FY 2002 RDT&E, N PROJECT JUSTIFICATION

Exhibit R-2, RDT&E,N Budget Item Justification Date: June 2001

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N

PROGRAM ELEMENT TITLE: Fleet Communication

COST ($ in Thousands)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
X0725 Communications Automation	4,529	3,317	9,678							
X1083 Shore to Ship Communications Systems	6,613	8,030	9,097							
X0795 Support of MEECN	648	555	2,361							
Total P.E. Cost	11,790	11,902	21,136							

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Communications Automation Program - This project is a continuing program that provides for automation and communications upgrades for Fleet tactical users. It includes Naval Modular Automated Communications System/Single Messaging Solution (NAVMACS II/SMS), Digital Wideband Transition System (DWTS) Low-Data Rate (EPLRS), Naval Computer & Telecommunications Area Master Station (NCTAMS), Joint Network Management System, Automated Digital Network System (ADNS) and Global Directory Services.

NAVMACS II/SMS develops joint/combined individual and organizational message handling to US Naval ships and submarines, United States Marine Corp (USMC) vans, and selected Military Sealift Command (MSC) and United States Coast Guard (USCG) platforms. NAVMACS II/SMS develops fleet interface to Defense Messaging System (DMS) and legacy ashore messaging systems.

DWTS Low-Data Rate (EPLRS) Navy requires a digital wideband capability, which can be used in amphibious operations where a fixed DWTS station cannot be used. System must be interoperable with Army and Marine Corps EPLRS system. DWTS Block Upgrade BRAVO improves the fixed DWTS station to operate at higher bandwidths with greater reliability than the current system.

NCTAMS, as part of the DoD Teleport initiative, is the information transfer gateway joining space-based and terrestrial networks. It provides a point of presence for strategic and tactical users. NCTAMS is the joint gateway for tactical resources providing multiple connection paths between information users and information producers integrating X, C, Ku, Civil & Military Ka, Extra High Frequency (EHF), Ultra High Frequency (UHF) and L-Band Satellite Communications (SATCOM) connectivity and Defense Information Switched Network (DISN), Defense Switched Network DSN, Defense Red Switched Network (DRSN), Secure Internet Protocol Router Network (SIPRNET), Non Secure Internet Protocol Router Network (NIPRENET), Joint World Wide Intelligence Communications System (JWICS), and Video Teleconference (VTC) services. NCTAMS will provide survivable worldwide connectivity to the war fighter enabling network centric warfare.

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N
PROGRAM ELEMENT TITLE: Fleet Communication

The Joint Network Management System is a CINC, Commander, Joint Forces (CJF) joint communications planning system with Department of the Army as the Executive Agent. It is intended to be an automated software system including capabilities for planning and engineering, monitoring, control and reconfigurations, spectrum management and security.

ADNS provides automated routing and switching of Tactical and Strategic C4I data via Transmission Control Protocol (TCP/IP) networks linking deployed Battle Group units with each other and with the DISN ashore via multiple Radio Frequency (RF) paths. Consists of Commercial Off-The-Shelf (COTS) non-developmental Joint Tactical Architecture (JTA) compliant hardware (routers, processors, switches) and commercial Y2K compliant software (VxWorks toolkit) in a standardized, scalable shock qualified rack design. Provides Internet Protocol (IP) connectivity afloat and ashore. Merges multiple redundant stove pipe communications circuits and efficiently manages RF assets resulting in better throughput using existing RF media. Line includes Network Operation Centers (NOCs) Ashore.

Global Directory Services is a key component of the infrastructure that will be leveraged to support a variety of network operations to include, but not limited to, Single Point of Administration (SPA) and Unified Account Management; Software Distribution; White/Yellow/Blue Pages; Menu, Profile, and Application Management; Public Key Infrastructure (PKI)-enablement of applications/devices; and Network Management. The Global Directory Services will leverage the Afloat deployed White Pages to construct individual ship Afloat Full Service Directories which will create a foundation for further development, over time, to create a ship-to-shore and ship-to-ship Global Directory Services.

The Shore to Ship Communications System develops communications systems elements, which provide positive command and control of deployed ballistic missile submarines (SSBNs). Provides the communication elements for continuous assessment of the command and control link between National Command Authority (NCA) and the ballistic missile platforms. Provides the tools for strategic command and control planning to deployed SSBNs.

