

# UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification								DATE: <b>February 2002</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY / BA-6</b>						R-1 ITEM NOMENCLATURE 0604759N Major T & E Investment					
COST (\$ in Millions)	Prior Years Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Total PE Cost			43.838	44.111	42.453	45.777	47.969	47.888	47.904	Continuing	Continuing
W2195 Test and Evaluation Investment			43.838	41.435	42.453	45.777	47.969	47.888	47.904	Continuing	Continuing
W9091 T&E Range & Airborne Telemetry				1.685							1.685
W9092 Flight Operations Safety at Pax River				0.991							0.991
Quantity of RDT&E Articles	Not Applicable										
<p>*The FY 2001 budget reflects Congressional Adds for T&amp;E Support for the Fleet Air Training (\$2.000 million) which was reduced by \$.018 million and the Acquisition/Installation of Refurbished SPS-48E Radar Systems (\$3.000 million) reduced by \$.027 million respectively for Congressional reductions.</p> <p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project improves visibility of Test and Evaluation (T&amp;E) resources across the Services for Major T&amp;E investment funding. These funds correct major deficiencies, improve T&amp;E capabilities, and increase T&amp;E support effectiveness. The T&amp;E Investment project provides support for the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center (NAVUNSEAWARCEN DET AUTEC), Andros Island, Bahamas; the Naval Air Warfare Center Weapons Division (NAVAIRWARCENWPNDIV), Point Mugu, CA and China Lake, CA; and Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV), Patuxent River, MD.</p> <p>(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&amp;E MANAGEMENT SUPPORT because it supports the operations and installations required for general research and development use.</p>											

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EXHIBIT R-2a, RDT&E Project Justification								DATE: <b>February 2002</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA: 6</b>		PROGRAM ELEMENT NUMBER AND NAME 0604759N Major T&E Investment				PROJECT NUMBER AND NAME W2195 T&E Investment					
COST (\$ in Millions)	Prior Years Cost	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program	
Project Cost		43.838*	41.435	42.453	45.777	47.969	47.888	47.904	Continuing	Continuing	
RDT&E Articles Qty											
<p>*The FY 2001 budget reflects Congressional Adds for T&amp;E Support for the Fleet Air Training (\$2.000 million) which was reduced by \$.018 million and the Acquisition/Installation of Refurbished SPS-48E Radar Systems (\$3.000 million) reduced by \$.027 million respectively for Congressional reductions.</p> <p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project improves visibility of Test and Evaluation (T&amp;E) resources across the Service for Major T&amp;E investment funding. These funds correct major deficiencies, improve T&amp;E capabilities, and increase T&amp;E support effectiveness. The T&amp;E Investment project provides support for the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center (NAVUNSEAWARCEN DET AUTECE), Andros Island, Bahamas; the Naval Air Warfare Center Weapons Division (NAVAIRWARCENWPNDIV), Point MUGU, CA and China Lake, CA; and the Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV), Patuxent River, MD.</p> <p>(U) PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p>1. FY 2001 ACCOMPLISHMENTS:</p> <p>- (U) (\$4.796) NAVUNSEAWARCEN DET AUTECE. Completed Tracking Hydrophone Replacement Project. Continued Instrumentation Component Replacements (ICR) efforts. Continued Radar Systems Improvement efforts. Continued the Off-Board Advanced Systems Stimulator Project (OASYS). Continued the Underwater Range Data Communication Project.