

UNCLASSIFIED

EXHIBIT R-2, FY 2003 RDT&E,N Budget Item Justification

DATE: FEBRUARY 2002

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605866N

PROGRAM ELEMENT TITLE: Navy Space and Electronic Warfare (SEW) Support

(U) COST: (Dollars in Thousands)

PROJECT NUMBER TITLE	FY 2001 ACTUAL	FY 2002 ESTIMATE	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	FY 2006 ESTIMATE	FY 2007 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R0739 Navy C4I Top Level Requirements	1,529	1,541	1,549	1,725	1,708	1,740	1,774	CONT.	CONT.
X0706 EMI Reduction and Radio Frequency Management	1,586	1,844	1,693	1,880	1,923	1,962	2,007	CONT.	CONT.
Total	3,115	3,385	3,242	3,605	3,631	3,702	3,781	CONT.	CONT.

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

Project R0739 Navy C4I Top Level Requirements - Analyzes fleet requirements and research and development technology to develop top level plans for operating Navy Communications, Command and Control Computers, and Intelligence (C4I) and space systems in the Space and Electronic Warfare (SEW) mission area.

Project X0706 Electromagnetic Interference (EMI) Reduction and Radio Frequency (RF) Management - Develops advanced technology to identify and reduce EMI sources from Navy systems and platforms.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations and installations required for general research and development use.

B. (U) PROGRAM CHANGE FOR TOTAL P.E.: See Individual Projects.

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PROJECT NUMBER: R0739

PROGRAM ELEMENT TITLE: SEW Support

PROJECT TITLE: Navy C4I Top Level Requirements

(U) COST: (Dollars in thousands)

PROJECT NUMBER & TITLE	FY 2001 ACTUAL	FY 2002 ESTIMATE	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	FY 2006 ESTIMATE	FY 2007 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R0739	Navy Command, Control, Communications, Computers and Intelligence (C4I) Top Level Requirements								
	1,529	1,541	1,549	1,725	1,708	1,740	1,774	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides analysis of fleet requirements and research and development technology to develop top level plans for operating Navy Communications, Command, Control, Communication and Computer Integration (C⁴I) and space systems in the Space and Electronic Warfare mission area.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 2001 ACCOMPLISHMENTS:

- (U) (\$532) Investigated potential benefit of and leveraging capability from continual reduction in chip development prices for DoN.
- (U) (\$474) Supported architectural analysis for web-based interaction DON-wide, including considerations to ensure maintenance of appropriate security. Product would be a comprehensive architecture displaying this security, the interfaces, and the functions.
- (U) (\$523) Identified requirements to improve Graphic User Interfaces by using tools to enhance intuitive understanding (i.e., icons and pull down menus) while providing all required capabilities for DON missions/administrative functions.

2. (U) FY 2002 PLAN:

- (U) (\$1,541) Identify requirements, programs and actions which can contribute to the development of Navy Space and Electronic Warfare issues and conduct analyses or solutions to problems for current and future scientific projects.

3. (U) FY 2003 PLAN:

- (U) (\$1,549) Identify requirements, programs and actions which contribute to the development of Navy Space and Electronic Warfare issues. Conduct analyses or solutions to problems for current and future scientific projects.

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PROJECT NUMBER: R0739

PROGRAM ELEMENT TITLE: SEW Support

PROJECT TITLE: Navy C4I Top Level Requirements

B. (U) PROGRAM CHANGE SUMMARY:

	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>
(U) FY 2002 President's Budget:	1,543	1,573	
(U) Adjustments from PRESBUDG:			
(U) Section 8086 - .7% Pro-Rata	-11		
(U) Government Wide Rescission	-3		
(U) SBIR Adjustment	-29		
(U) Execution Adjustment	+29		
(U) Section 8123 - Management Reform Initiative Reduction		-14	
(U) FFRDC Reduction		-18	
(U) FY 2003 President's Budget Submission:	1,529	1,541	1,549

(U) Schedule: Not applicable.

(U) Technical: Not applicable.

C. (U) OTHER PROGRAM FUNDING SUMMARY: Not applicable.

(U) RELATED RDT&E: Not applicable.

