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EXHIBIT R-2, RDT&E Budget Item Justification						DATE: June 2001																								
APPROPRIATION/BUDGET ACTIVITY RDT&E,N/ 07					R-1 ITEM NOMENCLATURE Surface ASW Combat System Integration/ 0205620N																									
COST (\$ in Millions)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost																				
Total PE Cost	22.544	29.314	28.119																											
ASW Combat Systems Integration/ V0896 *	2.794	0.000	0.000																											
ASW Combat Systems Integration/ Q0896 *	0.000	0.000	0.000																											
Surface ASW System Improvements/ V1916 *	12.967	0.000	0.000																											
Surface ASW System Improvements/ Q1916 *	0.000	29.314	28.119																											
High Dynamic Range Low Cost Towed Array Receiver/ V2662	6.783	0.000	0.000																											
Quantity of RDT&E Articles																														
<p>* The PEO identification changes from PEO(USW) to PEO(MUW) starting in FY 2001 due to the transfer of PEO(USW) into PEO(MUW). Therefore, the project prefix changes from V to Q beginning in FY 2001.</p> <p>A. Mission Description and Budget Item Justification: The objective of this Program Element (PE) is to significantly improve existing AN/SQQ-89(V) and Surface Ship Sonar System capabilities. It will improve AN/SQQ-89(V) Measures of Performance (MOP) by enhancing detection, tracking, classification, data processing and display capabilities, and increasing acoustic sensor frequency bandwidth. This PE will take advantage of the AN/SQQ-89(V) open system architecture to develop and integrate the Multi-Function Towed Array (MFTA) with active sonar bistatics (Echo Tracker Classifier - ETC) and torpedo defense capabilities into the AN/SQQ-89(V) as a backfit program for DDG51 class ships (AN/SQQ-89A(V)15). Funds were added to this PE as part of POM-02 to enhance the AN/SQQ-89A(V)15 system architecture to support technology refresh, maximize software portability, and modify external interfaces to support interoperability with multiple AEGIS baselines. Finally, this PE, under Project V2662 in FY 2000, will produce a single Towed Array Acoustic Intercept Subsystem (AISS) ship set and transition the AISS technology to the surface combatant AN/SQQ-89A(V)15 baseline for integration.</p> <p>B. Program Change Summary:</p> <table border="0"> <thead> <tr> <th></th> <th>FY 2000</th> <th>FY 2001</th> <th>FY 2002</th> </tr> </thead> <tbody> <tr> <td>FY 2001 President's Budget:</td> <td>23.504</td> <td>29.585</td> <td>24.240</td> </tr> <tr> <td>Appropriated Value:</td> <td>23.633</td> <td>29.585</td> <td></td> </tr> <tr> <td>Adjustments to FY 2000/2001 Appropriate Value/ FY 2001 President's Budget:</td> <td>-1.089</td> <td>-0.271</td> <td>+3.879</td> </tr> <tr> <td>FY 2002 PRES Budget Submit:</td> <td>22.544</td> <td>29.314</td> <td>28.119</td> </tr> </tbody> </table> <p>Funding: FY 2000 decrease for Congressional Across-the-Board reductions (-0.129), decrease for Small Business Innovative Research (SBIR) transfer (-0.506), Midyear Review Adjustment (-0.321), FY 2000 Actuals (-0.041), and Congressional Proportionate reductions (-0.092). FY 2001 decrease for Congressional Across-the-Board reductions (-0.207), Govtwide Recission -0.064. FY 2002 changes include decreases for Navy Working Capital Fund (NWCF) Rate Adjustments (-0.032), sponsor directed transfer to fund Distant Thunder program (-2.986) and balancing of program to POM-02 controls (-0.035), and increase for AN/SQQ-89A(V)15 program (+6.800) and inflation adjustments (+0.132).</p>												FY 2000	FY 2001	FY 2002	FY 2001 President's Budget:	23.504	29.585	24.240	Appropriated Value:	23.633	29.585		Adjustments to FY 2000/2001 Appropriate Value/ FY 2001 President's Budget:	-1.089	-0.271	+3.879	FY 2002 PRES Budget Submit:	22.544	29.314	28.119
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EXHIBIT R-2a, RDT&E Project Justification							DATE: June 2001			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/ 07	Surface ASW Combat System Integration/ 0205620N				Surface ASW System Improvements/ V1916/ Q1916					
COST (\$ in Millions)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Cost
Project Cost	12.967	29.314	28.119						CONT.	CONT.
RDT&E Articles Qty										
<p>A. Mission Description and Budget Item Justification: The Surface ASW System Improvements project will support essential performance enhancements on AN/SQQ-89(V) and Surface Ship Sonar Systems. This project will develop and refine active classification and display upgrades to support implementation in both the AN/SQQ-89(V) hull subsystem and the MFTA. This Project will integrate the MFTA, completed in Project V0896, with active sonar bistatics (ETC) and torpedo defense capabilities into the AN/SQQ-89(V) as a backfit program on DDG51 class ships (AN/SQQ-89A(V)15). Funds were added to this Project as part of POM-02 to enhance the AN/SQQ-89A(V)15 system architecture to support technology refresh, maximize software portability, and modify external interfaces to support interoperability with multiple AEGIS baselines. Finally, this Project will develop the AN/SQQ-89(V) design and interface with the Light Airborne Multi-Purpose System (LAMPS) Mk III Blk II system.</p> <p>PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p>1. (U) FY 2000 Accomplishments:</p> <ul style="list-style-type: none"> (\$2.484) Developed active sonar bistatic processing (ETC) to support implementation with the AN/SQQ-89A(V)15. (\$1.336) Developed torpedo DCL software to support implementation with the AN/SQQ-89A(V)15. (\$8.897) Began integration of MFTA, active sonar bistatic processing (ETC), and torpedo DCL software into the AN/SQQ-89A(V)15. (\$0.250) Conducted Computer Aided Dead Reckoning Tracer (CADRT) TECHEVAL and operational test and evaluation, OT-IIA, of an AN/SQQ-89(V)6 system with active adjunct processing and improved contact management. <p>2. (U) FY 2001 Plan:</p> <ul style="list-style-type: none"> (\$3.237) Complete active sonar bistatic processing (ETC) to support implementation with the AN/SQQ-89A(V)15. (\$1.153) Complete torpedo DCL software to support implementation with the AN/SQQ-89A(V)15. 										

