

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
							February 2005	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE			
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-4					0603562N/Submarine Tactical Warfare Systems			
COST (\$ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	6.939	5.900	7.125	10.369	9.911	10.233	10.487	10.722
0770/Advanced Sub. Spt Equipment Program	4.380	3.275	3.920	4.746	4.191	4.298	4.409	4.520
1739/Sub. Artic Warfare Development	2.559	2.625	3.205	5.623	5.720	5.935	6.078	6.202
Quantity of RDT&E Articles								
Defense Emergency Response Funds (DERF) Funds: NOT APPLICABLE								
A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Submarine Tactical Warfare Systems program element is comprised of the Advanced Submarine Support Equipment Program (ASSEP) and the Submarine Special Operations Support Program. The objective is to improve submarine operational effectiveness through the development and implementation of advanced Research and Development (R&D). Areas of improved operational effectiveness for Electronic Warfare Support (ES) and Imaging technologies include Threat Warning/Self Protection; Situational Awareness; and Intelligence, Surveillance, and Reconnaissance. A continuing need exists to improve these capabilities in the increasingly dense and sophisticated electromagnetic environment caused by the proliferation of complex radar, communications, and navigation equipment of potential adversaries. The Submarine Arctic Warfare Development program responds to the increased threat of Naval activity in the Littorals and the continuing threat of submarine and surface ship activity in regions of the world through the development of advanced submarine R&D technology to provide improved operational capability in shallow water regions. Particular emphasis is placed in the areas of sonar operability and maintainability, Littoral operations, mine warfare, tactical surveillance, weapon utility and other submarine support missions. Efforts include assessment of combat system effectiveness, development of Arctic shallow water specific improvements for existing sonars and weapons, development of class specific Arctic operational guidelines and the testing of ice-capable submarine support structures. This program also provides the framework for various R&D programs to conduct Test and Evaluation in shallow water and Arctic regions.								

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Exhibit R-2, RD TEN Budget Item Justification
(Exhibit R-2, page 1 of 21)

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EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							February 2005	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603562N/Submarine Tactical Warfare System				PROJECT NUMBER AND NAME 0770/Advanced Submarine Support Equipment Program (ASSEP)			
COST (\$ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost	4.380	3.275	3.920	4.746	4.191	4.298	4.409	4.520
RDT&E Articles Qty								
<p>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: A continuing need exists to improve submarine capabilities to improve safety of ship, survivability, and operational effectiveness in the increasingly dense and sophisticated electromagnetic environment caused by the proliferation of complex radar, communications, and navigation equipment of potential adversaries. Improvements are necessary for submarine ES and imaging to be operationally effective in the following mission areas: Joint Littoral Warfare, Joint Surveillance, Space and Electronic Warfare, Intelligence Collection, Maritime Protection and Joint Strike. The program is divided into three project categories: Threat Warning/Self Protection, Situational Awareness, and Intelligence, Surveillance and Reconnaissance. The Threat Warning/Self Protection project evaluates the vulnerability of submarine masts, periscopes and sensors to visual, radar, and infrared detection and evaluates the state of the art technology to implement periscope/mast engineering improvements to reduce counter detection threats. Both Situational Awareness and Intelligence, Surveillance, and Reconnaissance projects develop submarine unique improvements to mast, periscope, and ES electromagnetic and electro-optic sensors based on emerging technologies available from DOD Exploratory Development Programs, industry Independent Research and Development, and other sources. Feasibility demonstration models (FDMs) are developed, evaluated, and validated in the lab and through at-sea testing.</p> <p>Threat Warning/Self Protection sub-projects include: Mast Signature Reduction (RCS and EO/IR), Low Probability of Intercept (LPI) Receiver, and ES Frequency Extension.</p> <p>Situational Awareness sub-projects include: Automated Rangefinder (Phase B), Imaging Technologies (virtual periscope), Automatic Identification System (AIS), Situational Awareness Bouy (SAB), Photonics Camera Technology, Communications Acquisition Direction Finding (CADF) multi-function antenna, and Low Band Radar DF.</p> <p>Intelligence, Surveillance and Reconnaissance sub-projects include: Submarine Offboard Sensors (UAV/UUV Pay Load), Advanced EW Tuners, Modular Sensor System (Imaging/SIGINT modules), Imaging Enhancements (fusion), Improved Periscope Interfaces, and R.F. Imaging.</p> <p>The test articles identified consist of critical components that will be fully developed during engineering development into Engineering Development Models (EDM's).</p>								