</p> <p>- (U) (\$13.965) NAVAIRWARCENWPNSDIV. Continued to modernize core instrumentation capability. Completed high rate telemetry data acquisition and processing upgrades from one to four 20Mb/s data streams at the Sea Range. Continued the upgrade of two metric radar (3 and 4 of 7) electronic systems and control consoles and add moving target indicators, automatic calibration and computer controls of chart recorders at San Nicolas Island. Continued the Integrated Target Control System Keep Alive Project. Continued modernization of air traffic control radar processing systems, controller consoles and voice switches to systems that will be compatible with the Federal Aviation Administration (FAA) and non-Major Range Test and Facility Base (MRTFB) Department of Defense (DoD) air control network. Continued modernizing deteriorated copper cables providing data, video and communications within the Sea Range complex. Continued a project to assemble and field remote, fixed and mobile telemetry receiving stations to provide full land range coverage required by customers. Continued Kineto tracking mounts with video tracker, Infrared (IR) cameras and telescopes, and microwave transmission capability. Continued replacement of obsolete GPS receivers and operating software. Completed Air Reconnaissance Search Radar (ARSR-3) radar integration at San Nicholas Island. Completed Environmental Impact Studies at China Lake and Point Mugu.</p> <p>- (U) (\$3.100) Completed Network Centric Warfare (NCW) Implementation. Completed the consolidated Test and Evaluation effort on behalf of NAVAIRWARCENWPNSDIV and NAVAIRWARCENACDIV that refocuses investments towards interconnection of existing facilities. Completed the establishment of an enterprise federation of interconnected facilities that will utilize a common scheduling tool, interoperable models and a common network. Completed integration Research, Development, Test and Evaluation facilities to optimize support for air combat systems integration into future joint warfare systems. Completed using existing communications infrastructure Defense Research Engineering Network and Defense Information Systems Network. Completed the procurement of hardware and software to improve facility connectivity, establish software capabilities such as Distributed Interactive Simulation and High Level Architecture to support interoperability testing, and develop needed collaborative tools to operate the federation.</p>											

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**Exhibit R-2a, RDTE Project Justification**  
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EXHIBIT R-2a, RDT&E Project Justification		DATE:
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
<b>RDT&amp;E, N / BA-6</b>	0604759N Major T&E Investment	W2195 T&E Investment
<p>1. FY 2001 ACCOMPLISHMENTS: (continued)</p> <ul style="list-style-type: none"><li>- (U) (\$14.922) NAVAIRWARCENACDIV. Continued to modernize core instrumentation capability. Continued to modernize RIR-778 Range Instrumentation radars and the Multiple Target Instrumentation Radar. Continued to replace aging Telemetry acquisition and processing equipment. Continued to replace and upgrade obsolescent image generators and video display systems at the Manned Flight Simulator facility. Continued to develop full-spectrum dynamic avionics and aircraft signature measurement system. Continued procurement of Common Avionics Instrumentation System (CAIS) hardware suites. Completed correction of deficiencies in the tactical electronic warfare simulators. Completed radio frequency to fiber optic interface project. Completed fiber optic connectivity between multiple sites and range facilities.</li><li>- (U) (\$2.100) Joint Modeling and Simulation System (JMASS). Continued efforts to develop a tri-service simulation infrastructure that will assist model developers, engineers, and analysts in the development of digital models, configuration and execution of simulations and analysis of simulation capabilities.</li><li>- (U) (\$1.982) Fleet Air Training. Congress appropriated \$2M to augment and enhance the test and evaluation resources and capabilities (video scoring, laser evaluation, mobile command and control communications , portable emitters) of the Atlantic Test Range to support naval fleet aviation readiness training.</li><li>- (U) (\$2.973) Acquisition/Install SPS-48E. Congress appropriated \$3M to fund the acquisition and installation of a fleet-standard AN/SPS-48E shipboard air surveillance radar in support of the Airspace Management System at Naval Air Station (NAS) Patuxent River.</li></ul>		

