

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification								DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-5						R-1 ITEM NOMENCLATURE 0604784N/ Distributed Surveillance System					
COST (\$ in Millions)	Prior Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Total PE Cost	267.335	42.514	37.591	28.755	64.107	69.757	88.258	61.229	52.144	Continuing	Continuing
X1300/ ADVANCED DEPLOYABLE SYSTEM (ADS)	267.335	34.657	37.591	28.755	64.107	69.757	88.258	61.229	52.144	Continuing	Continuing
X9085/ ACCELERATE CABLE BURIAL CAPABILITY		3.928									3.928
X9086/ FIBER OPTIC TECHNOLOGY		3.929									3.929
											0.000
											0.000
											0.000
Quantity of RDT&E Articles											0

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

The Advanced Deployable System (ADS) is an undersea surveillance system composed of distributed sensors that can be rapidly and unobtrusively deployed in regional contingency areas for use against enemy submarines and in support of littoral warfare. It is designed to detect and track modern diesel electric and nuclear submarines, as well as provide the capability for tracking surface ships and detecting sea mine laying. ADS possesses great flexibility with respect to lay down options, ranging from single barrier to large area fields. It has built upon test experience with distributed sensor fields in shallow noisy water, and used collected data for processing verification. ADS uses conventional acoustic sensors and incorporates processing technologies and advanced sensors and technologies from other related programs.

Advanced Deployable Systems (ADS) – Accelerate Cable Burial Capability: Enhance ADS cable survivability and provide a trunk extension installation capability.

Advanced Deployable Systems (ADS) – Fiber Optic Technology: Reduce risk in development of remotely powered all optical array technology for application to ADS program.

(U) JUSTIFICATION FOR BUDGET ACTIVITY:
ENGINEERING AND MANUFACTURING DEVELOPMENT
 This program is funded under ENGINEERING AND MANUFACTURING DEVELOPMENT because it encompasses engineering and manufacturing development of new end-items prior to production approval decision.

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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME					
RDT&E, N / BA-5	0604784N/ Distributed Surveillance System					X1300/ ADVANCED DEPLOYABLE SYSTEM (ADS)					
COST (\$ in Millions)	Prior Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Project Cost	267.335	34.657	37.591	28.755	64.107	69.757	88.258	61.229	52.144	Continuing	Continuing
RDT&E Articles Qty											0

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION

The Advanced Deployable System (ADS) is an undersea surveillance system composed of distributed sensors that can be rapidly and unobtrusively deployed in regional contingency areas for use against enemy submarines and in support of littoral warfare. It is designed to detect and track modern diesel electric and nuclear submarines, as well as provide the capability for tracking surface ships and detecting sea mine laying. ADS possesses great flexibility with respect to lay down options, ranging from single barrier to large area fields. It has built upon test experience with distributed sensor fields in shallow noisy water, and used collected data for processing verification. ADS utilizes conventional acoustic sensors and incorporates processing technologies and advanced sensors and technologies from other related programs.

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2003
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA -5	PROGRAM ELEMENT NUMBER AND NAME 0604784N/ Distributed Surveillance System	PROJECT NUMBER AND NAME X1300/ ADVANCED DEPLOYABLE SYSTEM (ADS)

(U) B. Accomplishments/Planned Program

DRY END SYSTEM (DES)	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	6.596	7.175	5.305	13.871
RDT&E Articles Quantity				

FY02 (\$6,596) Developed the specification and layout for the communications relay van and software development in four functional areas- Mission Planning, Array Element Localization, relay van monitoring, and Acoustic Rapid COTS Insertion (ARCI) Increment 2 for ADS. Supported system engineering. Continued cable testing for enhanced survivability. Developed Mission Planning Workstation for automated determination of ADS array placement to meet mission requirements.

FY03 (\$7,175) Integration and delivery of the communications relay van, test and delivery of wet end lay down capability for the Mission Planner, test and delivery of the ARCI Increment 3 for ADS software build that will be used for System Integration Test (SIT), and test and delivery of the Array Element localization software. Support for system engineering.

FY04 (\$5,305) Installation of the communications relay van at the OPEVAL site, installation of the telecommunications circuits from the OPEVAL site to the Naval Ocean Processing Facility (NOPF), installation of processing and display equipment at the NOPF, installation of ARCI software at the NOPF and conduct of the Dry End Segment Design Verification Test. Participation in ADS's System Integration Test and TECHEVAL test.