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Exhibit R-2, RDTE Budget Item Justification
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B. Accomplishments/Planned Program Threat Warning / Self Protection																																																	
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B. Accomplishments/Planned Program (Cont.) Situational Awareness Enhancements

	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	2.338	1.575	1.443	0.861
RDT&E Articles Quantity				

FY 04 -07 Plan
Complete: Patriot Rangefinder - Complete testing of Phase A, develop and test sub-components and conceptual EDM for Phase B (Stealthy / Data Link), and develop prototype unit for use with photonics mast.

	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.458	0.122		
RDT&E Articles Quantity				

FY 04 -05 Plan
Complete: Automatic Identification System (AIS) - Complete the development of a conceptual EDM and prepare for and conduct At-Sea testing program.

	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost		0.445	1.005	0.615
RDT&E Articles Quantity				

FY 06 -07 Plan
Complete: Advanced Photonics Camera Technology - Conduct conceptual studies and feasibility studies, determine operational requirements and develop an appropriate performance specification.

	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost				0.405
RDT&E Articles Quantity				

FY 07 Plan
Complete :Enhanced Displays - Develop studies determining the potential improvements needed to enhance the effectiveness of displays associated with the AN/BLQ-10 system and prepare a design concept for future development.

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B. Accomplishments/Planned Program (Cont.)	Situational Awareness Enhancements (Cont.)
---------------------------------------------------	--------------------------------------------

	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.213	0.189		
RDT&E Articles Quantity				

FY 04 - FY 06 Plan
 Complete: Virtual Periscope - Continue development of system algorithms and prototype. Prepare for, conduct and analyze the results of At-Sea testing.

	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.127		0.232	
RDT&E Articles Quantity				

FY 04 - FY 06 Plan
 Complete: CADF Multi-Function Antenna Technology- Develop a conceptual EDM and conduct testing.

	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost				
RDT&E Articles Quantity				

FY 06 Plan
 Complete: Low Band Radar Direction Finding - Develop feasibility studies.

	FY 04	FY 05	FY 06	FY 07
Accomplishments/Effort/Subtotal Cost	0.307	0.247	0.742	0.116
RDT&E Articles Quantity				

FY 04 - FY 07 Plan
 Complete: Situational Awareness Buoy (SAB) - Develop conceptual design, develop a prototype and conduct At-Sea testing.

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D. OTHER PROGRAM FUNDING SUMMARY:										
<u>Line Item No. & Name</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>To Complete</u>	<u>Total Cost</u>
(U) Other Program Funding Summary: Not applicable. (U)Related RDT&E: (U) PE 0604503N(Submarine System Equipment Program) (U) PE 0604558N(New Design SSN Development) (U) PE 0604777N(Navigation /ID Systems)										
E. ACQUISITION STRATEGY: * This project optimizes technology insertion using a build-test-build approach to support ES and imaging operational needs. Operational needs have been based on the tactical requirements identified in CNO letters, Serial N77/3U629212, dated 04 Sep 03, Serial N77/3U629205, dated 01 Apr 03, and Serial N77/1U651534, dated 30 Oct 01, COMSUBLANT/COMSUBPAC Command Capability Issues (CCIs), Virginia Class SSN Operational Requirements Document objectives, a review, assessment and prioritization of Sensor and Processor efforts and SSN force level projections for SSN688/688I, SSN21, and SSN 774 classes through FY2015. Project efforts develop submarine unique improvements to mast, periscope, and ES electromagnetic and electro-optic sensors based on emerging technologies that are available from DOD Exploratory Development Programs, industry Independent Research and Development, and other sources. Feasibility Demonstration Models (FDMs) will be developed to provide a realistic method of evaluating the improvements, including deployment on submarines for testing.										
F. MAJOR PERFORMERS: ** NAWC, China Lake, CA NUWC, Newport, RI Applied EM Lockheed Martin										