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**Exhibit R-2a, RDTEN Project Justification**  
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EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2002</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0604759N Major T&E Investment	PROJECT NUMBER AND NAME W2195 T&E Investment
<p>2. FY 2002 PLANS:</p> <ul style="list-style-type: none"> <li>- (U) (\$8.790) NAVUNSEAWARGEN DET AUTC. Continue Instrumentation Component Replacement (ICR) efforts. Continue Radar Systems Improvement efforts. Continue the Off-Board Advanced Systems Stimulator Project. Continue the Underwater Range Data Communications Project. Initiate Range Ware Improvement Project.</li> <li>- (U) (\$16.497) NAVAIRWARCENWPNSDIV. Continue to modernize core instrumentation capability. Complete the upgrade of two metric radar (3 and 4 of 7) electronic systems and control consoles and add moving target indicators, automatic calibration and computer controls of chart recorders at San Nicolas Island. Complete the Integrated Target Control System Keep Alive project. Continue modernization of air traffic control radar processing systems, controller consoles and voice switches to systems that will be compatible with the Federal Aviation Administration (FAA) and non-Major Range Test and Facility Base (MRTFB) Department of Defense (DoD) air control network. Complete modernizing deteriorated copper cables proving data, video and communications within the Sea Range complexes. Continue a project to assemble and field remote, fixed and mobile telemetry receiving stations to provide full land range coverage required by customers. Complete Kineto tracking mounts with video tracker, Infrared (IR) cameras and telescopes, and microwave transmission capability. Complete replacement of obsolete GPS receivers and operating software. Initiate and complete upgrade of the site Command Transmitter System equipment. Develop a capability to test and evaluate effects and performance of hypersonic penetrators. Initiate replacement of aging cinesextant mount laser trackers with laser tracker kits. Initiate replacement of aging remote van equipment, vintage tracking antennas and allow multiple participant operations coverage at San Nicolas Island. Modernize frequency monitoring capabilities at Electronic Combat Range, Land Range, and Sea Range. Initiate replacement of obsolete data acquisition and electronic equipment at Skytop facility. Initiate moving target launch capability/instrumentation from C130A to C130F.</li> <li>- (U) (\$12.794) NAVAIRWARCENACDIV. Continue to modernize core instrumentation capability. Complete modernization of RIR-778 Range Instrumentation radars and the Multiple Target Instrumentation Radar. Continue to replace aging Telemetry acquisition and processing equipment. Continue to replace and upgrade obsolescent image generators and video display systems at the Manned Flight Simulator facility. Continue to develop full-spectrum dynamic avionics and aircraft signature measurement system. Complete procurement of Common Airborne Instrumentation System (CAIS) hardware suites. Initiate replacement of obsolete data collection system with new collection and distribution system. Initiate and complete increased fuel filtration testing capabilities. Modernize the Range Control Center display systems. Initiate procurement of hardware to monitor radio frequency (RF) environment and responses in real-time for installed test facility. Integrate and support replacement of high-speed film cameras with Airborne Separation Video System. Initiate replacement of analog National Television Systems Committee (NTSC) video with digital systems based on industry and Advanced Television Systems Committee formats. Initiate upgrade mechanical/machining capabilities.