

UNCLASSIFIED

EXHIBIT R-2, FY 2001 RDT&E,N Budget Item Justification

DATE: FEB 2000

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 1999 ESTIMATE	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	TO COMPLETE	TOTAL PROGRAM
R0739 Navy C4I Top Level Requirements	1,520	775	1,543	1,577	1,585	1,709	1,717	CONT.	CONT.
X0706 EMI Reduction and Radio Frequency Management	751	1,647	1,719	1,831	1,803	1,862	1,966	CONT.	CONT.
Total	2,271	2,422	3,262	3,408	3,388	3,571	3,683	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.

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B. (U) PROGRAM CHANGE SUMMARY:

FY 1999: \$-65K: SBIR/STTR Transfer. \$-1,100K: Departmental Adjustment
\$-15K: Various rate adjustments. \$-15K: Execution Adjustments
FY 2000: \$-9K: Congressional Across-the-Board Reduction. \$36K Portion of extramural
program is reserved for Small Business Innovation Research.
assessment in accordance with 15 USC 638.
FY 2001: \$-14K: Miscellaneous Departmental adjustments

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Exhibit R-2, RDT&E,N Budget Item Justification

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EXHIBIT R-2a, FY 2001 RDT&E,N Project Justification

DATE: FEB 2000

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605866N

PROJECT NUMBER: R0739

PROGRAM ELEMENT TITLE: SEW Support

PROJECT TITLE: Navy C4I Top Level

Requirements

(U) COST: (Dollars in thousands)

PROJECT NUMBER & TITLE	FY 1999 ACTUAL	FY 2000 ESTIMATE	FY 2001 ESTIMATE	FY 2002 ESTIMATE	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	TOTAL PROGRAM	
R0739	Navy Command, Control, Communications, Computers and Intelligence (C4I) Top Level Requirements	1,520	775	1,543	1,577	1,585	1,709	1,717	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 1999 ACCOMPLISHMENTS:

- (U) (\$168) Identified and quantified the effects of operator training quality on Tactical Data Link systems operational effectiveness.
- (U) (\$152) Developed and maintained a cadre of personnel with specialized educations and focused experience as information warriors. Built on success of previous effort with tracking system to ensure personnel distribution of Information Warfare professionals was matched to their abilities.
- (U) (\$168) Identify and evaluate tools that can enhance the effectiveness of the average shipboard LAN administrator.
- (U) (\$110) Redesigned a system to combine the Mobile Ashore Support Terminal and Mobile Integrated Command Facility capabilities.
- (U) (\$174) Studied and planned for the magnitude of the requirements and robust applications which emerged during the study of the Naval Warfare Mission Planning Roadmap. Built on that study by further defining the scope of the problem and ensuring a joint interoperability.
- (U) (\$253) Determined requirements for mobile user communications for the year 2007 and examined advanced system concepts to ascertain the most cost-effective way to meet the requirements.
- (U) (\$56) Assessed the commercial Satellite Communication industry with an eye toward engaging the commercial SATCOM industry to take advantage of developments in commercial technology, influencing commercial designs, and developing an acquisition strategy that builds the "Best Business case" for the Navy.
- (U) (\$112) Identified those C⁴I Surveillance and Reconnaissance components which have the greatest effect on overall Navy strike operational success and used these results to identify candidate programs

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Exhibit R-2a, RDT&E,N Project Justification (Project R0739)

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EXHIBIT R-2a, FY 2001 RDT&E,N Project Justification

DATE: FEB 2000

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605866N

PROJECT NUMBER: R0739

PROGRAM ELEMENT TITLE: SEW Support

PROJECT TITLE: Navy C4I Top Level

Requirements

for new or enhanced RDTEEN support. Provided extensive modeling and analysis to support contentions proposed.

- (U) (\$200) Assessed and quantified, within the Revolution in Business Affairs framework, how becoming a Network Centric Navy enables efficiencies from process and organizational changes.
- (U) (\$127) Studied the utility of redundancies in communications paths, and described their use in terms of the importance of the information exchange requirement.

2. (U) FY 2000 PLAN:

- (U) (\$125) Develop and maintain a cadre of personnel with specified education and focused experience as information warriors. Built on the success of previous efforts with tracking system, ensure personnel distribution of Information Warfare professionals matched to their abilities.
- (U) (\$115) Investigate the feasibility of developing a platform-independent, external mount airborne pod for tactical Signal Intelligence (SIGINT) data collection that is Joint Airborne SIGINT Architecture compliant.
- (U) (\$170) Develop an acceptable useful methodology and process for incorporating desired operational capabilities and results of Fleet Battle Experiments into N6 objectives.
- (U) (\$250) Research and analyze the scaleable effects of shipboard radio frequency emitters installed on Aegis cruisers on spaced-based systems.
- (U) (\$115) Develop a study group to review Extensible Markup Language (XML) technology and produce options for how to best implement XML as a "smart pull" process to establish a truly "seamless" method of transferring and exchanging data to a variety of systems.