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EXHIBIT R-2a, RDT&E Project Justification		DATE:
APPROPRIATION/BUDGET ACTIVITY	Surface ASW Combat System Integration/ 0205620N	June 2001
RDT&E, N/ 07		Surface ASW System Improvements/ V1916/ Q1916
<p>(\$22.914) Continue integration of MFTA, active sonar bistatic processing (ETC), and torpedo DCL software into the AN/SQQ-89A(V)15.</p> <p>(\$1.000) Begin integration of LAMPS Mk III Blk II KuBand into the AN/SQQ-89(V).</p> <p>(\$0.080) Complete analysis of CADRT TECHEVAL and OT-IIA at-sea test of an AN/SQQ-89(V)6 system with active adjunct processing and improved contact management.</p> <p>(\$0.300) Coordinate and conduct MFTA sea test.</p> <p>(\$0.630) Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 USC 638.</p> <p>3. (U) FY 2002 Plan:</p> <p>(\$8.500) Enhance AN/SQQ-89A(V)15 system architecture to support technology refresh, maximize software portability, and modify external interfaces to support interoperability with multiple AEGIS baselines.</p> <p>(\$18.019) Continue integration of MFTA, active sonar bistatic processing (ETC), and torpedo DCL software into the AN/SQQ-89A(V)15.</p> <p>(\$0.300) Coordinate and conduct MFTA sea test.</p> <p>(\$1.300) Continue the integration of the LAMPS Mk III Blk II KuBand into the AN/SQQ-89(V).</p>		

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EXHIBIT R-2a, RDT&E Project Justification						DATE: June 2001				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N/ 07		Surface ASW Combat System Integration/ 0205620N			Surface ASW System Improvements/ V1916/ Q1916					
B. Other Program Funding Summary:										
	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY2007</u>	<u>To Complete</u>	<u>Total Cost</u>
OPN Budget Line Item 213600/5	31.3	14.2	16.6							
Related RDT&E: N/A										
C. Acquisition Strategy: Development work in this project is performed primarily by:										
<ul style="list-style-type: none"> - Naval Undersea Warfare Center, Newport - AN/SQQ-89(V) Technical Direction Agent - Naval Surface Warfare Center, Dahlgren - AN/SQQ-89(V) Technical Direction Agent - Lockheed Martin Corporation - Incumbent AN/SQQ-89(V) Design Agent. This contract was awarded competitively and will extend through FY 2002 - Digital System Resources, Inc. - SBIR Phase III contract for common acoustic processor 										
Award new competitive AN/SQQ-89(V) contract in FY 2002.										
Complete AN/SQQ-89A(V)15 Engineering Development Model (EDM) in FY 2003 (RDT&E PE 0205620N) .										
Procurement of production AN/SQQ-89A(V)15 ship sets will commence in FY 2004 (OPN BLI 213600).										