R-1 SHOPPING LIST - Item No. 47

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)										DATE: February 2005					
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NUMBER AND NAME								
RDT&E, N / BA-4			0603562N/Submarine Tactical Warfare Systems				0770/Advanced Submarine Support Equipment Program (ASSEP)								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract	
Primary Hardware Development	SS/CPIF	NRL/LM/EDO/ARETE/AEM/JHU/TSC/JPL	0.000	0.711	10/03	0.833	10/04	1.166	10/05	2.081	10/06	TBD	TBD	TBD	
Ancillary Hardware Development													0.000		
Component Development													0.000		
Ship Integration													0.000		
Ship Suitability													0.000		
Systems Engineering	WR	NUWC Newport, RI		0.828	10/03	0.484	10/04	0.969	10/05	1.276	10/06	CONT	CONT	N/A	
	WR/RC	NAWC China Lake		2.486	10/03	1.705	10/04	1.244	10/05	0.744	10/06	CONT	CONT	N/A	
Licenses													0.000		
GFE	N/A	N/A											0.000		
Miscellaneous	Various	Various										CONT	CONT	N/A	
Award Fees													0.000		
Subtotal Product Development			0.000	4.025		3.022		3.379		4.101		CONT	CONT		
Remarks:															
Development Support													0.000		
Software Development													0.000		
Training Development													0.000		
Integrated Logistics Support													0.000		
Configuration Management													0.000		
Engineering Technical Services	C/CPFF	AT&T GSI, Vienna,VA		0.200	11/03	0.200	11/04	0.200	11/05	0.242	11/06	CONT	CONT	N/A	
GFE													0.000		
Award Fees													0.000		
Subtotal Support			0.000	0.200		0.200		0.200		0.242		CONT	CONT		
Remarks:															

R-1 SHOPPING LIST - Item No. 47

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: February 2005				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME								
RDT&E, N / BA-4			0603562N/Submarine Tactical Warfare Systems			0770/Advanced Submarine Support Equipment Program (ASSEP)								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation													0.000	
Operational Test & Evaluation													0.000	
Live Fire Test & Evaluation													0.000	
Test Assets													0.000	
Tooling													0.000	
GFE													0.000	
Award Fees													0.000	
Subtotal T&E			0.000	0.000		0.000		0.000		0.000		0.000	0.000	
Remarks:														
Contractor Engineering Support													0.000	
Government Engineering Support													0.000	
Management Support Services	C/CPFF	Various										CONT	CONT	N/A
Travel	TOs	Various		0.020		0.020		0.020		0.025		0.000	0.060	
Labor (Research Personnel)													0.000	
SBIR Assessment				0.135		0.033		0.321		0.378		CONT	CONT	
Subtotal Management			0.000	0.155		0.053		0.341		0.403		0.000	CONT	
Remarks:														
Total Cost			0.000	4.380		3.275		3.920		4.746		CONT	CONT	
Remarks:														

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NAME AND NUMBER	PROJECT NAME AND NUMBER	
RDTE, N/BA-4	0603562N/Submarine Tactical Warfare System	0770/Advanced Submarine Support Equipment Program (ASSEP)	

ASSEP F0770 SCHEDULE	FY02	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Threat Warning Self Protection										
Mast Signature Reduction		Coating Selection		EDM	Tetsing					
Low Probability of Intercept (LPI) Receiver		Testing/Integration		Ultra Wide Chirp	Testing					
ES Frequency Extension					Concept		Performance Spec		EDM	Tetsin
Situational Awareness Enhancements										
Patriot Phase B (Stealth and Data Link)	Concept		Performance Spec	EDM	Testing					
Automatic Identification System (AIS)	Concept	Performance Spec	EDM	At Sea Testing						
Advanced Camera Technology				Concept	Performance Spec		EDM		Testing	
Enhanced Displays					Concept	Performance Spec		EDM	Testing	
Virtual Periscope	Performance Spec		TEMPALT	At Sea Testing	EDM					
CADF - Antenna Technology	Concept		EDM	Testing	Integration					
Low Band Radar					Feasibility Study					
Situational Awareness Buoy (Expendable)			Conceptual Design	Performance Spec	Prototype	Testing				
ISR Enhancements										
Passive Surveillance Radar (PSR) / Electromagnetic Vulnerability Server (EVS)	Conceptual Design		Upgrades to design	Testing						
Imaging Enhancements (Super Resolution, Fusion) and RF Imaging						Conceptual Design	Performance Spec		EDM	Testing
Offboard Sensors (UAV/UUV Payloads)					Performance Spec			EDM	Testing	
Advanced EW Tuners						Performance Spec	EDM	Testing		
Modular Sensors (Package EVS/PSR/AIS)				Concept Study						
Digital Loss Antenna Interface						Performance		Prototype		