FY05 (\$13,871) Maintenance support during OPEVAL, refurbishment of the OPEVAL Dry End Segment (DES) equipment. Plan for the resolution of any discrepancies identified during testing. Finalize the DES input to the technical data package. Prepare for production of the DES hardware and plan for an eventual initial operational capability (IOC). Support Milestone III. Coordinate efforts to contract for software maintenance. Initiate development of the Increment 2 and Increment 3 specific DES components.

INSTALLATION SUBSYSTEM (ISS)	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	10.212	12.581	10.490	28.535
RDT&E Articles Quantity				

FY02 (\$10,212) Completed preliminary designs of all four of the ISS Hardware Configuration Items (HWCI) and the Software CSCI (Computer Software Configuration Item). Completed detailed designs of three of the four HWCI, including the Control and Monitor HWCI, the Wet End Capsule HWCI and the Inboard Mechanical Equipment HWCI. Built and tested the IME, verifying cable deployment and termination. Completed the Software CSCI detailed design. For each detailed design completed, the associated Detailed Design Reviews (DDR) were conducted and the drawings released.

FY03 (\$12,581) Complete Trunk Capsule HWCI detailed design. In addition, all drawings will be released and hardware purchase and build will be completed. Design Verification Tests will be conducted. The System Verification Review and Functional Configuration Audit will be completed. Prepare for upcoming major system tests.

FY04 (\$10,490) Finalize qualification of control and monitoring system (C&M) and Wet End Capsule (WEC) HWCIs. Manufacture and assemble WEC units B, C, and E; refurbish units A and B flowing tests. Manufacture and assemble Trunk Capsule. Perform environmental validation tests. Support DIT, SIT, TECHEVAL, and OPEVAL. Design Transportation and Storage cases. Develop training curricula and conduct training.

FY05 (\$28,535) Maintain support during OPEVAL, refurbish the OPEVAL Installation Support Segment (ISS) equipment. Plan for the resolution of any discrepancies identified during testing. Finalize the ISS input to the technical data package. Prepare for production of the ISS hardware and plan for an eventual Initial Operational Capability (IOC). Support Milestone III. Coordinate efforts to contract for software maintenance. Initiate development of the Increment 2 and Increment 3 specific ISS components.

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Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 3 of 23)