Minimum Essential Emergency Communications Network (MEECN) is the Tri-Service transmission system, including land-based segment, which ensures delivery of Emergency Action Messages (EAM) to our strategic platforms.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it encompasses engineering and manufacturing development for upgrade of existing, operational systems.

B. (U) PROGRAM CHANGE SUMMARY:
FY00: Transfer to SBIR (-223K), WINSAT (486K), Feasibility Study (+1,165K), ASN RDA execution adjustment (-170K), Miscellaneous Navy adjustments (329K), Section 8055 Congressional Proportionate Rescission (-39K), NAVWARGPS (-125K), and Tomahawk (-157K).
FY01: Section 8086 .7% Pro-Rata Reduction (-84K), PL 106-664 Congressional Rescission (-26K).

C. (U) OTHER PROGRAM FUNDING SUMMARY: See individual projects.

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N
PROGRAM ELEMENT TITLE: Fleet Communication

D. (U) ACQUISTION STRATEGY: See individual projects.

E. (U) SCHEDULE PROFILE: See individual projects.

FY 2002 RDT&E, N PROJECT JUSTIFICATION

Exhibit R-2, RDT&E,N Budget Item Justification Date: June 2001

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N PROGRAM ELEMENT TITLE: Fleet Communication PROJECT TITLE: Communications Automation

Cost ($ in Thousands)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
X0725 Communications Automation	**4,529**	**3,317**	**9,678**							

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project is a continuing program that provides for automation and communications upgrades for Fleet tactical users. The Naval Modular Automated Communications System II (NAVMACS II)/Single Messaging Solution (SMS) is the network centric IP solution for the processing, storage, distribution and forwarding of General Service and Defense Messaging System (DMS) organizational messages to the user's desktop throughout the IT-21 Local Area Network (LAN)/Wide Area Network (WAN). DWTS Low-Data Rate (EPLRS); Navy requires a digital wideband capability which can be used in amphibious operations where a fixed DWTS station cannot be used. System must be interoperable with Army and Marine Corps EPLRS system. Existing DWTS configuration requires improvement in order to provide more reliable performance at the highest bandwidths. Naval Computer & Telecommunications Area master Station (NCTAMS), as part of the DoD Teleport initiative, is an information transfer gateway joining space-based and terrestrial networks. It provides a point of presence for the strategic and tactical users. NCTAMS is the joint gateway for tactical resources providing multiple connection paths between information users and information producers integrating X, C, Ku, Civil & Military Da, EHF, UHF and L-Band SATCOM connectivity and DISN, DSN, DRSN, SIPRNET, NIPRNET, JWICS, AND VTC services. NCTAMS will provide survivable worldwide connectivity to the war fighter enabling network centric warfare. The Joint Network management System is a CINC, Commander, Joint Forces (CJF) joint communications planning system with the Department of the Army as the Executive Agent. It is intended to be an automated software system including capabilities for planning and engineering, monitoring, control and reconfigurations, spectrum management and security. Automated Digital Network System (ADNS) provides automated routing and switching of Tactical and Strategic C4I data via Transmission Control Protocol (TCP/IP) networks linking deployed Battle Group units with each other and with the Defense Information Systems Network (DISN) ashore via multiple Radio Frequency (RF) paths. Consists of Commercial Off-The-Shelf (COTS) non-developmental Joint Tactical Architecture (JTA) compliant hardware (routers, processors, switches) and commercial Y2K compliant software (VxWorks toolkit) in a standardized, scalable shock qualified rack design. Provides Internet Protocol (IP) connectivity afloat and ashore. Merges multiple redundant stove pipe communications circuits and efficiently manages RF assets resulting in better throughput using existing RF medial. Line includes Network Operation Centers (NOCs) Ashore. Global Directory Services is a key component of the infrastructure that will be leveraged to support a variety of network operations to include, but not limited to, Single Point of Administration (SPA) and Unified Account Management; Software Distribution; White/Yellow/Blue Pages; Menu, Profile, and Application Management; PKI-enablement of applications/devices; and Network Management. The Global Directory Services will leverage the Afloat deployed White Pages to construct individual ship Afloat Full Service Directories which will create a foundation for further development, over time, to create a ship-to-shore and ship-to-ship Global Directory Services.