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Exhibit R-4, RDT&E Project Justification

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Exhibit R-2, RDTEN Budget Item Justification
(Exhibit R-2, page 12 of 21)

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CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: February 2005		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-04		PROGRAM ELEMENT 0603562N/Submarine Tactical Warfare Systems				PROJECT NUMBER AND NAME 0770/Advanced Submarine Support Equip Prog (ASSEP)		
Schedule Profile	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Threat Warning / Self Protection								
Mast Signature Reduction - Coating Selection	Q1							
EDM Coated Mast			Q4					
LPI Ultra Wide Chirp Design		Q4						
Frequency Extension Performance Spec					Q1			
Frequency Extension EDM							Q4	
Situational Awareness Enhancements								
Patriot Phase B Sub-component Fabrication	Q4							
Patriot Phase B EDM		Q4						
Automatic ID System EDM	Q4							
Automatic ID System At-sea Testing		Q3						
Advanced Camera Technology Performance Spec			Q4					
Advanced Camera Technology EDM					Q4			
Enhanced Displays Performance Spec					Q2			
Enhanced Displays EDM							Q1	
Virtual Periscope Prep for At-sea Testing	Q4							
Virtual Periscope At-sea Testing		Q3						
CADF Multi-function EDM		Q3						
CADF Multi-function Testing			Q3					
Low band DF Feasibility Study			Q3					
Situational Awareness Bouy Conceptual Design	Q3							
Situational Awareness Bouy Prototype			Q3					
Situational Awareness Bouy Testing				Q3				
Intelligence, Surveillance, Reconnaissance Enhancements								
PSR/EVS Add Upgrades to Concept Design	Q3							
PSR/EVS At Sea Testing		Q4						
RF Imaging/ Imaging Enhancements Conceptual Design				Q3				
RF Imaging/ Imaging Enhancements Performance Spec					Q3			
RF Imaging/ Imaging Enhancements EDM							Q3	
Offboard Sensors Performance Spec			Q4					
Offboard Sensors EDM						Q1		
Advanced EW Tuners Performance Spec				Q4				
Advanced EW Tuners EDM					Q3			
Modular Sensors Concept Study		Q3						
Digital Loss Antenna Interface Performance Spec				Q4				
Digital Loss Antenna Interface Prototype						Q1		
Digital Loss Antenna Testing							Q4	

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Exhibit R-2, RTEN Budget Item Justification
(Exhibit R-2, page 13 of 21)

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							February 2005	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME				PROJECT NUMBER AND NAME			
RDT&E, N / BA-4	PE 0603562N Submarine Tactical Warfare System				1739 Submarine Special Operations Support			
COST (\$ in Millions)	FY 04	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost	2.559	2.625	3.205	5.623	5.720	5.935	6.078	6.202
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Artic project responds to the increased threat of Naval activity in the Littoral and continuing threat of submarine and surface ship activity in all regions of the world through the development of advanced submarine concepts. It places particular emphasis on submarine operability and mission support in unique environments. Efforts include assessment of combat system effectiveness, weapons testing, use of high frequency sonars in Arctic regions, testing of ice-capable submarine structures, and development of class specific Arctic shallow water operational guidelines. This program also provides the framework for various Research and Development (R&D) programs to conduct Test and Evaluation in the shallow water and Arctic regions.