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2003																
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604784N/ Distributed Surveillance System	PROJECT NUMBER AND NAME X1300/ ADVANCED DEPLOYABLE SYSTEM (ADS)																	
(U) B. Accomplishments/Planned Program																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 30%;">TEST AND EVALUATION (T&E)</th> <th style="width: 15%;">FY 02</th> <th style="width: 15%;">FY 03</th> <th style="width: 15%;">FY 04</th> <th style="width: 15%;">FY 05</th> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td>0.956</td> <td>1.350</td> <td>1.835</td> <td>4.307</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					TEST AND EVALUATION (T&E)	FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	0.956	1.350	1.835	4.307	RDT&E Articles Quantity				
TEST AND EVALUATION (T&E)	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	0.956	1.350	1.835	4.307															
RDT&E Articles Quantity																			
<p>FY02 (\$956) Developed the system level integrated Verification Plan and initiated the development of system level test documentation to include the installation platform certification, Target Threat Verification Plan, and Environmental Documentation. Supported the System Engineering Management Team (SEMT) and ADS Systems Engineering Team (ASET) in the definition of developmental testing objectives for system level testing.</p> <p>FY03 (\$1,350) Complete required system level test documentation. Monitor the developmental testing conducted by the IPTs and the management of the Integrated Verification Plan. Plan for the conduct of system level testing in FY04. Manage external relationships to Director of Test and Evaluation (DOT&E) and Commander Operational Test and Evaluation Force (COMOPTEVFOR) with respect to testing.</p> <p>FY04 (\$1,835) Coordinate test planning, obtain supporting assets, conduct testing of and analysis results from the PB-A ADS system at a System Integration Test (SIT) and conduct a Technical Evaluation (TECHEVAL). Support COMOPTEVFOR in the conduct of the Operational Evaluation (OPEVAL).</p> <p>FY05 (\$4,307) Complete OPEVAL and coordinate data analysis from FY04 testing. Support Milestone III. Plan and conduct Follow-On Test & Evaluation (FOT&E) efforts to resolve outstanding discrepancies from TECH/OPEVAL. Conduct shock, drop and safety testing in support of Increment 1 certification. Initiate Increment 2 and 3 system level test planning.</p>																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 30%;">WET END SYSTEM (WES)</th> <th style="width: 15%;">FY 02</th> <th style="width: 15%;">FY 03</th> <th style="width: 15%;">FY 04</th> <th style="width: 15%;">FY 05</th> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td>10.573</td> <td>12.063</td> <td>6.514</td> <td>10.974</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					WET END SYSTEM (WES)	FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	10.573	12.063	6.514	10.974	RDT&E Articles Quantity				
WET END SYSTEM (WES)	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	10.573	12.063	6.514	10.974															
RDT&E Articles Quantity																			
<p>FY02 (\$10,573) Developed array cable pack design, array internodes splice, array dispenser, T-shell, developed winding technology, lithium battery development, node and sensor CCA (Circuit Card Assembly) design, and array assembly manufacturing. Built and tested the first production representative array. Conducted design verification testing of deployment methods and wet end hardware.</p> <p>FY03 (\$12,063) Build sensors and array for Dual Array Test (DAT) and System Integration Test (SIT), design and build of shells, assembly of shells for deployment, design and build of Shore Line Transition Bottle (SLTB), design of SLC extension, pack array dispensers, and R/M/S design influence.</p> <p>FY04 (\$6,514) Complete production of the EMD hardware. Package and deliver all EMD test hardware. Conduct the last of the design verification testing, prepare for the system integration test, conduct the analysis of the test results and prepare for TECHEVAL and operational evaluation. Initiate actions to develop a new contract for Increment 3 for a new start in FY05.</p> <p>FY05 (\$10,974) Maintain support during OPEVAL, refurbish the OPEVAL Wet End Segment equipment. Plan for the resolution of any discrepancies identified during testing. Finalize the WES input to the technical data package. Conduct TECHEVAL and operational evaluation. Prepare for production of the WES hardware and plan for an eventual Initial Operational Capability (IOC). Support Milestone III. Initiate development of the Increment 2 and Increment 3 specific WES components. Award contract for Increment 3 new start. Develop and install Increment 3 prototype.</p>																			

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Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 4 of 23)

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EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2003																
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA- 5	PROGRAM ELEMENT NUMBER AND NAME 0604784N/ Distributed Surveillance System	PROJECT NUMBER AND NAME X1300/ ADVANCED DEPLOYABLE SYSTEM (ADS)																
(U) B. Accomplishments/Planned Program																		
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="text-align: left;">SYSTEMS ENGINEERING PROJECT MANAGEMENT (SEPM)</th> <th style="text-align: center;">FY 02</th> <th style="text-align: center;">FY 03</th> <th style="text-align: center;">FY 04</th> <th style="text-align: center;">FY 05</th> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td style="text-align: center;">6.320</td> <td style="text-align: center;">4.422</td> <td style="text-align: center;">4.611</td> <td style="text-align: center;">6.420</td> </tr> <tr> <td>RDT&E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>				SYSTEMS ENGINEERING PROJECT MANAGEMENT (SEPM)	FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	6.320	4.422	4.611	6.420	RDT&E Articles Quantity				
SYSTEMS ENGINEERING PROJECT MANAGEMENT (SEPM)	FY 02	FY 03	FY 04	FY 05														
Accomplishments/Effort/Subtotal Cost	6.320	4.422	4.611	6.420														
RDT&E Articles Quantity																		
<div style="border: 1px solid black; min-height: 300px; margin-top: 10px;"> <p>FY02 (\$6,320) Provided System Engineering project management support for the ADS project office; Managed ADS through monitoring of contractor and government technical, schedule, and cost performance. Started Integrated Logistics Support (ILS) plans and infrastructure. Completed revised APBA based on ORD modification. Updated Acquisition Strategy Report (ASR) and Acquisition Plan (AP). Successfully completed program review with ASN/RDA who approved the revised APBA and ASR.</p> <p>FY03 (\$4.422) Continue System Engineering Project Management support for the ADS project office; Manage ADS through monitoring of contractor and government technical, schedule, and cost performance. Continue development of ILS plans and infrastructure. Conduct Milestone B for Increment I.</p> <p>FY04 (\$4.611) Oversee the preparation for and conduct of integration testing, TECHEVAL, and OPEVAL. Oversee the preparation and delivery of all equipment for TECHEVAL and OPEVAL. Conduct Investment Baseline Review (IBR) for Increment 2 and Increment 3 Development Programs. Initiate contracting efforts for Increment 2 and 3 programs. Conduct Milestone B for Increment 3.</p> <p>FY05 (\$6,420) Support the analyses of TECHEVAL and OPEVAL data. Oversee the delivery of the technical data package for Increment 1. Initiate planning for the production of ADS Increment 1 and oversee preparations for an eventual Initial Operational Capability (IOC). Initiate the ADS Increment 2 and Increment 3 development program and start production planning. Initiate ADS Increment 2 and Increment 3 system engineering efforts.</p> </div>																		