</li> <li>- (U) (\$2.100) Joint Modeling and Simulation System (JMASS). Continue efforts to develop a tri-service simulation infrastructure that will assist model developers, engineers, and analysis in the development of digital models, configuration and execution of simulations and analysis of simulation capabilities.</li> <li>- (U) (\$1.254) Portion of extramural program reserved for Small Business Innovation Research (SBIR) assessment accordance with 15 USC 638.</li> </ul>		

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**Exhibit R-2a, RDTEN Project Justification**  
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EXHIBIT R-2a, RDT&E Project Justification		DATE:
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
<b>RDT&amp;E, N / BA-6</b>	0604759N Major T&E Investment	W2195 T&E Investment
<p>3. FY 2003 PLANS:</p> <ul style="list-style-type: none"><li>- (U) (\$7.830) NAVUNSEAWARGEN DET AUTEK. Continue Instrumentation Component Replacement (ICR) efforts. Continue Radar Systems Improvement efforts. Continue the Off-Board Advanced Systems Stimulator Project. Continue the Underwater Range Data Communications Project. Continue Range Ware Improvement Project.</li><li>- (U) (\$20.302) NAVAIRWARCENWPNSDIV. Continue to modernize core instrumentation capability. Continue modernization of air traffic control radar processing systems, controller consoles and voice switches to systems that will be compatible with the Federal Aviation Administration (FAA) and non-Major Range Test and Facility Base (MRTFB) Department of Defense (DoD) air control network. Complete a project to assemble and field remote, fixed and mobile telemetry receiving stations to provide full land range coverage required by customers. Continue development of capability to test and evaluate effects and performance of hypersonic penetrators. Complete replacement of aging cinesextant mount laser trackers with laser tracker kits. Continue replacement of aging remote van equipment, vintage tracking antennas and allow multiple participant operations coverage at San Nicolas Island. Continue to modernize frequency monitoring capabilities at Electronic Combat Range, Land Range, and Sea Range. Continue replacement of obsolete data acquisition and electronic equipment at Skytop facility. Continue moving target launch capability/instrumentation from C130A to C130F. Initiate upgrade of metric radars (5 &amp; 6) electronic systems and control consoles and add moving target indicators, automatic calibration and computer controls of chart recorders at San Nicolas Island. Initiate P-3 Instrumentation Replacement Project. Provide equipment support of the Advanced Range Telemetry Program (ARTM). Initiate upgrade Range's need to gather, distribute, record/store and perform post test data analysis with Digital Video.</li><li>- (U) (\$12.921) NAVAIRWARCENACDIV. Continue to modernize core instrumentation capability. Complete replacement of aging Telemetry acquisition and processing equipment. Complete replacement and upgrade of obsolescent image generators and video display systems at the Manned Flight Simulator facility. Complete development of full-spectrum dynamic avionics and aircraft signature measurement system. Continue to replace obsolete data collection system with new collection and distribution system. Complete modernization of the Range Control Center display systems. Continue procurement of hardware to monitor radio frequency (RF) environment and responses in real-time for installed test facility. Complete integration and support replacement of high-speed film cameras with Airborne Separation Video System. Complete replacement of analog National Television Systems Committee (NTSC) video with digital systems based on industry and Advanced Television Systems Committee formats. Initiate upgrade universal radar moving target transponder to support all Navy radar systems. Continue to upgrade mechanical/machining capabilities. Initiate a development of a High Cycle Fatigue (HCF) Test Capability. Initiate upgrade for semi-automatic and video reader capabilities under the Next Generation Video Project.