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2005																
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA4	PROGRAM ELEMENT NUMBER AND NAME PE 0603562N Submarine Tactical Warfare System	PROJECT NUMBER AND NAME 1739 Submarine Special Operations Support																
B. Accomplishments/Planned Program																		
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td style="text-align: center;">2.559</td><td style="text-align: center;">2.625</td><td style="text-align: center;">3.205</td><td style="text-align: center;">5.623</td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>					FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost	2.559	2.625	3.205	5.623	RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07														
Accomplishments/Effort/Subtotal Cost	2.559	2.625	3.205	5.623														
RDT&E Articles Quantity																		
<div style="border: 1px solid black; padding: 5px;"><p>Conduct ICEX mission, arctic transit mission, ICEX workup, ICEX training, and Ice Camp. Provide planning, logistics, support for Ice Camp Operations. FY06 Plans: Support Arctic deployments, including inter-fleet transfers, as required by the Submarine Force Commanders. Investigate, research, develop and deploy new systems for Arctic submarine support. Support testing and tactical development required to improve submarine Arctic operability and warfighting. Plan a large ice camp in the Arctic Ocean during Spring 2007 to conduct submarine technical testing and tactical development, and to collect Arctic environmental data. FY07 Plans: Support Arctic deployments, including inter-fleet transfers, as required by the Submarine Force Commanders. Investigate, research, develop and deploy new systems for Arctic submarine support. Support testing and tactical development required to improve submarine Arctic operability and warfighting. Coordinate and provide technical and logistic support for the Spring 2007 Ice Camp in the Arctic Ocean.</p></div>																		
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td></td><td></td><td></td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>					FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost					RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07														
Accomplishments/Effort/Subtotal Cost																		
RDT&E Articles Quantity																		
<div style="border: 1px solid black; height: 60px;"></div>																		
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 30%;"></th><th style="width: 15%;">FY 04</th><th style="width: 15%;">FY 05</th><th style="width: 15%;">FY 06</th><th style="width: 15%;">FY 07</th></tr></thead><tbody><tr><td>Accomplishments/Effort/Subtotal Cost</td><td></td><td></td><td></td><td></td></tr><tr><td>RDT&E Articles Quantity</td><td></td><td></td><td></td><td></td></tr></tbody></table>					FY 04	FY 05	FY 06	FY 07	Accomplishments/Effort/Subtotal Cost					RDT&E Articles Quantity				
	FY 04	FY 05	FY 06	FY 07														
Accomplishments/Effort/Subtotal Cost																		
RDT&E Articles Quantity																		
<div style="border: 1px solid black; height: 60px;"></div>																		

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EXHIBIT R-2a, RDT&E Project Justification			DATE:	
			February 2005	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME		
RDT&E, N / BA4	PE 063562N Submarine Tactical Warfare Sys	1739 Submarine Special Operations Support		
C. PROGRAM CHANGE SUMMARY:				
Funding:	FY 2004	FY 2005	FY 2006	FY 2007
FY05 President's Budget	2.567	2.650	3.274	5.835
FY06 President's Budget	2.559	2.625	3.205	5.623
Totals Adjustments	-0.008	-0.025	-0.069	-0.212
Summary of Adjustments				
Undistributed congressional reductions	-0.002	-0.024		
Programmatic adjustments		-0.001	-0.069	-0.212
Cancelled Account	-0.006			
Subtotal	-0.008	-0.025	-0.069	-0.212
Schedule:				
N/A				
Technical:				
N/A				

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2005
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA4	PROGRAM ELEMENT NUMBER AND NAME PE 063562N Submarine Tactical Warfare System	PROJECT NUMBER AND NAME 1739 Submarine Special Operations Support
<p>D. OTHER PROGRAM FUNDING SUMMARY: N/A</p> <p>E. ACQUISITION STRATEGY: * NON-ACAT Progam</p> <p>F. MAJOR PERFORMERS: ** Command Submarine ForceUS PacificFleet (COMSUBPAC) - Develop and definitize an Arctic-Deploying side Scan Sonar replacement plan, which will deliver a significant improved qualitative view of the underside of the ICE Canopy Sighting and tracking surfaceable features of current submarines, and the future VA Class submarine.</p>		

