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

COST ($ in Thousands)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
X0725 Communications Automation	5,732	9,095	4,793	4,198	4,024	4,096	4,175	CONT	CONT
X1083 Shore to Ship Communications Systems	7,761	9,013	6,716	7,584	10,081	11,247	10,235	CONT	CONT
X0795 Support of MEECN	519	2,338	1,067	1,077	889	1,309	1,376	CONT	CONT
X9100 Programmable Integrated Communications Terminals (PICT)	0	3,370	0	0	0	0	0		
Total P.E. Cost	14,012	23,816	12,576	12,859	14,994	16,652	15,786	CONT	CONT

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 II (NAVMACS II/SMS), Digital Wideband Transition System (DWTS) Low-Data Rate (EPLRS), Naval Computer & Telecommunications Area Master Station (NCTAMS), Joint Network Management System (JNMS), 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. Begin concept exploration for extending DWTS and EPLRS line-of-sight to meet ORD requirements under the Seabridge initiative.

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.

The programmable Integrated Communications Terminal (PICT) is a user voice terminal designed to operate with Integrated Service Digital Network (ISDN) switches and legacy switches to support both interior and radio (external) shipboard communications. The Digital Modular Radio (DMR) system will be integrated into shipboard communications systems that require remote control capability to the radio for various end user applications. These integrated communications systems will include both internal phone and internal communications such as the Integrated Voice Network (IVN) as well as external radio communications.

(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: FY01: Section 8086 .7% pro rata reduction (-84K), Govt Wide rescission (-26K), SBIR (-161K), MUOS UHF offload demonstration BTR (-80K), Department adjustments (+2,351K), FY02: FY02: EKMS Tier 1 (-$500K), Section 8123: Mgmt. Reform Initiative (-212K), Section 8032 FFRDC (-8K), Programmable Integrated Communications Terminals (+3,400K).

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

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

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

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

BUDGET ACTIVITY: 7
PROGRAM ELEMENT: 0204163N
PROGRAM ELEMENT TITLE: Fleet Communication
PROJECT NUMBER: X0725
PROJECT TITLE: Communications Automation

Cost ($ in Thousands)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
X0725 Communications Automation	5,732	9,095	4,793	4,198	4,024	4,096	4,175	CONT	CONT

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. DWTS and EPLRS require further development in order to meet objective range requirements; these efforts are combined under the Seabridge initiative. The Joint Network Management System (JNMS) 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 PROGRAM ELEMENT TITLE: Fleet Communication PROJECT NUMBER: X0725 PROJECT TITLE: Communications Automation

PROGRAM ACCOMPLISHMENTS AND PLANS:

- FY 2001 Accomplishments:

  ($1,334) Completed development of emerging technologies (SMS Support Server) which included Multicast NT (ISDS) integration, DMS 2.2 interface products, and DMDS 5.0 profiler. Completed PCI Front End Processor (FEP) Phase II circuits. Conducted Security Accreditation engineering and evaluation for surface and submarine SMS configurations. Conducted development, integration, test and evaluation of Fleet SIPRNet Messaging (FSM) IP interface. Integrated the DMDS 5.0 backend profiler with NAVMACSII Message Processor. Conducted Messaging Architecture evaluation during JUICE exercise.

  ($4,398) Began Risk Reduction RDT&E for Low-Data DWTS (EPLRS). Conducted DT-I and MS-II DWTS LDR (EPLRS). Designed, developed, and tested DWTS Block Upgrade BRAVO to improve radio performance at the highest data rates.

- FY 2002 PLAN:

  ($1,942) Conclude EMD Phase including ILS development and DT/OT-II DWTS LDR (EPLRS). Conduct concept exploration and component advanced development for Seabridge concept.

  ($1,898) Continue test and evaluation of emerging technologies to include SSS Multi-Cast Applications and Lightweight Directory Access Protocol (LDAP) services. Continue SCI and Top Secret IP messaging automation engineering and testing. Initiate research into multilevel security messaging.

  ($498) Support testing of JNMS for Integrated Shipboard and Network Systems (ISNS), ADNS, and lab activities for security accreditation of the system.

  ($3,132) 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.

  ($1,625) Global Directory Services: Provide initial engineering design efforts for a directory service architecture in the Ashore and Afloat support communities which support major programs (GCCS-M, NTCSS, etc) and general network environments. Provide development for enhancement to the

directory service product. Modify ship data feed to Navy/Marine Corps White Pages and 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.