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604784N/ Distributed Surveillance System	PROJECT NUMBER AND NAME X1300/ ADVANCED DEPLOYABLE SYSTEM (ADS)		

(U) C. PROGRAM CHANGE SUMMARY:

	FY 2002	FY 2003	FY 2004	FY 2005
(U) Funding:				
President's Budget:	34.711	35.861	28.755	64.107
Current BES/President's Budget	34.657	37.591	28.755	64.107
Total Adjustments	-0.054	1.730	0.000	0.000
Summary of Adjustments				
Section 8123: Management Reform Initiative	-0.307			
Section 313: PL 107-206: Revised Economic Assumption	-0.073			
Section 8135: Economic Assumptions	-0.095	-0.216		
FY02 Federal Technology Transfer (28-Jan-02)	-0.020			
Miscellaneous Navy Adjustments	0.441			
Section 8100: Business Process Reform		-0.154		
Section 8109: IT Cost Growth		-0.071		
Advanced Deployable Off-Board Sensor		2.600		
Section 8029: FY03 FFRDC Reduction P.L. 107-248		-0.021		
Miscellaneous Department Adjustments		-0.408		
Subtotal	-0.054	1.730	0.000	0.000
(U) Schedule:				
Not applicable				
(U) Technical:				
Not Applicable				

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EXHIBIT R-2a, RDT&E Project Justification									DATE: February 2003	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT NUMBER AND NAME 0604784N/ Distributed Surveillance System				PROJECT NUMBER AND NAME X1300/ ADVANCED DEPLOYABLE SYSTEM (ADS)			

(U) D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost
OPN#2221	0	0	0	35.427	67.395	80.552	89.194	105.152	Continuing	Continuing
024311N/Project X9102 IUSS MISSION PLANNING	6.686	2.927	0	0	0	0	0	0	0	9.613

These funds provide for the first increment of the Automated IUSS Mission Planning System. This effort builds on work begun in the ADS program (PE 0604784N) to automate array lay down and cable routing plans and allows the mission planner the capability to rapidly update the plan. Functional requirements for Fixed Surveillance Systems (FSS), Advanced Deployable System (ADS) and Surveillance Towed Array Sensor (SURTASS) will be combined and prioritized with fleet input. Software will be developed as GCCS-M segment what are at least level 6 DII-COE compliant. Included is approximately \$800K to collect environmental and physical data for an area of high fleet interest for mission planner demonstration.

(U) E. ACQUISITION STRATEGY: *

- Sole source award of EDM cost plus award fee contact to the PD&RR (Program Definition and Risk Reduction) contractor.
- ADS will conduct an evolutionary acquisition approach to meet fleet requirements:

- * Increment 1: Platform Bravo method Alpha
- * Increment 2: Platform Bravo method Bravo
- * Increment 3: Off board sensor
- * Increment 4: Platform Alpha

		FY02		FY03		FY04		FY05
PROGRAM MILESTONES						Milestone C (LRIP*)		FRP** Milestone
ENGINEERING MILESTONES				WET END SYSTEM VALIDATION REVIEW		SYSTEM INTEGRATION REVIEW		INCREMENT 1 OPERATIONAL PERFORMANCE REVIEW
T&E MILESTONES		SHELL DEPLOYMENT/DROP TEST		ISS IN WATER DESIGN VERIFICATION TEST (DVT); DEPLOYMENT MECHANISM TEST, DUAL ARRAY TEST, SYSTEM SAFETY TEST, DOCKSIDE INTEGRATION TEST		SYSTEM INTEGRATION TEST		TECHNICAL EVALUATION, OPERATIONAL EVALUATION
CONTRACT MILESTONES						CONTRACT FOR INCREMENT2 & 3 DEVELOPMENT AND INCREMENT 1 PRODUCTION		

