CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: **February 2005**	
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA4**					R-1 ITEM NOMENCLATURE PE 0603553N Surface ASW/1704 ASW Advanced Development			
COST ($ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	**13.569**	**19.843**	**17.343**	**18.012**	**18.592**	**19.040**	**19.507**	**19.936**
ASW Advanced Development/1704	**11.647**	**17.464**	**17.343**	**18.012**	**18.592**	**19.040**	**19.507**	**19.936**
ASW Rick Reduction/9352	**1.922**							
Surface Vessel Torpedo Tude - Airbag Tech/9185		**1.388**						
Surface Ship Combat System Warfighting Enhancement/9525		**0.991**						

Defense Emergency Response Funds (DERF) Funds: N/A

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Anti Submarine Warfare (ASW) Advanced Development project provides advanced development demonstration and validation of technology for potential surface sonar and combat system applications. Efforts focus on resolution of technical issues associated with providing capability against the Year 2005 and beyond threat with emphasis on shallow water/littoral area Undersea Warfare (USW) and on demonstration and validation of USW concepts and technology. Key technology areas include active sonar transmissions, advanced signal and data processing, active sonar classification, towed and hull arrays and transducer technology, multi-static sonar, and multi-sensor data fusion including multi-platform data fusion and netcentric undersea warfare concepts. This Program Element, 0603553N, has been designated to support Multi-Static Active ASW (MAASW) efforts associated with the Distant Thunder program and other emerging multi-static technologies, and the CNO's Task Force ASW initiative.

The MAASW project conducts advanced development and testing of active multistatic acoustic concepts. The concept development is directed at providing surface ships combat groups with the capability of detection, classification, and localization of quiet threat submarines in difficult acoustic environments associated with Littoral waters. The project concentrates on the development of acoustic processor algorithms, alternative cost-effective active sources and information sharing technologies to develop a coordinated multi-static acoustic picture employing distributed sensors and active sources.

The Task Force ASW (TF ASW) initiative is a focused effort to identify the most promising ASW technologies through a process of discovery, assessment and experimentation. TF ASW will coordinate the development of technologies which move beyond incremental or marginal improvements in ASW effectiveness. The CNO's vision of "fundamentally changing the way ASW is currently conducted to render the enemy submarine irrelevant against U.S. and coalition forces" necessitates a change in the calculus of how the US Navy conducts ASW. Central to TF ASW's achieving the CNO's vision are several innovative approaches which include using the art-of-the-technologically-possible; minimizing force-on-force; reducing the ASW end-to-end timeline; supporting rapid maneuver; developing off-board and distributed ASW detection systems; and finding innovative weapons solutions. To achieve these keys, it is essential to develop new ASW technologies and conduct at-sea experiments to prove/disprove technology concepts and collect corroborating data. The most promising technology concepts from government laboratories, university research centers, and industry are developed to the point where these technologies can be tested in at-sea experiments, with the objective of transitioning those which demonstrate exceptional capability to programs-of-record. In addition to developing and testing promising new technologies, an effective system of measuring the performance of existing and new surface ship ASW systems is essential to enable data based assessment of the capabilities and shortfalls in the performance of these systems in realistic scenarios through a Surface Ship Enhanced Measurement Program (SSEMP). By rigorously closing the feedback loop, SSEMP enables data based programmatic decision making for Surface Ship combat systems.

Congressional Adds:

1. Project Unit 9352 will develop ASW Risk Reduction efforts.
2. Project Unit 9185 will develop Surface Vessel Torpedo Tube - Airbag Technology.
3. Project Unit 9525 will develop Surface Ship Combat System Warfighting Enhancements.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2005**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RD RDT&E N/BA4	PE 0603553N Surface ASW	1704 ASW Advanced Development

B. Accomplishments/Planned Program

	FY 2004	FY 2005	FY 2006	FY 2007
Accomplishments/Effort/Subtotal Cost	**11.647**	**17.464**	**17.343**	**18.012**
RDT&E Articles Quantity				

MAASW/Distant Thunder - Migrated 2 of 3 key elements of processor to open systems architecture to support transition to SQQ-89 A(V)15 combat system. Transitioned the development environment for these software engines to an open systems architecture. Conducted at-sea testing and analyzed data collected to support processor improvement. Developed and began implementation of hardware technology refresh strategy. Obtained flight certification for P-3 AIP aircraft. FY05-FY07 plans include completing transition of remaining processor elements to opens systems architecure, completing hardware technology refresh, continuing spiral development of processor algorithms, developing improved shipboard mission planning tools (TACAID Play Book), and introducing new aircraft independent source technology.