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N PROJECT TITLE: Communications
PROGRAM ELEMENT TITLE: Fleet Communication Automation

PROGRAM ACCOMPLISHMENTS AND PLANS:

- FY 2000 Accomplishments:
  ($3,591K) Supported DWTS Range Extension development through EPLRS interface. Conducted concept exploration and risk reduction. Performed test and evaluation, Systems Engineering and Evaluation, preliminary installation design and Integrated Logistics System development. Supported feasibility studies.

  ($938K) Continued Tactical DMS/SMS afloat migration efforts. Continued the development of emerging technologies which includes DMS Fortezza Gateway (DFG) and Personal Computer Interface Front End Processor (PCI FEP) Phase 1 Engineering and Integration. Continued Fleet Automated Messaging Information System (FAMIS) interface testing of Smart-push/Warrior-pull and P-MUL broadcast. Conducted integration and evaluation of SMS Support Server (SSS) functionality.

- FY 2001 PLAN:
  ($1,347) Complete development of emerging technologies which includes the Multicast NT integration of DMS interface products and PCI FEP Phase II circuits. Conduct evaluation and test of Bandwidth (BW) Mitigation Tools and Techniques for Medium assurance messaging. Conduct Security Accreditation engineering and evaluation. Initiate Fleet Developmental Testing of Internet Protocol (IP) messaging.

  ($1,970) Begin Risk Reduction RDT&E for Low-Data DWTS (EPLRS). Conduct DT-I and MS-II DWTS LDR (EPLRS).

- FY 2002 PLAN:

  ($2,067) Conclude EMD Phase including ILS development and DT/OT-II DWTS LDR (EPLRS). Design, develop, and test DWTS Block Upgrade BRAVO to improve radio performance at the highest data rates.

  ($2,019K) Continue the test and evaluation of emerging technology which includes SSS Multi-Cast Connector and Lightweight Directory Access Protocol (LDAP) Services. Initiate DoD (PKI) engineering evaluation. Initiate Sensitive Compartmentalized Information (SCI) messaging engineering, evaluation and testing. Continue Top Secret IP messaging automation engineering and testing. Initiate development and test efforts for multi-enclave messaging.

  ($529K) Supports testing of JNMS for Integrated Shipboard and Network Systems (ISNS), ADNS, and lab activities for security accreditation of the system.

  ($3,335) Begin research and development to support major technology refresh to include integration of ADNS and ISNS software and hardware. Begin development for Integrated Voice, Video and Data within the shipboard ADNS environment. Begin development to support the time division multiplexing

transition. Development required for additional routers and RF interfaces as they become available to ensure continued inter-operability and scalability. Investigate, develop and test ADNS technology upgrades to incorporate into existing architecture until integrated system is available. The ADNS program must prepare for efficient insertion of replacement technology being driven by an eighteen month technology change cycle. Investigate, develop and test Network Management to merge with existing ADNS development solutions.

($1,728K) Global Directory Services: Provide engineering efforts for a directory service architecture in the Ashore and Afloat support communities to support major programs (GCCS-M, NTCSS, etc) and general network environments. Provide engineering support for enhancement of the deployed directory service product. Modify ship data feed to Navy/ Marine Corps White Pages . Expand Common Access Card (PKI SmartCard) capability and integrate with Single Sign-On functionality. Develop Directory Services menus and applications including Navy/Marine Corps Yellow and Blue Pages.

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N PROJECT TITLE: Communications
PROGRAM ELEMENT TITLE: Fleet Communication Automation

OTHER PROGRAM FUNDING SUMMARY:

	FY 2000	FY 2001	FY 2002
OPN Line 3050 – Comm Auto - NAVMACS	11,078	13,311	18,242
OPN Line 3050 – Comm Auto – JNMS	0	0	618
OPN Line 3050 – Comm Auto – ADNS	37,766	37,180	18,743
OPN Line 3050 – Comm Auto – TELEPORT	0	0	0
OPN Line 3010 – 52NU Ship TAC Comms - DWTS	11,078	7,596	3,197
O&MN 4A6M – NAVMACS	1,177	1,063	1,081
O&MN 4B7N – DWTS (EPLRS)	0	394	147
O&MN 4A6M – NCTAMS	0	0	10,766
O&MN 4A6M – ADNS	3,012	2,472	7,992
O&MN 4A6M – JNMS	0	0	1,161

