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FY 2004/2005 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET Exhibit R-2

DATE: February 2003

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605856N
PROGRAM ELEMENT TITLE: Strategic Technical Support

COST: (Dollars in Thousands)

PROJECT NUMBER/ TITLE	FY 2002 ACTUAL	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	FY 2006 ESTIMATE	FY 2007 ESTIMATE	FY 2008 ESTIMATE	FY 2009 ESTIMATE
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R0128 Management and Technical Support, Strategic

1,345	1,407	1,438	1,464	1,496	1,526	1,553	1,582
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R1038 Acoustic and Non-Acoustic Analysis Support

930*	878*	2,445	2,440	2,465	2,484	2,501	2,518
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Total	2,275	2,285	3,883	3,904	3,961	4,010	4,054	4,100
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*Funds executed in Project Z1038

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program supports technical studies and analyses as directed by the Director for Submarine Warfare to support major policy and procurement decisions. This program is divided into two elements to support decision making in submarine warfare and undersea surveillance.

B. PROGRAM CHANGE SUMMARY:

	FY 2002	FY 2003	FY 2004	FY 2005
FY 2003 President's Submission:	2,369	2,340	2,388	2,411
Adjustments from FY 2003 President's Budget:				
FY2002 SBIR	-38			
Cong. Rescissions/Adjustments/Undist. Reductions	-12	-28		
NWCF Rate Adjustments				2
Execution Adjustments	-44			
Program Increase			1,600	1,600
Pay Raise/Inflation Adjustments		-27	-92	-98
Efficiencies at NWCF Activities			-13	-11
FY 2004/2005 OSD/OMB Budget Submission:	2,275	2,285	3,883	3,904

PROGRAM CHANGE SUMMARY EXPLANATION:

Schedule: Not applicable.
Technical: Not applicable.

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Exhibit R-2a

DATE: February 2003

BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605856N
PROGRAM ELEMENT TITLE: Strategic Technical Support

Project Number: R0128
Project Title: Management and
Technical Support, Strategic

COST: (Dollars in Thousands)

PROJECT NUMBER/ TITLE	FY 2002 ACTUAL	FY2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	FY 2006 ESTIMATE	FY 2007 ESTIMATE	FY 2008 ESTIMATE	FY 2009 ESTIMATE
R0128 Management and Technical Support, Strategic	1,345	1,407	1,438	1,464	1,496	1,526	1,553	1,582

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides analytical support to the Director, Submarine Warfare Division as a basis for major policy, planning and acquisition program decisions. It supports research and development strategy development planning and implementation. Additionally, this line supports studies in the area of submarine and undersea surveillance missions, force structure, payloads and sensors and force employment.

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 02	FY 03	FY 04	FY 05
Management and Technical Support, Strategic	1,345	1,407	1,438	1,464

FY 2002 ACCOMPLISHMENTS:

- Continued to assess the strategic deterrence (conventional and nuclear) force structure, security and capability in the Navy. This included issues resulting from the Nuclear Posture review.
- Performed a study of countermeasures to submarine detection systems in littoral waters based on large fields of small sensors.
- Assessed implications of current technological innovations to guide future investments in research and development.
- Supported reviews of various submarine operations to assess the safety and security of the ships and missions assigned to determine problems that require further study.
- Developed models to assess the acoustic and non-acoustic vulnerability of nuclear-powered guided-missile submarines (SSGN) using existing ballistic missile submarine (SSBN) data and expected operating areas for SSGN.
- Examined the specific applications for submarine mine countermeasures and developed and integrated view of technology candidates to meet submarine needs.
- Investigated the effectiveness of Surveillance Towed Array Sonar Systems (SURTASS) to passively detect and track diesel submarines.

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BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605856N
PROGRAM ELEMENT TITLE: Strategic Technical Support

Project Number: R0128
Project Title: Management and
Technical Support, Strategic

FY 2003 PLANS:

- Continue to assess the strategic deterrence (conventional and nuclear) force structure, security, and capability in the Navy.
- Perform an in-depth review of undersea warfare research and development requirements, past and present, and propose an investment strategy to maximize future capabilities.
- Assess implications of current technological innovations on undersea warfare developments in both near and far term systems and develop strategic concepts for future acquisitions through partnership with the Naval Postgraduate School.
- Assess the submarine forces ability to perform intelligence, surveillance and reconnaissance (ISR) and strike warfare missions to make recommendations on improved war-fighting capability. This will concentrate on the impact of SSGN.
- Continue to examine specific applications for submarine mine countermeasures and develop a strategy for ensuring submarine access to contested areas of the world.
- Continue reviews of various submarine operations to assess the safety and security of the ships and missions assigned to identify the problems that require further analysis and study.

FY 2004 PLANS:

- Continue to assess the strategic deterrence (conventional and nuclear) force structure, security, and capability in the Navy.
- Continue to perform an in-depth review of undersea warfare research and development requirements, past and present, and propose an investment strategy to maximize future capabilities.
- Continue to perform technical and operational analysis of potential improvements or additions to submarine systems in order to understand their impact on submarine design, performance and safety.
- Continue to assess implications of current and developing technologies on undersea warfare in both near and far term systems and develop strategic concepts to guide future acquisitions through partnership with the Naval Postgraduate School.
- Continue to assess the current and future submarine force ability to perform Special Operations Forces (SOF) missions, strike warfare and ISR missions with emphasis on the capabilities of SSGN.
- Continue reviews of various submarine operations to assess the safety and security of the ships and missions assigned to identify the problems that require further analysis and study.