* LRIP= Low Rate Initial Production
**FRP= Full Rate Production

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

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2003				
APPROPRIATION/BUDGET ACTIVITY RDTE&E, N / BA-5			PROGRAM ELEMENT 0604784N/ Distributed Surveillance System			PROJECT NUMBER AND NAME X1300/ ADVANCED DEPLOYABLE SYSTEM (ADS)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Prime Mission Product Development	C/CPAF	LMFS MANASSAS, VA	89.334								89.334	89.334
Prime Mission Product Development	C/CPAF	LMFS MANASSAS, VA	32.617	17.618	11/02	10.495	11/03	20.379	11/04	Continuing	Continuing	Continuing
Government Engineering Support	WX	SSC SAN DIEGO, CA	43.455	7.859	11/02	7.232	11/03	11.586	11/04	Continuing	Continuing	Continuing
Engineering Support Services	C/CPFF	AHA ROCKVILLE, MD	3.120								3.120	3.120
Engineering Support Services	SS/CPFF	APL/JHU LAUREL, MD	4.671	0.176	11/02	0.136	11/03	0.322	11/04	Continuing	Continuing	Continuing
Engineering Support Services	SS/CPFF	ARL/UT AUSTIN, TX	7.322	0.453	11/02	0.149	11/03	0.827	11/04	Continuing	Continuing	Continuing
Software Development	C/CPFF	ORINCON SAN DIEGO, CA	16.534								16.534	16.534
Other Contracts			17.575	2.085		1.338		3.809		Continuing	Continuing	Continuing
Other Activities			18.276	0.761		0.750		1.390		Continuing	Continuing	Continuing
											0.000	0.000
											0.000	0.000
Subtotal Product Development			232.904	28.952		20.100		38.313		Continuing	Continuing	Continuing
Remarks:												
Contract Engineering Support	C/CPFF	AMRON SAN DIEGO ,CA	2.763								2.763	2.763
Government Engineering Support	WX	SSC SAN DIEGO,CA	7.752	0.685	11/02	0.378	11/03	2.253	11/04	Continuing	Continuing	Continuing
Other Contracts			14.715	0.711		0.711		6.299		Continuing	Continuing	Continuing
Other Activities			4.270	1.471		1.121		6.515		Continuing	Continuing	Continuing
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Support			29.500	2.867		2.210		15.067		Continuing	Continuing	Continuing
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)										DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDTE, N / BA-5			0604784N/ Distributed Surveillance System			X1300/ ADVANCED DEPLOYABLE SYSTEM (ADS)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation		OTHER CONTRACTS	7.595	0.030		0.173		0.062		Continuing	Continuing	Continuing
Developmental and Operational Test	WX	SSC-SAN DIEGO,CA	11.209	1.320	11/02	1.662	11/03	4.245	11/04	Continuing	Continuing	Continuing
Developmental and Operational Test and Evalu		OTHER ACTIVITIES	4.658							Continuing	Continuing	Continuing
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			23.462	1.350		1.835		4.307		Continuing	Continuing	Continuing
Remarks:												
Program Management Support	C/CPFF	AMRON, SAN DIEGO, CA	5.277								5.277	5.277
Program Management Support		OTHER CONTRACTS	8.082	2.217		2.355		2.697		Continuing	Continuing	Continuing
Program Management Support		OTHER CONTRACTS	2.767	2.205		2.255		3.723		Continuing	Continuing	Continuing
											0.000	
											0.000	
											0.000	
Subtotal Management			16.126	4.422		4.610		6.420		Continuing	Continuing	Continuing
Remarks:												
Total Cost			301.992	37.591		28.755		64.107		Continuing	Continuing	Continuing
Remarks:												

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EXHIBIT R4, Schedule Profile																								DATE: February 2003									
APPROPRIATION/BUDGET ACTIVITY									PROGRAM ELEMENT NUMBER AND NAME																PROJECT NUMBER AND NAME								
RDT&E, N / BA-5									0604784N/ Advanced Deployable System																X1300/ ADVANCED DEPLOYABLE SYSTEM								
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009				
QTR	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					
Acquisition Milestones				PR																													
MDA Reviews/Milestones				△								△			△							△						△					
Wet End Subsystem				△			△					Incr. 3 MS B			Incr. 1 MS III							Incr. 3 MS III					Incr. 2 MS III						
Installation Sub System								△																									
Dry End Subsystem			▲									△																					
Test & Evaluation Milestones (Increment 1)																																	
Dual Array Test							△																										
Dockside Integration Test								△																									
System Integration Test											△																						
TECHEVAL												△																					
OPEVAL												△		△								△			△								
												Incr. 1										Incr. 3			Incr. 2								
Production Milestones												△										△					△						
Production Readiness Review												Incr. 1										Incr. 3					Incr. 2						