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N PROJECT TITLE: Communications
PROGRAM ELEMENT TITLE: Fleet Communication Automation

C. Acquisition Strategy: N/A

D. Schedule Profile:

	FY 2000	FY2001	FY2002
Program Milestones			
T & E Milestones		2Q DWTS TECHEVAL Block A 4Q DWTS TECHEVAL Block B	4Q EPLRS DT/OT

FY 2002 RDT&E, N PROJECT COST ANALYSIS

Exhibit R-3, RDT&E,N Project Cost Analysis Date: June 2001

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N PROJECT NUMBER: X0725

Exhibit R-3 Cost Analysis (page 1)												Date:
APPROPRIATION/BUDGET ACTIVITY 7			PROGRAM ELEMENT Fleet Communications 0204163N									PROJECT NAME AND NUMBER: X0725 Communications Automation
Cost Categories	Contract Method & Type	Performing Activity & Location	Total FY00 and PYs Cost	FY01 Cost	FY01 Award Date	FY02 Cost	FY02 Award Date	FY03 Cost	FY03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
240 Engineering Development	WX	SSC, San Diego	685	1,640	10/00	1,644	10/01				CONT	CONT
		SSC, San Diego	0	0	0	738	12/01				CONT	CONT
240 Engineering Development	Various	Various	329	105	Var	127	Var				CONT	CONT
240 Engineering Development	WX	SSC Charleston	1,756	1,242	Var	2,372	12/00				CONT	CONT
		SSC Charleston	100								CONT	CONT
		BAH	348									
Primary Hardware Development		DSCC	617									
Primary Hardware Development	Various	SSC, San Diego	795			300	Var					
Prime Mission Product	Various	SSC, San Diego				577	12/01				CONT	CONT
Prime Mission Product	Various	SSC, Charleston				558	12/01				CONT	CONT
Subtotal Product Development			4,630	2,987		6,316					CONT	CONT
Remarks:												
Software Development	Various	Various	N/A	N/A	N/A	1,710	12/01				CONT	CONT

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N PROJECT NUMBER: X0725

Subtotal Support						1,710					CONT	CONT
Remarks												

Cost Categories	Contract Method & Type	Performing Activity & Location	FY00 and Prior	FY01 Cost	FY01 Award Date	FY02 Cost	FY02 Award Date	FY03 Cost	FY03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
400 System T&E	WX	SSC San Diego	37	50	10/00	225	10/01			CONT	CONT	CONT
400 System T&E	Var	Various				380	12/01			374		
400 System T&E	N/A	SSC SD				294	12/01			293		
400 System T&E	N/A	OPTEVFOR				60	12/01			240		
400 System T&E	Var	SSC Charleston				246	12/01			196		
400 System T&E	WX	SSC San Diego				0				CONT	CONT	CONT
Subtotal T&E			37	50		1,205						
Remarks												
210 Project Management	WX	SSC, San Diego	749	280	10/00	198	10/01			CONT	CONT	CONT
210 Project Management	Var	Various				249	12/01			392	742	
210 Project Management		BAH	350			0	12/01			CONT	CONT	
Subtotal Management			1,099	280		447						

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N PROJECT NUMBER: X0725

Remarks												
Total Cost			5,766	3,317		9,678						
Remarks												

Exhibit R-2a, RDT&E,N Project Justification Date: June 2001

BUDGET ACTIVITY: 7
PROGRAM ELEMENT: 0204163N
PROGRAM ELEMENT TITLE: Fleet Communications
PROJECT NUMBER: X1083
PROJECT TITLE: Shore to Ship Communication System

Cost ($ in Thousands)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
X1083 Shore to Ship Communications System	6,613	8,030	9,097							

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project develops communications systems elements that provide positive command and control of deployed ballistic missile submarines (SSBNs). This program provides enhancements to the shore-to-ship transmitting systems and the Submarine Low Frequency (LF)/Very Low Frequency (VLF) Versa Module Eurocard (VME) Receiver (SLVR) System. This project also provides submarine unique capabilities to the Network Operation Center (NOC) and Broadcast Command Authority (BCA). Evaluation of this communications system performance is provided via the Strategic Communications Assessment Program (SCAP) and the Continued Evaluation Program (CEP) that provides constant assessment of the effectiveness of the end-to-end network. Submarine Communications Support System (SCSS) accomplishes the integration of component systems into single radio room configuration. Phase I of SCSS is scheduled for completion during FY01 and the follow on phase II efforts have been renamed Common Submarine Radio Room (CSRR). The NOC and the BCA provide the oversight and control for all fixed submarine broadcasts. Improvements to high voltage insulators, bushings and antenna components used in the FVLF transmit systems are evaluated and tested through the High Voltage Improvement Program (HVIP). Composite bushings take advantage of new material technology to replace aging expensive ceramic bushings.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