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APPROPRIATION/BUDGET ACTIVITY	Surface ASW Combat System Integration/ 0205620N			Surface ASW System Improvements/ V1916/ Q1916				
RDT&E, N/ 07								
D. Schedule Profile								
	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
Program Milestones	Began AN/SQQ-89A(V)15 Integration	Begin LAMPS Mk III Blk II Integration		Complete AN/SQQ-89A(V)15 EDM	AN/SQQ-89A(V)15 EDM Install			Complete LAMPS Mk III Blk II Integration
Engineering Milestones		2Q Integrated MFTA Sea Test	3Q Integrated MFTA Sea Test	1Q Integrated MFTA Sea Test				
T&E Milestones	2Q CADRT TECHEVAL	1Q CADRT OT-IIA Sea Test			3Q AN/SQQ-89A(V)15 DT Sea Test	2Q AN/SQQ-89A(V)15 OT Sea Test		
Contract Milestones			Award new competitive AN/SQQ-89(V) contract					

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Exhibit R-3 Cost Analysis (page 1)										DATE: June 2001		
APPROPRIATION/BUDGET ACTIVITY			Surface ASW Combat Systems Integration/ 0205620N			Surface ASW System Improvement/ V1916/ Q1916						
RDT&E, N/ 07												
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary H/W & S/W Development	WR	NSWC/Dahlgren, VA	4.466	1.043	11/99	1.400	11/00	1.350	11/01	CONT.	CONT.	
Primary H/W & S/W Development	WR	NUWC/Newport, RI	19.487	0.115	03/00	2.630	11/00	2.200	11/01	CONT.	CONT.	
Primary H/W & S/W Development	C/CPFF	Digital Systems Resources,VA	0.267	0.222	01/00	0.987	12/00	1.678	12/01	CONT.	CONT.	
Primary H/W & S/W Development	C/CPAF	Lockheed Martin, NY	5.381	8.784	11/99	15.042	11/00	9.498	12/01	0.000	38.705	38.705
Primary H/W & S/W Development	Var.	Misc.	19.828	1.641	Var.	8.156	Var.	12.358	Var.	CONT.	CONT.	
Common Systems Engineering	Var.	Misc.	0.580							CONT.	CONT.	
											0.000	
											0.000	
											0.000	
Subtotal Product Development			50.009	11.805		28.215		27.084		CONT.	CONT.	
Remarks: Budgeted for Lockheed Martin award fees (\$M): 1.242 in FY01 and 0.780 in FY02. Lockheed Martin's performance has been excellent in prior years, earning close to 100% of possible award fee for the most recent award fee periods.												
Studies, Analysis, & Evaluations	Var.	Misc.	0.900							0.000	0.900	
Engineering & Technical Services	Var.	Misc.	1.500							0.000	1.500	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Support			2.400	0.000		0.000		0.000		0.000	2.400	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)										DATE: June 2001		
APPROPRIATION/BUDGET ACTIVITY			Surface ASW Combat Systems Integration/ 0205620N			Surface ASW System Improvement/ V1916/ Q1916						
RDT&E, N/ 07												
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 00 Cost	FY 00 Award Date	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Development & Operational T&E	Var.	Misc.	4.010	0.250	Var.	0.080	Var.			CONT.	CONT.	
Miscellaneous T&E	Var.	Misc.	2.447							CONT.	CONT.	
											0.000	
											0.000	
Subtotal T&E			6.457	0.250		0.080		0.000		CONT.	CONT.	
Remarks:												
Program Management Support	Var.	Misc.	4.073	0.742	Var.	0.869	Var.	0.885	Var.	CONT.	CONT.	
Travel	Var.	Misc.	0.684	0.170	Var.	0.150	Var.	0.150	Var.	CONT.	CONT.	
											0.000	
											0.000	
											0.000	
Subtotal Management			4.757	0.912		1.019		1.035		CONT.	CONT.	
Remarks:												
Total Cost			63.623	12.967		29.314		28.119		CONT.	CONT.	

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