D. (U) SCHEDULE PROFILE: Not applicable.

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DATE: FEBRUARY 2002

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605866N

PROJECT NUMBER: X0706

PROGRAM ELEMENT TITLE: SEW Support

PROJECT TITLE: EMI Reduction and Radio Frequency Management

(U) COST: (Dollars in Thousands)

PROJECT

NUMBER	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	TO	TOTAL
TITLE	ACTUAL	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	ESTIMATE	COMPLETE	PROGRAM
X0706 EMI Reduction and Radio Frequency Management	1,586	1,844	1,693	1,880	1,923	1,962	2,007	CONT.	CONT.

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: Electromagnetic Interference (EMI) Reduction and Radio Frequency (RF) Management. This project develops tools to identify and reduce EMI sources from Navy systems and platforms. There are several tools under development to identify and reduce EMI through proper use of the electromagnetic spectrum. Automated capabilities will be developed that reflect research into new operational fleet battle group frequency management processes that reflect current fleet needs for a communications planning and frequency management tool used to plan communication links and analyze, allocate, and assign communication and radar frequencies for fleet operations. Research also includes EMI models for phased arrays, development of new analysis techniques to avoid EMI, and development of guidance to harmonize commercial EMI practices.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 2001 ACCOMPLISHMENTS:

- (U) (\$876) CPM and EMCAP: Developed interfaces for real time use of spectrum into communications and other C4ISR equipment based on the Navy operational EME to find available spectrum automatically to reduce incidences of interference to and from systems.
- (U) (\$432) EMI Models: Development of generic C4ISR system models. Concentrated development on user utility to run on as many computer platforms and networks as feasible.
- (U) (\$278) Criteria and Test Procedures: Continued to investigate industrial standards (foreign and domestic) for conversion to military standards. Continued to incorporate new communications planning techniques, including phased array antennas.

2. (U) FY 2002 PLAN:

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DATE: FEBRUARY 2002

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PROGRAM ELEMENT: 0605866N
PROGRAM ELEMENT TITLE: SEW Support

PROJECT NUMBER: X0706
PROJECT TITLE: EMI Reduction and Radio
Frequency Management

- (U) (\$1,019) CPM and EMCAP: Develop web based applications that tie into not only Navy C4ISR systems but into commercial communication systems being used by the Navy and ensure their operational use is not a source or victim of interference to find available spectrum automatically.
- (U) (\$502) C4I EMC: Due to congested topside environment, develop enhancements to antennas to reduce incidences of interference, and in addition develop models to analyze those enhancements to be repeatable on other platform types.
- (U) (\$323) C4I EMC Criteria : Incorporate commercial systems practices and standards into EMC C4I criteria. Continue to incorporate new communications and radar planning techniques, including phased array antennas.

3. (U) FY 2003 PLAN:

- (U) (\$935) Automated Tools: Develop interfaces for EMCAP, CPM, and other automated tools to interface with evolving network protocols to ensure currency for web based applications. Develop new algorithms for automated tools for new Navy C4ISR systems for both government and commercial communication systems being used by the Navy to ensure their operational use is not a source or victim of interference to find available spectrum automatically.
- (U) (\$461) C4I EMC: Due to congested topside environment, develop enhancements to antennas to reduce incidences of interference, develop models to analyze those enhancements, and research the interference for below decks emitters such as wireless LANs to the topside and below decks environments.
- (U) (\$297) C4I EMC Criteria : Incorporate commercial systems practices and standards into EMC C4I criteria and incorporate into Navy practices.

B. (U) PROGRAM CHANGE SUMMARY:

FY 2001: \$-12K: Section 8086 .7% Pro Rata Reduction. \$-4K: Government Wide Recission PL 106-554, Sec. 1403.
 \$-38K: SBIR Assessment. \$-79K: Navy Miscellaneous Adjustment.
 FY 2002: \$-16K: Section 8123 Management Reform Initiative.

C. (U) OTHER PROGRAM FUNDING SUMMARY:

(U) PE 0702827N, AGSAG 4B7N	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY2006	FY2007
	3,103	2,573	2,894	3,036	3,081	3,142	3,213
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PROGRAM ELEMENT: 0605866N

PROJECT NUMBER: X0706

PROGRAM ELEMENT TITLE: SEW Support

PROJECT TITLE: EMI Reduction and Radio
Frequency Management

(U) Related RDT&E: Not applicable.

D. (U) ACQUISITION STRATEGY: Not applicable.

E. (U) SCHEDULE PROFILE: Not applicable.

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