- FY 2003 PLAN:

($2,029) Initiate development and test efforts for multi-enclave messaging. Continue test and evaluation of emerging technology and product upgrades such as DMS 4.0, DMDS, multicast, and GOTS Delta products. Develop and integrate Afloat SCI messaging with Shore DMS products. Continue research into multilevel security messaging.

($1,014) Continue development and integration to support future technology refresh interfaces. Continue integration and implementation to Genser ADNS capabilities.

($1,750) Provide continuing design and development efforts that will build an enterprise-wide directory service environment by bridging efforts developed in FY02. Specifically providing for the development of a global meta-directory service to integrate disparate directory services used throughout the Naval community. Efforts also include developing a directory service architecture to support the development of Universal E-mail and providing developmental engineering support for the new functionality that would interact with the Navy/Marine Corps white Pages and related directory service environments.

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N PROJECT NUMBER: X0725
PROGRAM ELEMENT TITLE: Fleet Communication PROJECT TITLE: Communications Automation

OTHER PROGRAM FUNDING SUMMARY:

	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Complete	Total Cost
OPN Line 3050 – Comm Auto - NAVMACS	19,667	16,733	17,218	12,441	16,817	18,706	5,905	CONT	CONT
OPN Line 3050 – Comm Auto – JNMS	0	654	3,649	1,097	0	2,853	2,172	CONT	CONT
OPN Line 3050 – Comm Auto – ADNS	32,706	22,830	16,532	16,532	3,026	14,819	8,332	CONT	CONT
OPN Line 3010 – 52NU Ship TAC Comms- DWTS	5,445	3,824	1,038	7,441	2,510	0	0	CONT	CONT
O&MN 4A6M – NAVMACS	1,225	1,034	2,609	2,383	2,321	2,318	2,398	CONT	CONT
O&MN 4B7N – DWTS (EPLRS)	110	141	126	478	470	469	524	CONT	CONT
O&MN 4A6M – ADNS	2,472	4,904	6,090	5,859	6,402	6,346	6,198	CONT	CONT
O&MN 4A6M – JNMS	0	1,116	1,093	1,166	1,174	1,190	1,227	CONT	CONT

C. Acquisition Strategy: N/A

BUDGET ACTIVITY: 7
PROGRAM ELEMENT: 0204163N
PROGRAM ELEMENT TITLE: Fleet Communication
PROJECT NUMBER: X0725
PROJECT TITLE: Communications Automation

D. Schedule Profile:

	FY2001	FY2002	FY2003
Program Milestones			
T & E Milestones	2Q DWTS TECHEVAL Block A 4Q DWTS TECHEVAL Block B	4Q EPLRS DT/OT	

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	2,385	10/00	828	10/01				CONT	CONT
240 Engineering Development	CPFF	BAH	348									
240 Engineering Development	Various	Various	329		Var	127	Var				CONT	CONT
240 Engineering Development	WX	SSC, Charleston	1,856	313		1,649	12/01				CONT	CONT
240 Engineering Development	CPFF	MAXIM						630	10/02		CONT	CONT
Primary Hardware Development	WX	SSC, Charleston		107								
Primary Hardware Development	Various	DSCC	617									
Primary Hardware Development	WXs	SSC, San Diego	795	1,295			Var					
Prime Mission Product	Various	SSC, San Diego				1,023	12/01	474	12/02		CONT	CONT
Prime Mission Product	Various	SSC, Charleston						853	10/02			
Prime Mission Product	Various	SSC, Charleston				1,034	12/01	244	12/02		CONT	CONT
Software Development	Various	Various	N/A		5/01	1,639	12/01	1,638	12/02		CONT	CONT
Subtotal Product Development			4,630	4,100		6,300		3,839			CONT	CONT
Remarks:												

FY 2003 RDT&E, N PROJECT COST ANALYSIS

Exhibit R-3, RDT&E,N Project Cost Analysis Date:February 2002

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

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, Charleston			10/00							
400 System T&E	WX	SSC, San Diego		1,407	10/00	782	12/01				CONT	CONT
400 System T&E	WX	Various				350	12/01					
400 System T&E	WX	SSC, Charleston			10/00			366	12/01			
400 System T&E	WX	SSC, San Diego	37					146	12/02		CONT	CONT
400 System T&E	N/A	OPTEVFOR				315	12/01	60	12/02			
400 System T&E	Var	SSC, Charleston				756	12/01	97	12/02			
Subtotal T&E			37	1,407		2,203		669				
Remarks												
210 Project Management	WX	SSC, San Diego	749	225	10/00	343	10/01			CONT	CONT	CONT
210 Project Management	CPFF	BAH	350			249	12/01	102	12/02	CONT	CONT	
210 Project Management	CPFF	BAH			10/00			183	12/02	CONT	CONT	
Subtotal Management			1,099	225		592		285				
Remarks												
Total Cost			5,766	5,732		9,095		4,793				
Remarks												

Exhibit R-2a, RDT&E,N Project Justification Date:February 2002

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 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
X1083 Shore to Ship Communications System	7,761	9,013	6,716	7,584	10,081	11,247	10,235	CONT.	CONT.