FY 2000 ACCOMPLISHMENTS:

- ($300) Continued high voltage and antenna component development and test. Initiated feasibility study to explore use of low cost composite exit bushings to replace aging high cost ceramic exit bushings.
- ($1,250) Continued development of the ELF and Signal Processing integration into SLVR.
- ($1,414) Completed SCSS Phase I design and continue integration and test.

Exhibit R-2a, RDT&E,N Project Justification Date: June 2001

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N PROJECT NUMBER: X1083
PROGRAM ELEMENT TITLE: Fleet Communications PROJECT TITLE: Shore to Ship Communication System

- ($3,649) Continued SCAP, conducted CEP and strategic connectivity threats, and performed analysis.

FY 2001 PLAN:

- ($323) Continue high voltage and antenna component development and test. Test candidate composite exit bushings to replace aging high cost ceramic exit bushings.
- ($1,962) Continue development of the ELF and Signal Processing integration into SLVR.
- ($1,491) Complete SCSS Phase I integration and land-based test.
- ($4,254) Continue SCAP, conduct CEP and strategic connectivity threats, and perform analysis.

FY 2002 PLAN:

- ($368) Complete high voltage on-site testing and evaluation of composite bushings with focus on development of system to detect onset of corona breakdown which will provide a heightened protection to present day carrier cutoff systems at FVLF sites.
- ($1,095) Complete Phase I at –sea testing and continue engineering, integration and test for CSRR architecture and component upgrades.
- ($2,548) Complete development of ELF integration into SLVR and commence system level testing to meet FY03 Virginia Class requirement.
- ($4,039) Continue SCAP, conduct CEP and strategic connectivity threats, and perform analysis.
- ($698) Conduct research and development necessary for integration of shore based submarine unique capabilities at the Network Operation Center (NOC) and Broadcast Control Authority (BCA).
- ($349) Initiate design concepts for integrated FVLF dynamic control system.

Exhibit R-2a, RDT&E,N Project Justification Date: June 2001

BUDGET ACTIVITY: 7
PROGRAM ELEMENT: 0204163N
PROGRAM ELEMENT TITLE: Fleet Communications
PROJECT NUMBER: X1083
PROJECT TITLE: Shore to Ship Communication System

B. (U) OTHER PROGRAM FUNDING SUMMARY

	FY 2000	FY 2001	FY 2002
OPN Line 3107 Shore LF	35,135	31,144	18,117
O&MN 4A6M	14,383	16,499	16,232

Exhibit R-2a, RDT&E,N Project Justification Date: June 2001

BUDGET ACTIVITY: 7
PROGRAM ELEMENT: 0204163N
PROGRAM ELEMENT TITLE: Fleet Communications
PROJECT NUMBER: X1083
PROJECT TITLE: Shore to Ship Communication System

C. (U) ACQUISITION STRATEGY:

	FY 2000	FY 2001	FY 2002
Program Milestones			
T&E Milestones	3Q SLVR OT-III (SLVR/TRIDENT FOT&E) 4Q SLVR DT (REM into SLVR on TRIDENT)	2Q DT (SSN) 3Q OT IV A & B on both SSNs and SSBNs (OT events combined to support fleet asset availability.)	