</li><li>- (U) (\$1.400) Joint Modeling and Simulation System (JMASS). Continue efforts to develop a tri-service simulation infrastructure that will assist model developers, engineers, and analysis in the development of digital models, configuration and execution of simulations and analysis of simulation capabilities.</li></ul>		

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**Exhibit R-2a, RDTEN Project Justification**  
(Exhibit R-2a, page 5 of 12)

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EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2002</b>																
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0604759N Major T&E Investment	PROJECT NUMBER AND NAME W2195 T&E Investment																
<p>(U) B. PROGRAM CHANGE SUMMARY:</p> <table style="margin-left: 40px; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY2001</u></th> <th style="text-align: center;"><u>FY2002</u></th> <th style="text-align: center;"><u>FY2003</u></th> </tr> </thead> <tbody> <tr> <td>(U) FY 2002 President's Budget:</td> <td style="text-align: center;">45.227</td> <td style="text-align: center;">41.804</td> <td></td> </tr> <tr> <td>(U) Adjustments from the FY 2002 President's Budget:</td> <td style="text-align: center;">-1.389</td> <td style="text-align: center;">-0.369</td> <td></td> </tr> <tr> <td>(U) FY 2003 President's Budget Submit:</td> <td style="text-align: center;">43.838</td> <td style="text-align: center;">41.435</td> <td style="text-align: center;">42.453</td> </tr> </tbody> </table> <p style="margin-left: 40px;">CHANGE SUMMARY EXPLANATION:</p> <p style="margin-left: 80px;">(U) Funding: FY2001 decrease of \$1.389 million consists of a \$1.342 million decrease for reprioritization of requirements within the Navy and a \$.047 million decrease for a Small Business Innovative Research (SBIR) Assessment. FY2002 decrease of \$ .369 million reflects an undistributed congressional reduction.</p> <p style="margin-left: 80px;">(U) Schedule: Not Applicable.</p> <p style="margin-left: 80px;">(U) Technical: Not Applicable.</p> <p>(U) C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.</p> <p style="margin-left: 40px;"><u>Related RDT&amp;E</u></p> <p style="margin-left: 80px;">(U) PE 0605807F: Test and Evaluation (Air Force) (U) PE 0605864N: Test and Evaluation (Navy)</p> <p>(U) D. ACQUISITION STRATEGY: Not Applicable.</p> <p>(U) E. SCHEDULE PROFILE: Not Applicable.</p>				<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	(U) FY 2002 President's Budget:	45.227	41.804		(U) Adjustments from the FY 2002 President's Budget:	-1.389	-0.369		(U) FY 2003 President's Budget Submit:	43.838	41.435	42.453
	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>															
(U) FY 2002 President's Budget:	45.227	41.804																
(U) Adjustments from the FY 2002 President's Budget:	-1.389	-0.369																
(U) FY 2003 President's Budget Submit:	43.838	41.435	42.453															

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Exhibit R-3 Cost Analysis (page 1)										DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-6			0604759N Major T&E Investment			W2195 T&E Investment						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Network Centric Warfare Implement	WX	NAWCWD, Point Mugu, CA	2.850	3.100	10/00						5.950	
Tracking Hydrophone Replacement	WX	AUTEC, Newport, RI	17.242	1.457	10/00						18.699	
