME AND NUMBER DISN Systems Engineering Support/T82
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Cost Category	Contract Method & Type	Performing Activity & Location	Total PYS Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost To Complete	Total Cost	Target Value of Contract
System Engineering	FFP	SETA, McLean, VA	.916	.672	06/04	.689	06/05	Contg	Contg	2.277
	CPFF	OPNET, Bethesda, MD	<u>.686</u>	<u>.708</u>	04/04	<u>.737</u>	04/05	Contg	Contg	2.131
			1.602	1.380		1.426				

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Exhibit R-4 Schedule Profile					Date: February 2004																											
Appropriation/Budget Activity RDT&E, Defense -Wide/07					Program Element Number and Name Long Haul Communications/PE 0303126K					Project Number and Name DISN Systems Engineering Support/T82																						
Fiscal Year	2003				2004				2005				2006				2007				2008				2009							
	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				
DGS Task Order Award							▲				▲				▲				▲				▲				▲				▲	
On-going DISN Technology Insertion (WDM/gigabit routers), etc.				▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲
OPNET Contract/ Task Order Award							▲				▲				▲				▲				▲				▲				▲	
On-going Development and Application of Network Design, Analysis & Modeling Tools				▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲

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Exhibit R-4a Schedule Detail						DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT			PROJECT NAME AND NUMBER			
RDT&E, Defense-Wide/07	Long Haul Communications/PE 0303126K			DISN Systems Engineering Support/T82			
Schedule Profile	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
DGS Task Order Award	3Q	3Q	3Q	3Q	3Q	3Q	3Q
On-going DISN Tech Insertion (wave division multiplexing(WDM)/ gigabit routers) Convergence Network/ Integrated Service Assessments & Pilots, etc.	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
OPNET Task Order Award	3Q	3Q	3Q	3Q	3Q	3Q	3Q
On-going Development and Application of Network Design, Analysis & Modeling Tools	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q

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Exhibit R-2a, RDT&E Project Justification							DATE: February 2004	
APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07		PROGRAM ELEMENT Long Haul Communications /PE 0303126K			PROJECT NAME AND NUMBER Presidential and National Voice Conferencing/PC01			
COST (in millions)		FY03	FY04	FY05	FY06	FY07	FY08	FY09
Presidential and National Voice Conferencing/PC01		0	0	9.975	0	0	0	0

A. Mission Description and Budget Item Justification: As the Presidential and National Voice Conferencing (PNVC) program lead and system engineer, this project funds system engineering, planning, development, integration, installation and testing of new baseband (cryptographic and vocoder) equipment needed to provide survivable, near toll-quality voice conferencing capability for the President and other national/military leaders. This project funds the critical and essential engineering required to develop a new voice processing algorithm, as well as the development of new vocoder and cryptographic equipment by taking advantage of ongoing RDT&E efforts by another Defense component. These baseband devices will implement new technology capabilities such as multi-stream cryptography/vocoding and information technology capabilities such as baseband Ethernet interfaces supporting baseband Internet Protocol (IP) addressing. This project supports the Joint Staff's requirement to fully implement the recommended Advance Extreme High Frequency (AEHF) PNVC improvements no later than FY10 for all PNVC participants. Funding for FY06 and beyond will be addressed in the FY06 POM as DISA works with the Joint Staff to refine the requirements. This project involves efforts supporting operational development of a secure, survivable voice conferencing capability for the national and military leadership during crises.

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APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT				PROJECT NAME AND NUMBER			
RDT&E, Defense-Wide/07	Long Haul Communications /PE 0303126K				Presidential and National Voice Conferencing/PC01			
COST (in millions)		FY03	FY04	FY05	FY06	FY07	FY08	FY09
Presidential and National Voice Conferencing/PC01		0	0	9.975	0	0	0	0

B. Accomplishments/Planned Program:

	<u>FY 03</u>	<u>FY 04</u>	<u>FY 05</u>
Subtotal Cost	0	0	9.975

The primary effort in FY05 will be the development of the PNVC system design description and conducting trade studies, engineering and technical analyzes to develop the crypto/vocoder definition and specifications to meet the goal of starting production at the start of FY07. PNVC product integration, installation, and testing is scheduled to start in FY08 and complete in FY10. Initial Operational Capability (IOC) has been tentatively scheduled for end of FY09 and is defined to be the deployment of the first CONUS AEHF satellite and the PNVC initiative implemented at the principal conferees' locations.

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RDT&E, Defense-Wide/07		Long Haul Communications /PE 0303126K			Presidential and National Voice Conferencing/PC01			
COST (in millions)		FY03	FY04	FY05	FY06	FY07	FY08	FY09
Presidential and National Voice Conferencing/PC01		0	0	9.975	0	0	0	0
<p>C. <u>Other Program Funding Summary:</u> None</p> <p>D. <u>Acquisition Strategy:</u> Engineering support services for the PNVC will be provided by contract and FFRDC support. Although some limited in-house government capability exists, the expertise necessary to fulfill the mission and responsibilities of the PNVC does not exist. Full and open competition will be used for the acquisition of SETA support through existing DISA contracts.</p>								
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Exhibit R-3 Cost Analysis	DATE: February 2004
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APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	PROGRAM ELEMENT Long Haul Communications / PE 0303126K	PROJECT NAME AND NUMBER Presidential and National Voice Conferencing (PNVC)/PC01
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Cost Category	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost To Complete	Total Cost	Target Value of Contract
FFRDC Engineering/Technical Spt	C/CPAF	Aerospace Fld Ofc Falls Church, VA	0			1.300	10/04	0	1.300	1.300
NSA Engineering/Technical Support	C/TBD	NSA	0			8.675	10/04	0	8.675	8.675
Total			0			9.975			9.975	9.975

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Exhibit R-4 Schedule Profile													Date: February 2004																									
Appropriation/Budget Activity RDT&E, Defense -Wide/07													Program Element Number and Name Long Haul Communications / PE 0303126K													Project Number and Name Presidential and National Voice Conferencing (PNVC)/PC01												
Fiscal Year	2003				2004				2005				2006				2007				2008				2009													
	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										
Program (Project) Management Plan																																						
CONOPS																																						
System Design Description																																						
Crypto Development (NRE)																																						
Vocoder Development (NRE)																																						

Note: NRE = Non Recurring Engineering

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Exhibit R-4a Schedule Detail		DATE: February 2004
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APPROPRIATION/BUDGET ACTIVITY RDT&E, Defense-Wide/07	PROGRAM ELEMENT Long Haul Communications / PE 0303126K	PROJECT NAME AND NUMBER Presidential and National Voice Conferencing (PNVC)/PC01
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<u>Schedule Profile</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
MIPR Funds to NSA			1Q				
MIPR Funds to SMC (Aerospace Support)			1Q				
MOU/MOA with NSA and AEHF TPOs (MILDEPS Terminal Program Offices)			2Q				
Crypto & Vocoder Trade Studies			2Q				
Crypto & Vocoder Specification Development			3Q				
Crypto & Vocoder Systems Requirements Reviews (SRR)			4Q				
Crypto & Vocoder Preliminary Design Reviews				2Q			
Crypto & Vocoder Critical Design Reviews				4Q			
PNVC Test and Evaluation Master Plan (TEMP)				2Q			

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