Task Force ASW - Conducted first TF ASW experiment of promising and inovative ASW technologies, collected and analyzed data, and reported results. Planned and conducted second TF ASW experiment and planned third experiment to test other promising technologies, including both industry and university affilitated esearch center proposed technologies. Issued an industry solicitation to obtain new technology ideas, and began strategic investment in the most promising transformational technologies derived from this solicitation. Initiated a Surface Ship Enhanced Measurement Program to begin collecting, analyzing, assessing and reporting on the performance of Surface Ship ASW systems to support results based decision making. FY05-FY07 plans include continued development of specific innovative technologies, procurement of reuseable test assets for specific technology concepts, continued investment in developing and testing the highest potential industry originated technology concepts, and continuing to peform data collection, analysis, assessment and reporting of Surface Ship ASW combat system performance under realistic conditions.

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 / BA4	PE 0603553N Surface ASW	1704 ASW Advanced Development	

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 2004	FY 2005	FY 2006	FY 2007
FY 2005 President's Budget Controls	2.456	17.633	17.701	3.308
FY2006 President's Controls	11.647	17.464	17.343	18.012
Totals Adjustments	9.191	-0.169	-0.358	14.704
Summary of Adjustments				
Programmatic Adjustments			-0.202	14.866
Other Adjustments		-0.003	-0.156	-0.162
SBIR	-0.025			
NAVSEA Civilian				
Congressional Undistributed Reductions		-0.166		
Execution Realignment	9.222			
Cancelled Accounts	-0.006			
Subtotal	9.191	-0.169	-0.358	14.704

Schedule:

N/A

Technical:

N/A

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 / BA4	PE 0603553N Surface ASW	1704 ASW Advanced Development

D. OTHER PROGRAM FUNDING SUMMARY: N/A

E. ACQUISITION STRATEGY: *

Competitively awarded contracts from Broad Agency Announcement (BAA) solicitations.

F. MAJOR PERFORMERS: **

Naval Air Warfare Center /PAX River, MD – Maintain and install the two Air Multistatic Active ASW (MAASW(DT)) Rapid Deployment Kit (RDK) systems, lab test these systems and processor updates for these systems, and maintain NAVAIR authorization to install and fly this ADM system in P-3C and P-3C AIP TYCOM Aircraft.
Naval Undersea Warfare Center, Newport, RI – Provide management support in working with various administrative and operational organizations to develop and implement teams for MAASW Distant Thunder development and evaluation. Support laboratory and at-sea testing of Distant Thunder processor algoriothms for ship installations. Perform planning, execution and analysis of experiments.
Johns Hopkins University Applied Physics Laboratory, Laurel, MD - Participate in experiment planning, execution and analysis, and lead the Surface Ship Enhanced Measurement Program (SSEMP) effort.