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

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Exhibit R-4a, Schedule Detail						DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY RDT&E BA-5	PROGRAM ELEMENT 0604784N/ Distributed Surveillance System				PROJECT NUMBER AND NAME X1300/ ADVANCED DEPLOYABLE SYSTEM			
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
WET END SUBSYSTEM								
Node CCA Qual tests	3Q							
Shell designs complete	3Q							
Sensor final design review	3Q							
Hinge and clip drop design verification test		1Q						
Gold Unit Array fabrication	1Q-3Q							
Single Array Test		1Q						
Node pressure vessel qual		2Q						
INSTALLATION SUBSYSTEM								
Control & monitoring DDR		1Q						
Wet End Capsule DDR	2Q							
Trunk Capsule & concatenation DDR	4Q							
NUWC Tank tests		3Q						
DRY END SUBSYSTEM								
Comm & Relay Van SDB RFP	3Q							
CARV SDB contract award	3Q							
CARV assembly		3Q						
CARV integration			1Q					
DES design verification test			2Q					
SYSTEM TESTS								
Dual Array test		3Q						
Dockside Integration test		4Q						
System Integration Test			2Q					
TECHEVAL			4Q					
OPEVAL			4Q					
PRODUCTION READINESS REVIEW				1Q				

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 11 of 23)

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604784N/ Distributed Surveillance System				PROJECT NUMBER AND NAME X9085/ ACCELERATE CABLE BURIAL CAPABILITY					
COST (\$ in Millions)	Prior Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Project Cost		3.928									3.928
RDT&E Articles Qty											0
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>X9085 Cable Burial Capability- Enhance ADS cable survivability and provide a trunk extension installation capability</p>											

R-1 SHOPPING LIST - Item No.

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604784N/ Distributed Surveillance System	PROJECT NUMBER AND NAME X9085/ ACCELERATE CABLE BURIAL CAPABILITY		
(U) B. Accomplishments/Planned Program				
CABLE BURIAL	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	3.928			
RDT&E Articles Quantity				
<p>FY02: (\$3,928K) Accelerated cable burial capability incorporating larger diameter cable and surface ship deployment leveraging the dual application program burial sled. Conducted in water design verification test.</p>				

R-1 SHOPPING LIST - Item No. 136

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2003																																																													
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604784N/ Distributed Surveillance System	PROJECT NUMBER AND NAME X9085/ ACCELERATE CABLE BURIAL CAPABILITY																																																														
<p>(U) C. PROGRAM CHANGE SUMMARY:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: right;">FY 2002</th> <th style="text-align: right;">FY 2003</th> <th style="text-align: right;">FY 2004</th> <th style="text-align: right;">FY 2005</th> </tr> </thead> <tbody> <tr> <td>(U) Funding:</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Previous President's Budget:</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> </tr> <tr> <td>Current BES/President's Budget</td> <td style="text-align: right;">3.928</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> <td style="text-align: right;">0.000</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">3.928</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> </tr> <tr> <td colspan="5" style="padding-top: 10px;">Summary of Adjustments</td> </tr> <tr> <td> ADS - Accelerate Cable Burial Capability</td> <td style="text-align: right;">4.000</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Section 8123: Management Reform Initiative</td> <td style="text-align: right;">-0.035</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Section 313: PL 107-206: Revised Economic Assumption</td> <td style="text-align: right;">-0.008</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Section 8135: Economic Assumptions</td> <td style="text-align: right;">-0.011</td> <td></td> <td></td> <td></td> </tr> <tr> <td> Miscellaneous Navy Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">-0.018</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Subtotal</td> <td style="text-align: right; border-top: 1px solid black;">3.928</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> <td style="text-align: right; border-top: 1px solid black;">0.000</td> </tr> </tbody> </table> <p style="margin-top: 20px;">(U) Schedule: Not applicable</p> <p style="margin-top: 20px;">(U) Technical: Not Applicable</p>						FY 2002	FY 2003	FY 2004	FY 2005	(U) Funding:					Previous President's Budget:	0.000	0.000	0.000	0.000	Current BES/President's Budget	3.928	0.000	0.000	0.000	Total Adjustments	3.928	0.000	0.000	0.000	Summary of Adjustments					ADS - Accelerate Cable Burial Capability	4.000				Section 8123: Management Reform Initiative	-0.035				Section 313: PL 107-206: Revised Economic Assumption	-0.008				Section 8135: Economic Assumptions	-0.011				Miscellaneous Navy Adjustments	-0.018				Subtotal	3.928	0.000	0.000	0.000
	FY 2002	FY 2003	FY 2004	FY 2005																																																												
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Total Adjustments	3.928	0.000	0.000	0.000																																																												
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Subtotal	3.928	0.000	0.000	0.000																																																												