3. (U) FY 2001 PLAN:

- (U) (\$550) Investigate potential benefit of and leveraging capability from continual reduction in chip development prices for DoN.
- (U) (\$446) Support 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) (\$547) Identify 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.

B. (U) PROGRAM CHANGE SUMMARY:

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Exhibit R-2a, RDT&E,N Project Justification (Project R0739)

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EXHIBIT R-2a, FY 2001 RDT&E,N Project Justification

DATE: FEB 2000

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605866N

PROJECT NUMBER: R0739

PROGRAM ELEMENT TITLE: SEW Support

PROJECT TITLE: Navy C4I Top Level

Requirements

	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
(U) FY 2000 President's Budget:	1,606	780	1,627
(U) Appropriated Value:			
(U) Congressional Rescissions		-5	
(U) FY-99 SBIR/STTR Transfer	-36		
(U) Execution Adjustments	-42		-70
(U) Various Rate Adjustments	-7		-14
(U) FY 2001 PRESBUDG Submission:	1,520	775	1,543

(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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EXHIBIT R-2a, FY 2001 RDT&E,N Project Justification

DATE: FEB 2000

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605866N

PROJECT NUMBER: X0706

PROGRAM ELEMENT TITLE: SEW Support

PROJECT TITLE: EMI Reduction and Radio
Frequency Management

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

1. (U) FY 1999 ACCOMPLISHMENTS:

- (U) (\$301) ASPECTS: Completed the development of capability to receive recordings of the EME to be used in frequency management. Continued ASPECTS and EMCAP software updates. Continued real-time frequency management research.
- (U) (\$337) BEES: Continued development of generic and specific electronic communications systems models. Apply conditional logic to selected additional models to replicate operational decision making as it relates to E3.
- (U) (\$113) Criteria and Test Procedures: Continued to investigate industrial standards (foreign and domestic) for conversion to military standards. Continued to incorporate Coherent Measurement Techniques into E3 test criteria.

2. (U) FY 2000 PLAN:

- (U) (\$957) ASPECTS: Enhance development efforts for real time use of spectrum for automated C4ISR systems to adapt to the electromagnetic environment. Continue ASPECTS and EMCAP software updates.
- (U) (\$442) BEES: Develop a common operating system version of the analysis software that can be run on networked and stand alone machines
- (U) (\$248) Criteria and Test Procedures: Continue to investigate industrial standards (foreign and domestic) for conversion to military standards. Develop new communications planning techniques to avoid EMI.

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EXHIBIT R-2a, FY 2001 RDT&E,N Project Justification

DATE: FEB 2000

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605866N
PROGRAM ELEMENT TITLE: SEW Support

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

3. (U) FY 2001 PLAN:

- (U) (\$957) ASPECTS: Develop 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) (\$466) BEES: Development of generic C4ISR system models. Apply conditional logic to selected additional models to replicate operational decision making as it relates to E3.
- (U) (\$296) Criteria and Test Procedures: Continue to investigate industrial standards (foreign and domestic) for conversion to military standards. Continue to incorporate new communications planning techniques.

B. (U) OTHER PROGRAM FUNDING SUMMARY:

(U) PE 0702827N, AGSAG 4B7N	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
	3,410	2,829	2,389	2,501	3,391	2,346	2,402

(U) Related RDT&E: Not applicable.

C. (U) ACQUISITION STRATEGY: Not applicable.

D. (U) SCHEDULE PROFILE: Not applicable.

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EXHIBIT R-3, RDT&E,N Project Cost Analysis

DATE: FEB 2000

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605866N

PROJECT NUMBER: X0706

Exhibit R-3 Cost Analysis (page 1)								Date: Feb 00				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT					PROJECT NAME AND NUMBER				
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 99 Cost	FY 99 Award Date	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal Product Development												
Remarks:												
ASPECTS/EMCAP Development	Various	Various	3433	301	TBD	957	TBD	957	TBD	Cont.	Cont.	Cont.
E3 Analysis Tool Development	Various	Various	3291	337	TBD	442	TBD	466	TBD	Cont.	Cont.	Cont.
Specifications and Standards	Various	Various	1703	113	TBD	248	TBD	296	TBD	Cont.	Cont.	Cont.
Subtotal Support			8427	751		1647		1719		Cont.	Cont.	Cont.
Remarks												

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EXHIBIT R-3, RDT&E,N Project Cost Analysis

DATE: FEB 2000

BUDGET ACTIVITY: 6

PROGRAM ELEMENT: 0605866N

PROJECT NUMBER: X0706

Exhibit R-3 Cost Analysis (page 2)								Date: Feb 00				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT					PROJECT NAME AND NUMBER				
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 99 Cost	FY 99 Award Date	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	Cost To Complete	Total Cost	Target Value of Contract
Subtotal T&E												
Remarks:												
Subtotal Management												
Remarks												
Total Cost			8427	751		1647		1719		Cont.	Cont.	Cont.

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Exhibit R-3, RDT&E,N Project Cost Analysis