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)												DATE: February 2005		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA4**		PROGRAM ELEMENT PE 0603553N Surface ASW				PROJECT NUMBER AND NAME 1704 ASW Advanced Development								
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
Multistatic Sonar Development	WR	NUWC Newport	4.089	0.950	12/03	0.648	12/04	0.398	12/05	0.466	12/06	Continuous	Continuous	
Multistatic Sonar Development	WR	BATH MIN	0.021										0.021	
Multistatic Sonar Development	WR	PASCAGOULA MS	0.017										0.017	
Multistatic Sonar Development	WR	NAWC/Key West	0.010										0.010	
Multistatic Sonar Development	WR	NAWC/Pax River	1.513	0.000		0.161	12/04	0.100	12/05	0.100	12/06	Continuous	Continuous	
Multistatic Sonar Development	CPFF	BBN	3.332	0.265	12/03	0.088	12/04	0.150	12/05	0.150	12/06	Continuous	Continuous	
Multistatic Sonar Development	CPFF	APL/JHU	0.350										0.350	
Multistatic Sonar Development	RCP	FLT. Industry SUP Center	0.010										0.010	
Multistatic Sonar Development	RCP	ONR	0.472										0.472	
Various	Various	Various	0.542	0.159	03/04	0.000	02/04	0.255	01/06	0.255	01/07	Continuous	Continuous	
Subtotal Product Development			10.356	1.374		0.897		0.903		0.971		Continuous	Continuous	
Remarks:														
Developmental Test & Evaluation	WR	NUWC/Npt	2.505	0.000		0.400	11/04	0.315	11/05	0.655	11/06	Continuous	Continuous	
Developmental Test & Evaluation	WR	NAWC/Pax River	1.086	0.205	11/03	0.170	11/04	0.170	11/05	0.170	11/06	Continuous	Continuous	
Developmental Test & Evaluation	CPFF	BBN	0.623	0.400	11/03	0.300	11/04	0.300	11/05	0.300	11/06	Continuous	Continuous	
Developmental Test & Evaluation	CPFF	AAC				0.212								
Developmental Test & Evaluation	WR	SUPSHIP BATH MIN.	0.033										0.033	
Developmental Test & Evaluation	WR	NUWC/Keyport	0.933										0.933	
Developmental Test & Evaluation	WR	NSWC/Carderock, MD	0.695										0.695	
Developmental Test & Evaluation	WR	NSWC/Dahlgren, VA	0.040										0.040	
Developmental Test & Evaluation	WR	NSWC/Indian Head				0.035								
Developmental Test & Evaluation	CPFF	APL/JHU, MD	1.536										1.536	
Developmental Test & Evaluation	CPFF	ARL/UT	0.124	0.000		0.050	11/04	0.150	11/05	0.150	11/06	Continuous	Continuous	
Developmental Test & Evaluation	CPFF	Various	0.325	0.300	11/03	0.000	11/04	0.105	12/05	0.366	12/05	Continuous	Continuous	
Developmental Test & Evaluation	CPFF	Progeny, Inc.	1.217										1.217	
Developmental Test & Evaluation	CPFF	IPD	0.055										0.055	
Developmental Test & Evaluation	MIPR	U.S. ARMY/MITRE	0.000										0.000	
Developmental Test & Evaluation	WR	SPAWAR Systems Center	0.558										0.558	
Subtotal T&E			9.730	0.905		1.167		1.040		1.641		Continuous	Continuous	
Remarks:														

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CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: **February 2005**						
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA4**		PROGRAM ELEMENT PE 0603553N Surface ASW			PROJECT NUMBER AND NAME 1704 ASW Advanced Development									
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
At-Sea Test/Experiment (TFASN)	C/CPFF	JHU/APL, MD	0.000	1.100		4.000	11/04	4.000	10/05	4.000	10/06	Continuous	Continuous	
At-Sea Test/Experiment	WX	NAVSEA/NEWPORT, RI	0.000	2.300		8.000	11/04	8.000	10/05	8.000	10/06	Continuous	Continuous	
At-Sea Test/Experiment	RCP	ONR/ANTEON	0.000	0.930									0.930	
At-Sea Test/Experiment	RCP	ONR/BAE	0.000	1.800									1.800	
Enhanced Data Collection (SSEMP)	C/CPFF	JHU/APL, MD	0.000			2.000	11/04	2.000	10/05	2.000	10/06	Continuous	Continuous	
Enhanced Data Collection														
and Analysis (SSEMP)	Various	Various	0.000	2.981		1.000	11/04	1.000	10/05	1.000	10/06	Continuous	Continuous	
Subtotal T&E			0.000	9.111		15.000		15.000		15.000		0.000	39.111	
Remarks:														
Contractor Engineering Support														
SBIR														
Government Engineering Support														
Program Management Support	CPFF	Stanley Assoc.	0.539	0.132	01/04	0.350	01/05	0.350	01/06	0.350	01/07	Continuous	Continuous	
Program Management Support	CPFF	Anteon Corp.	0.050	0.075	01/04	0.000		0.000		0.000		Continuous	Continuous	
Travel			0.060	0.050	10/04	0.050	11/04	0.050	11/05	0.050	11/06	Continuous	Continuous	
Labor (Research Personnel)														
Overhead														
Subtotal Management			0.649	0.257		0.400		0.400		0.400		Continuous	Continuous	
Remarks:														
Total Cost			20.735	11.647		17.464		17.343		18.012		Continuous	Continuous	
Remarks:														