R-1 SHOPPING LIST - Item No. 136

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2003				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5			PROGRAM ELEMENT NUMBER AND NAME 0604784N/ Distributed Surveillance System			PROJECT NUMBER AND NAME X9085/ ACCELERATE CABLE BURIAL CAPABILITY					
(U) D. OTHER PROGRAM FUNDING SUMMARY:											
Line Item No. & Name	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	To Complete	Total Cost	
OPN#2221	0	0	0	35.427	67.395	80.552	89.194	105.152	Continuing	Continuing	
024311N/ Project X9102 IUSS MISSION PLANNING	6.686	2.927	0	0	0	0	0				
Funds first increment of the Automated IUSS Mission Planning System. This effort builder on work begun in the ADS program (PE 0604784N) to automate array lay down and cable routing plans and allows the mission planner the capability to rapidly update the plan. Functional requirements for Fixed Surveillance Systems (FSS), Advanced Deployable System (ADS) and Surveillance Towed Array Sensor (SURTASS) will be combined and prioritized with fleet input. Software will be developed as GCCS-M segment what are at least level 6 DII-COE compliant. Included is approximately \$800K to collect environmental and physical data for an area of high fleet interest for mission planner demonstration.											
(U) E. ACQUISITION STRATEGY: *											
		FY02		FY03							
PROGRAM MILESTONES											
ENGINEERING MILESTONES		SYSTEM REQUIRMENT REVIEW Q2, SYSTEM DESIGN REVIEW Q3									
T&E MILESTONES		IN WATER PROTOTYPE TEST Q2		IN WATER DVT Q2 (DESIGN VERIFICATION TEST)							
CONTRACT MILESTONES		JUSTIFICATION AND AUTHORIZATION FOR SOLE SOURCE AWARD Q3, CONTRACT AWARD FOR BURIAL SLED Q4									
* Not required for Budget Activities 1,2,3, and 6											

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2003				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604784N/ Distributed Surveillance System			X9085/ ACCELERATE CABLE BURIAL CAPABILITY						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
											0.000	
Government Engineering Support	WX	SSC SAN DIEGO, CA	0.704								0.704	0.676
Prime Mission Product	FFP	SOIL MACHINE DYNAMICS	2.474								2.474	2.500
Prime Mission Product	CPFF	LMFS MANASSAS, VA	0.704								0.046	0.789
Other Contracts			0.046								0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			3.928	0.000		0.000		0.000		0.000	3.928	
Remarks:												
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Support			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 2003				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604784N/ Distributed Surveillance System			X9085/ ACCELERATE CABLE BURIAL CAPABILITY						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
SBIR Assessment											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Total Cost			3.928	0.000		0.000		0.000		0.000	3.928	
Remarks:												

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5		PROGRAM ELEMENT NUMBER AND NAME 0604784N/ Distributed Surveillance System				PROJECT NUMBER AND NAME X9086/ FIBER OPTIC TECHNOLOGY					
COST (\$ in Millions)	Prior Years Cost	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Cost to Complete	Total Program
Project Cost		3.929									3.929
RDT&E Articles Qty											0
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>X9086 Fiber Optic Technology- Reduced risk in development of remotely powered all optical array technology for application to ADS program.</p>											

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Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 18 of 23)