FY 2005 PLANS:

- Continue to assess the strategic deterrence (conventional and nuclear) force structure, security, and capability in the Navy.

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PROGRAM ELEMENT TITLE: Strategic Technical Support

Project Number: R0128
Project Title: Management and
Technical Support, Strategic

- Continue to perform an in-depth review of undersea warfare research and development requirements, past and present, and propose an investment strategy to maximize future capabilities.
- Continue to perform technical and operational analysis of potential improvements or additions to submarine systems in order to understand their impact on submarine design, performance and safety.
- Continue to assess implications of current and developing technologies on undersea warfare in both near and far term systems and develop strategic concepts to guide future acquisitions through partnership with the Naval Postgraduate School.
- Continue to assess the current and future submarine force ability to perform SOF missions, strike warfare and ISR missions with emphasis on the capabilities of SSGN.
- Continue reviews of various submarine operations to assess the safety and security of the ships and missions assigned to identify the problems that require further analysis and study.

C. OTHER PROGRAM FUNDING SUMMARY: Not applicable

D. ACQUISITION STRATEGY: Not applicable.

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BUDGET ACTIVITY: 6 PROGRAM ELEMENT: 0605856N
PROGRAM ELEMENT TITLE: Strategic Technical Support

Project Number: R1038
Project Title: Acoustic and
Non-Acoustic Analysis Support

COST: (Dollars in Thousands)

PROJECT NUMBER/ TITLE	FY 2002 ACTUAL	FY 2003 ESTIMATE	FY 2004 ESTIMATE	FY 2005 ESTIMATE	FY 2006 ESTIMATE	FY 2007 ESTIMATE	FY 2008 ESTIMATE	FY 2009 ESTIMATE
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R1038 Acoustic and Non Acoustic Analysis Support	930*	878*	2,445	2,440	2,465	2,484	2,501	2,518
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*Executed as Project Z1038.

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides analytical support to the Director, Submarine Warfare Division and the Integrated Undersea Surveillance System (IUSS) Branch Head as a basis for major policy, planning, and acquisition program decisions. It supports studies in the area of undersea surveillance missions, sensor system, communications, acoustic performance prediction systems, environmental and medical effects of acoustics systems including installations/removals, operational security, and future threat analysis. Supports synthetic mission lay down simulations for IUSS strategic planning and resource allocation. Continues development/documentation of architecture for future undersea surveillance capabilities. Supports study to determine long term impact of Low Frequency Active (LFA) Sonar on marine mammals.

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 02	FY 03	FY 04	FY 05
Acoustic and Non-Acoustic Analysis Support	930*	878*	2,445	2,440

FY 2002 ACCOMPLISHMENTS:

- Continued development/documentation of architecture for future undersea surveillance capabilities.
- Continued to develop a high-level design specification for a new sound measurement system.
- Calibrated and certified fixed sensors for use in sound measurements.
- Updated Acoustic Model Applications Program (AMAP) software and associated database.
- Installed and tested new Acoustic Recording and Processing System (ARAPS).
- Developed software and documentation for adaptive beamforming utilities.
- Provided technical support for continued development of interfaces to facilitate data exchange.

FY 2003 PLAN:

- Continue development/documentation of architecture for future undersea surveillance capabilities.

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PROGRAM ELEMENT TITLE: Strategic Technical Support

Project Number: R1038
Project Title: Acoustic and
Non-Acoustic Analysis Support

- Continue to work on the calibration and certification of fixed sensors for use in the development of sound measurements.
- Continue to update AMAP software and associated documentation.
- Conduct analysis of undersea technology for application for future undersea surveillance capabilities.
- Develop alternative IUSS mission requirements analysis; including detailed performance predictions against the latest threat.

FY 2004 PLAN:

- Conduct analysis of undersea technology for application for future undersea surveillance capabilities.
- Develop alternative IUSS mission requirements analysis; including detailed performance predictions against the latest Office of Naval Intelligence (ONI) documented threats.
- Continue development/documentation of architecture for future undersea surveillance capabilities.
- Develop an IUSS secure wide area secure information exchange system.
- Conduct study to determine the long-term effects of LFA Sonar on marine mammals.
- Assess the current and future IUSS warfare areas and potential allied Navy contributions.

FY 2005 PLAN:

- Continue analysis of undersea technology for application for future undersea surveillance capabilities.
- Continue development of alternative IUSS mission requirements analysis; including detailed performance predictions against the latest ONI documented threats.
- Continue development/documentation of architecture for future undersea surveillance capabilities.
- Continue to develop an IUSS real time performance analysis workstation.
- Assess the current and future IUSS warfare areas and potential allied Navy contributions.
- Continue study to determine the long-term effects of LFA Sonar on marine mammals.

C. OTHER PROGRAM FUNDING SUMMARY: Not applicable.

D. ACQUISITION STRATEGY: Not applicable

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