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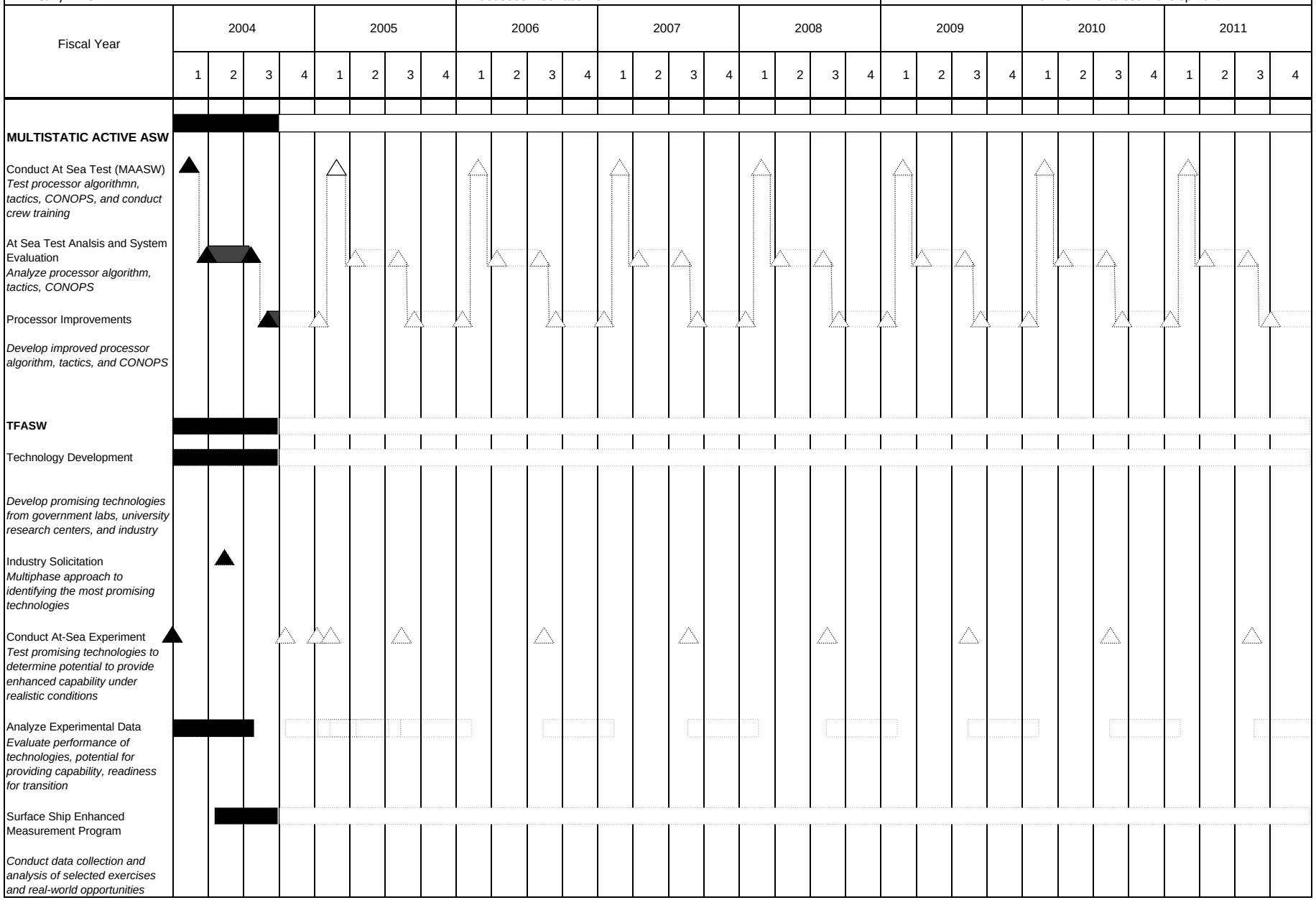
CLASSIFICATION:

EXHIBIT R4, Schedule Profile | DATE: **February 2005**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E, N / BA4**

PROGRAM ELEMENT NUMBER AND NAME: PE 0603553N Surface ASW

PROJECT NUMBER AND NAME: 1704 ASW Advanced Development



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

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: **February 2005**		
APPROPRIATION/BUDGET ACTIVITY **RDT&BA4**	PROGRAM ELEMENT PE 0603553N Surface ASW				PROJECT NUMBER AND NAME 1704 ASW Advanced Development			
Schedule Profile	FY2004	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
Conduct At Sea Test	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Sea Test Analysis and System Evaluation	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
Development Test & Evaluation	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
At Sea Test Experiment	4Q	1Q-2Q-4Q	3Q	2Q	1Q-4Q	3Q	2Q	1Q-4Q

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