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) and fleet submarine broadcast connectivity to SSNs and 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). The NOC and the BCA provide the oversight and control for all fixed submarine broadcasts. 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 integration and land-based test of SCSS was completed during FY01, at sea testing will be completed in FY02 and the follow on phase II efforts have been renamed Common Submarine Radio Room (CSRR). In support of the CSRR, multifunctional crypto system (MCS) is being developed. This project contributes to the development and certification of the MCS. Technologies to improve high voltage insulators, bushings and antenna components used in the Fixed VLF (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 2001 ACCOMPLISHMENTS:

- ($323) Continued high voltage and antenna component development and test. Tested candidate composite exit bushings to replace aging high cost ceramic exit bushings.

- ($2,008) Continued development of the ELF and Signal Processing integration into SLVR.

- ($1,413) Completed SCSS Phase I integration and land-based test and started development of the multifunctional crypto system (MCS).
- ($4,017) Continued SCAP, collected data and performed strategic connectivity threats analysis under CEP.

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 SCSS Phase I at –sea testing and continue engineering, integration and test for CSRR architecture and component upgrades and continue development of MCS.
- ($2,492) 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.
- ($670) 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) Investigate technology and initiate design concepts for integrated FVLF dynamic control system.

FY 2003 PLAN:

- ($547) Complete development of system to detect onset of corona breakdown which will provide a heightened protection to present day carrier cutoff systems at FVLF sites .
- ($925) Continue engineering, integration and test for CSRR architecture and component upgrades and complete development and testing of MCS.
- ($4,059) Continue SCAP, conduct CEP and strategic connectivity threats, and perform analysis.
- ($485) Continue design concept and initial feasible studies for integrated FVLF dynamic control system.
- ($700) Complete research and development necessary for development of shore based submarine unique capabilities at the NOC and BCA.

Exhibit R-2a, RDT&E,N Project Justification Date:February 2002

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 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Total Complete	Cost
OPN Line 3107 Shore LF	30,901	17,362	5,427	17,032	18,921	13,855	11,720	CONT	CONT
O&MN 4A6M	10,559	15,676	16,523	18,943	24,039	23,116	22,684	CONT	CONT

Exhibit R-2a, RDT&E,N Project Justification Date:February 2002

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 2001	FY 2002	FY 2003
Program Milestones			
T&E Milestones	2Q DT (SSN) 3Q OT IV		

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

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	0	N/A	Complete	15,864	N/A
240 Engineering Support	CPFF	APL/JHU Baltimore, MD	24,378	3,659	11/00	3,712	12/01	3,760	12/02	CONT	CONT	CONT
240 Engineering Support	WR	SSC, San Diego, CA	28,571	2,007	11/00	3,085	11/01	1,516	11/02	CONT	CONT	N/A
240 Engineering Support	WR	Miscellaneous Labs, NUWC	6,247	1,285	11/00	519	11/01	624	11/02	CONT	CONT	N/A
240 Engineering Support	WR	U.S. Army, Monmouth, NJ	3,790	130	11/00	0	11/01	0	N/A	CONT	CONT	N/A
240 Engineering Support	Various	Various	0	0	N/A	0	N/A	0	N/a		0	
Subtotal Product Development			78,850	7,081		7, 316		5,900				
Remarks:												
Subtotal Support												
Remarks												

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	482	11/02	CONT	CONT	
Subtotal T&E			850	297		1,298		482				
Remarks												
210 Program Management	Various	Various	3,047	383	11/00	399	11/01	334	11/02	CONT	CONT	
Subtotal Management			3,047	383		399		334				
Remarks												
Total Cost			82,747	7,761		9,013		6,716				
Remarks												

Exhibit R-3, RDT&E,N Project Justification Date: February 2002

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

Cost ($ in Thousands)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
X0795 MEECN	519	2,338	1,067	1,077	889	1,309	1,376	CONT	CONT

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 National 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. Improvements in mode design and signal processing are being investigated for MEECN application into a common Unified Mode design to support all VLF Strategic Platforms. 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 2001 ACCOMPLISHMENTS:

- ($220) Incorporated improved MEECN Mode into Mode Standard.
- ($267) Incorporated Mode Standard design into Mode Standard MEECN Test Bed for performance evaluation.
- ($32) Investigated applicability of commercial programmable crypto devices to the MEECN transmission.