D. (U) SCHEDULE PROFILE: See paragraph C.

FY 2002 RDT&E, N PROJECT COST ANALYSIS

Exhibit R-3, RDT&E,N Project Cost Analysis Date: June 2001

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N PROJECT NUMBER: X1083

Cost Categories	Contract Method & Type	Performing Activity & Location	FY 00 and Prior	FY01 Cost	FY01 Award Date	FY02 Cost	FY02 Award Date	FY03 Cost	FY03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
240 Engineering Support	CPIF	Rockwell, Richardson, TX	15,864	0	N/A	0	N/A			Complete	16,197	N/A
240 Engineering Support	CPFF	APL/JHU Baltimore, MD	24,378	3,659	11/00	3,712	11/01			CONT	CONT	CONT
240 Engineering Support	WR	SSC, San Diego, CA	28,571	2,007	11/00	2,985	11/01			CONT	CONT	N/A
240 Engineering Support	WR	Miscellaneous Labs, NUWC	6,247	1,554	11/00	519	11/01			CONT	CONT	N/A
240 Engineering Support	WR	U.S. Army, Monmouth, NJ	3,790	130	11/00	0	11/01			CONT	CONT	N/A
240 Engineering Support	Various	Various	0	0	N/A	0	N/A				0	
Subtotal Product Development			78,850	7,350		7,216						
Remarks:												
Subtotal Support												
Remarks												

FY 2002 RDT&E, N PROJECT COST ANALYSIS

Exhibit R-3, RDT&E,N Project Cost Analysis Date: June 2001

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N PROJECT NUMBER: X1083

Cost Categories	Contract Method & Type	Performing Activity & Location	FY00 and Prior	FY01 Cost	FY01 Award Date	FY02 Cost	FY02 Award Date	FY03 Cost	FY03 Award Date	Cost To Complete	Total Cost	Target Value of Contract
400 System T&E	Various	Various	850	297	11/00	1,298	11/01			CONT	CONT	
Subtotal T&E			850	297		1,298						
Remarks												
210 Program Management	Various	Various	3,047	383	11/00	583	11/01		11/02	CONT	CONT	
Subtotal Management			3,047	383		583						
Remarks												
Total Cost			82,747	8,030		9,097						
Remarks												

FY 2002 RDT&E, N PROJECT COST ANALYSIS

Exhibit R-3, RDT&E,N Project Cost Analysis Date: June 2001

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N PROJECT NUMBER: X1083

FY 2002 RDT&E, N PROJECT JUSTIFICATION

Exhibit R-2a, RDT&E,N Project Justification Date: June 2001

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N PROJECT NUMBER: X0795
PROGRAM ELEMENT TITLE: Fleet Communications PROJECT TITLE: MEECN

Cost ($ in Thousands)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
X0795 MEECN	648	555	2,361							

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION

Support of Minimum Essential Emergency Communications Network (MEECN). MEECN is the Tri-Service communication system that ensures delivery of Emergency Action Messages (EAMs) to our strategic platforms including the land based delivery system components. Because of substantial downsizing in the number of MEECN assets, such as the CINC Airborne Command Post (ABNCP) fleet, it is necessary to improve the range, timeliness and reliability of MEECN communications to maintain connectivity to the platforms. This project identifies, researches, and develops improvements to the MEECN primarily in the Very Low Frequency and Low Frequency (VLF/LF) ranges of MEECN. The new High Data Rate (HIDAR) mode, which greatly reduces message transmission time while providing the performance of low data rate modes, has been deployed. Potential improvements in mode design and signal processing are continually being investigated for MEECN application. A new generation of high performance universal mode will be defined to provide a single standard MEECN replacement to take advantage of new computer processing capability.

FY 2000 ACCOMPLISHMENTS:

- ($300) Completed Turbo Code investigation to MEECN Modes.
- ($166) Continued development of improved MEECN Mode.
- ($167) Completed study to integrate NONAP and Signal Separator AJ algorithms.
- ($15) Completed crypto replacement coordination.

FY 2001 PLAN:

- ($220) Incorporate improved MEECN Mode into Mode Standard.
- ($303) Incorporate Mode Standard design into Mode Standard MEECN Test Bed for performance evaluation.
- ($32) Investigate applicability of commercial programmable crypto devices to the MEECN transmission.

FY 2002 PLAN:

- ($234) Complete MEECN Mode Standard.
- ($266) Complete verification of Mode Standard performance in MEECN testbed.
- ($ 23) Complete evaluation of commercial programmable crypto.
- ($1,838) Develop a non-AUTODIN based Emergency Action Messages (EAMs) delivery system.

B. (U) OTHER PROGRAM FUNDING SUMMARY

	FY 2000	FY 2001	FY 2002
O&MN 4A6M	555	541	544

C. (U) ACQUISITION STRATEGY: Not applicable.

D. (U) SCHEDULE PROFILE: Not applicable.