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Exhibit R-3 Cost Analysis (page 1)										DATE: February 2005				
APPROPRIATION/BUDGET ACTIVITY RDTE&E, N / BA4			PROGRAM ELEMENT PE 063562N Submarine Tactical Warfare System			PROJECT NUMBER AND NAME 1739 Submarine Special Operations Support								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development													0.000	
Ancillary Hardware Development													0.000	
Systems Engineering	WR	NSWC Carderock	0.400										0.400	
Systems Engineering		EB Corp	0.025										0.025	
Systems Engineering	WR	NSWC INDIAN HEAD	0.051										0.051	
Systems Engineering	WR	SPAWAR	0.120										0.120	
Licenses													0.000	
Tooling													0.000	
GFE													0.000	
Subtotal Product Development			0.596	0.000		0.000		0.000		0.000		0.000	0.596	
Remarks:														
Development Support													0.000	
Software Development													0.000	
Training Development													0.000	
Integrated Logistics Support													0.000	
Configuration Management													0.000	
Technical Data													0.000	
GFE													0.000	
Award Fees													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	
Remarks:														

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)										DATE: February 2005				
APPROPRIATION/BUDGET ACTIVITY RDTE, N / BA			PROGRAM ELEMENT PE 063562N Submarine Tactical Warfare System			PROJECT NUMBER AND NAME 1739 Submarine Special Operations Support								
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	SUBDEVRON Five	7.835	2.447	11/03	2.462	11/04	3.042	11/05	5.460	11/06	CONT.	CONT.	
Developmental Test & Evaluation	WR		0.015										0.015	
Developmental Test & Evaluation	WR	CMDR,3rd NAVCON BRIGA	0.200										0.200	
Developmental Test & Evaluation	WR	CMDR,2nd NAVCON BRIGA	0.250										0.250	
Developmental Test & Evaluation	SS/CPFF	APL/University of Washington	3.294										3.294	
Tooling													0.000	
GFE													0.000	
Subtotal T&E			11.594	2.447		2.462		3.042		5.460		0.000	19.545	
Remarks:														
Contractor Engineering Support														
Government Engineering Support														
Program Management Support		EG&G	0.379	0.102	11/03	0.153	11/04	0.153	11/05	0.153	11/06	CONT.	CONT.	
Travel			0.040	0.010	11/03	0.010	11/04	0.010	11/05	0.010	11/06	CONT.	CONT.	
Labor (Research Personnel)													0.000	
SBIR Assessment													0.000	
Subtotal Management			0.419	0.112		0.163		0.163		0.163		0.000	0.857	
Remarks:														
Total Cost			12.609	2.559		2.625		3.205		5.623		0.000	20.998	
Remarks:														

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CLASSIFICATION:

EXHIBIT R4, Schedule Profile																								DATE:				February 2005							
APPROPRIATION/BUDGET ACTIVITY												PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME											
RDT&E, N / BA4												PE 063562N Submarine Tactical Warfare System												1739 Submarine Special Operations Support											
Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011						
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
Arctic Ice Exercise																																			
ICEX Mission (at Sea) A Submarine arctic operation is to improve the Navy's understanding of the Arctic.		△△	△											△△	△							△△	△												
Arctic Transit Mission An operation in support of the Navy's need to "surge" a submarine from the Atlantic to the Pacific (or vice versa) via the Arctic.			△△	△		△△	△			△△	△			△△	△			△△	△			△△	△												
ICEX Workup A short underway period conducted in the submarine's local operating areas prior to embarking on an Arctic mission.	△△	△		△				△				△		△		△			△△	△															
ICEX Training Provides classroom training to the ship's watchstanders by the Ice pilot(s) to practice under-ice shiphandling.		△	△△	△				△				△△	△		△			△△	△																
ICE Camp (Arctic Ocean) A remote field station set up in the Arctic to conduct scientific and tactical testing.						△								△△	△						△△	△													
SCICEX Accommodation Support scientific understanding of the Arctic Ocean.	△						△				△			△△	△						△△	△													

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* Not required for Budget Activities 1, 2, 3, and 6

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[illegible]

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Exhibit R-2, RD TEN Budget Item Justification
(Exhibit R-2, page 21 of 21)