FY 2002 PLAN:

- ($234) Complete MEECN Mode Standard.
- ($243) Complete verification of Mode Standard performance in MEECN testbed.
- ($ 23) Complete evaluation of commercial programmable crypto.
- ($1,838) Develop a non-AUTODIN based Emergency Action Messages (EAMs) delivery system.

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

FY 2003 PLAN:

- ($466) Update improved MEECN Mode for a simplified high performance airborne transmit.
- ($560) Continue non-AUTODIN based Emergency Action Messages (EAMs) delivery system (NOVA Hybrid Solution) and complete NOVA Hybrid Solution certification testing to support the FY03 AUTODIN closure.
- ($41) Incorporate transverse electric/magnetic antenna pattern combining methods into improved MEECN Mode.

B. (U) OTHER PROGRAM FUNDING SUMMARY

	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Complete	Total Cost
O&MN 4A6M	55	525	593	685	655	657	676	CONT	CONT

C. (U) ACQUISITION STRATEGY: Not applicable.

D. (U) SCHEDULE PROFILE: Not applicable.

BUDGET ACTIVITY: 7 PROGRAM ELEMENT: 0204163N PROGRAM ELEMENT TITLE: Fleet Communication PROJECT NUMBER: X9100 PROJECT TITLE: Programmable Integrated Communications Terminals

Cost ($ in Thousands)	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
X9100 Programmable Integrated Communications Terminals (PICT)		3,370							

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The programmable Integrated Communications Terminal (PICT) is a user voice terminal which is designed to operate with Integrated Service Digital Network (ISDN) switches and legacy switches to support both interior and radio (external) shipboard communications. The Digital Modular Radio (DMR) system will be integrated into shipboard communications systems that require remote control capability to the radio for various end user applications. These integrated communications systems will include both internal phone and internal communications such as the Integrated Voice Network (IVN) as well as external radio communications.

PROGRAM ACCOMPLISHMENTS AND PLANS:

- FY 2001 Accomplishments: N/A

- FY 2002 PLAN:

  ($3,370) Combine the Integrated Voice Network and the Programmable Integrated Communications Terminal with the Digital Modular Radio. Design and develop upgrades to the user terminal, switches and DMR controllers to allow the radio control functions to be remotely controlled from the user terminals. Integrate and test to demonstrate that the system design will meet specification requirements and is interoperable end-to-end from the user voice terminal to the radio.

  FY 2003 PLAN: N/A

BUDGET ACTIVITY: 7
PROGRAM ELEMENT: 0204163N
PROGRAM ELEMENT TITLE: Fleet Communication
PROJECT NUMBER: X9100
PROJECT TITLE: Programmable Integrated Communications Terminals

OTHER PROGRAM FUNDING SUMMARY: N/A

FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Complete	Total Cost

E. Acquisition Strategy: N/A

F. Schedule Profile: N/A

FY2001	FY2002	FY2003

Program Milestones: N/A

T & E Milestones: N/A

BUDGET ACTIVITY: 7
PROGRAM ELEMENT: 0204163N
PROGRAM ELEMENT TITLE: Fleet Communication
PROJECT NUMBER: X9100
PROJECT TITLE: Programmable Integrated Communications Terminals

Exhibit R-3 Cost Analysis (page 1)												Date:
APPROPRIATION/BUDGET ACTIVITY 7			PROGRAM ELEMENT Fleet Communications 0204163N									PROJECT NAME AND NUMBER: X9100 PICT
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				800	02/02				CONT	CONT
240 Engineering Development	WX	SSC, Charleston				1,435	02/02					
240 Engineering Development	CPFF	MAXIM				300	02/02					
Subtotal Product Development						2,535					CONT	CONT
Remarks:												

BUDGET ACTIVITY: 7
PROGRAM ELEMENT: 0204163N
PROGRAM ELEMENT TITLE: Fleet Communication
PROJECT NUMBER: X9100
PROJECT TITLE: Programmable Integrated Communications Terminals

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 Charleston				300	02/02					
400 System T&E	WX	SSC, San Diego				300	02/02					
Subtotal T&E						600						
Remarks												
210 Project Management	WX	SSC, San Diego				150	02/02					
210 Project Management	CPFF	BAH				85	02/02					
Subtotal Management						235						
Remarks												
Total Cost						3,370						