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-5	PROGRAM ELEMENT NUMBER AND NAME 0604784N/ Distributed Surveillance System	PROJECT NUMBER AND NAME X9086/ FIBER OPTIC TECHNOLOGY		
(U) B. Accomplishments/Planned Program				
FIBER OPTIC	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	3.929			
RDT&E Articles Quantity				
<p>FY02: (\$3,929) - Reduced risk in fiber optical technology and integrated fiber optic technology application to rapidly deployable surveillance systems. Refurbished all optical array and changed to a remotely powered design. Determined deployment location and conduct required permits and surveys. Designed surface ship deployment method for all optical array and cable. Conducted in water design verification test and deployed system for end to end ADM testing. Developed and tested surface deployment handling system.</p>				

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:	
			February 2003	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME		
RDTE, N / BA-5	0604784N/ Distributed Surveillance System	X9086/ FIBER OPTIC TECHNOLOGY		
(U) C. PROGRAM CHANGE SUMMARY:				
(U) Funding:	FY 2002	FY 2003	FY 2004	FY 2005
President's Budget:	0.000	0.000	0.000	0.000
Current BES/President's Budget	3.929	0.000	0.000	0.000
Total Adjustments	3.929	0.000	0.000	0.000
Summary of Adjustments				
ADS - Fiber Optic Tech	4.000			
Section 8123: Management Reform Initiative	-0.035			
Section 313: PL 107-206: Revised Economic Assumption	-0.008			
Section 8135: Economic Assumptions	-0.011			
Miscellaneous Navy Adjustments	-0.017			
	3.929	0.000	0.000	0.000
(U) Schedule:				
Not Applicable				
(U) Technical:				
Not Applicable				

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CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY RDTE&E, N / BA-5			PROGRAM ELEMENT NUMBER AND NAME 0604784N/ Distributed Surveillance System			PROJECT NUMBER AND NAME X9086/ FIBER OPTIC TECHNOLOGY				
(U) D. OTHER PROGRAM FUNDING SUMMARY:										
<u>Line Item No. & Name</u>	<u>FY 2002</u>	<u>FY 2003</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>	To Complete	Total Cost
OPN#2221	0.000	0.000	0.000	35.427	67.395	80.552	89.194	105.152	Continuing	Continuing
024311N/ X9102 IUSS MISSION PLANNING	6.686	2.927	0.000	0.000	0.000	0.000	0.000	0.000	0	9.613
<p>Funds first increment of the Automated IUSS Mission Planning System. This effort builder on work begun in the ADS program (PE 0604784N) to automate array lay down and cable routing plans and allows the mission planner the capability to rapidly update the plan. Functional requirements for Fixed Surveillance Systems (FSS), Advanced Deployable System (ADS) and Surveillance Towed Array Sensor (SURTASS) will be combined and prioritized with fleet input. Software will be developed as GCCS-M segment what are at least level 6 DII-COE compliant. Included is approximately \$800K to collect environmental and physical data for an area of high fleet interest for mission planner demonstration.</p>										
(U) E. ACQUISITION STRATEGY: *										
		FY02		FY03						
PROGRAM MILESTONES										
ENGINEERING MILESTONES		WET END SYSTEM VALIDATION REVIEW Q3								
T&E MILESTONES				IN WATER DVT Q4 (DESIGN VERIFICATION TEST)						
CONTRACT MILESTONES		CONTRACT MODIFICATION Q3								
<p>* Not required for Budget Activities 1,2,3, and 6</p>										

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: February 2003				
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-5			0604784N/ Distributed Surveillance System			X9086/ FIBER OPTIC TECHNOLOGY						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Prime Mission Product Development	C/CPFF	NORTHROP GRUMMAN	1.680	0.000		0.000		0.000			1.680	1.760
Government Engineering Support	WX	SSC-SAN DIEGO,CA	2.095	0.000		0.000		0.000			2.095	2.051
		OTHER CONTRACTS	0.154	0.000		0.000		0.000			0.154	0.154
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			3.929	0.000		0.000		0.000		0.000	3.929	
Remarks:												
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												

UNCLASSIFIED

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)									DATE: February 2003			
APPROPRIATION/BUDGET ACTIVITY RDTE, N / BA-5			PROGRAM ELEMENT 0604784N/ Distributed Surveillance System			PROJECT NUMBER AND NAME X9086/ FIBER OPTIC TECHNOLOGY						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal T&E			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	
Remarks:												
Total Cost			3.929	0.000		0.000		0.000		0.000	3.929	
Remarks:												

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Exhibit R-3, Project Cost Analysis
(Exhibit R-3, page 23 of 23)