Tracking Mounts	WX	NAWCWD, Point Mugu, CA	11.363	1.103	10/00						12.466	
Range Telemetry Systems	WX	NAWCWD, Point Mugu, CA	8.526	0.800	10/00						9.326	
Air Surveillance Radar	WX	NAWCWD, Point Mugu, CA	3.252	0.700	10/00						3.952	
Slep FPS-16 (3 & 4)	WX	NAWCWD, Point Mugu, CA	2.600	1.620	10/00	1.720	10/01				5.940	
Radar Systems Improvements	WX	AUTEC, Newport, RI	0.200	0.200	01/01	2.900	10/01	1.300	10/02	1.300	5.900	
CATS-Radars	WX	NAWCAD, Pax River, MD	1.100	0.400	10/00	1.225	10/01				2.725	
Test Monitoring and Processing	WX	NAWCAD, Pax River, MD	1.700	1.968	10/00	2.572	10/01	2.460	10/02	0.758	9.458	
Target Control System	WX	NAWCWD, Point Mugu, CA	1.278	0.535	10/00	0.725	10/01				2.538	
Off-Board Advanced Sys Stimulator	WX	AUTEC, Newport, RI	2.846	1.879	10/00	2.760	10/01	3.300	10/02	3.300	14.085	
Manned Flight Simulator Upgrades	WX	NAWCAD, Pax River, MD	0.800	3.815	10/00	1.166	10/01				5.781	
MRTFB Surveillance	WX	NAWCWD, Point Mugu, CA	0.160	0.740	10/00	1.240	10/01	2.600	10/02	6.000	10.740	
Dynamic Multi-spectral Avionics Measure	WX	NAWCAD, Pax River, MD	1.345	2.630	10/00	2.700	10/01	2.100	10/02	2.100	10.875	
CAIS Equipment	WX	NAWCAD, Pax River, MD	2.100	3.340	10/00	1.200	10/01				6.640	
Cable Plant Phase II	WX	NAWCWD, Point Mugu, CA	2.045	2.497	01/01	2.250	01/02				6.792	
Fiber Optic Network Connectivity	WX	NAWCAD, Pax River, MD	0.640	0.190	10/00						0.830	
ATEWES Generator Upgrade	WX	NAWCAD, Pax River, MD	0.686	0.804	10/00						1.490	
ARDS Receiver Upgrade	WX	NAWCWD, Point Mugu, CA	1.800	1.803	10/00	0.750	10/01				4.353	
RF to Fiber Transmission Interface	WX	NAWCAD, Pax River, MD	1.500	0.455	10/00						1.955	
Remote TM Stations	WX	NAWCWD, Point Mugu, CA	1.206	1.344	10/00	2.643	10/01	1.197	10/02	1.645	8.035	
Investment Items Less Than \$1M	WX	Various		4.653	10/00	6.222	10/01	4.468	10/02	Continuing	Continuing	
Underwater Range Data Comm	WX	AUTEC, Newport, RI	0.650	0.750	10/00	1.710	10/01	1.600	10/02	2.649	7.359	
JMASS	MP	USAF, WPAFB, OH	1.100	2.100	10/00	2.100	10/01	1.400	10/02		6.700	
Remarks:												

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Exhibit R-3 Cost Analysis (page 1)							DATE: <b>February 2002</b>					
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT				PROJECT NUMBER AND NAME					
<b>RDT&amp;E, N / BA-6</b>			0604759N Major T&E Investment				W2195 T&E Investment					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Remote TM (SN)	WX	NAWCWD, Point Mugu, CA				1.119	1/02	1.190	10/02	0.410	2.719	
Real-Time RF Environment Monitor	WX	NAWCAD, Pax River, MD				0.800	1/02	1.200	10/02		2.000	
RangeWare Improvement	WX	AUTEC, Newport, RI				0.800	1/02	1.200	10/02	3.600	5.600	
T-Range Heater	WX	NAWCWD, Point Mugu, CA				1.079	1/02	1.731	10/02	1.069	3.879	
ASVS Integration and Support	WX	NAWCAD, Pax River, MD				0.200	1/02	1.000	10/02		1.200	
Digital Imaging/Video Systems	WX	NAWCAD, Pax River, MD				0.800	1/02	1.000	10/02	1.600	3.400	
Spectrum Monitoring	WX	NAWCWD, Point Mugu, CA				1.500	1/02	3.041	10/02	3.700	8.241	
Tactical Propulsion	WX	NAWCWD, Point Mugu, CA						2.300	10/02	2.000	4.300	
Fleet Air Training	WX	NAWCAD, Pax River, MD		1.982	1/01						1.982	
Acquisition/Install SPS-48E	WX	NAWCAD, Pax River, MD		2.973	1/01						2.973	
SLEP 5 & 6	WX	NAWCWD, Point Mugu, CA						2.000	1/03	3.300	5.300	
P-3 Replacement/Instrumentation	WX	NAWCWD, Point Mugu, CA						2.000	1/03	14.000	16.000	
Universal Radar Moving Target Tran	WX	NAWCAD, Pax River, MD						0.400	1/03	0.700	1.100	
Mechanical Solutions Enhancement	WX	NAWCAD, Pax River, MD						0.665	1/03	1.500	2.165	
Next Generation Video/Film Visualizat	WX	NAWCAD, Pax River, MD						0.500	1/03	1.000	1.500	
High Cycle Fatigue (HCF) Test Capa	WX	NAWCAD, Pax River, MD						1.582	1/03	1.100	2.682	
ARTM	WX	NAWCWD, Point Mugu, CA						1.325	1/03	0.533	1.858	
Digital Video Implementation	WX	NAWCWD, Point Mugu, CA						0.894	1/03	3.900	4.794	
SBIR ASSESSMENT						1.254				1.254	1.254	
Subtotal Product Development			66.989	43.838		41.435		42.453		Continuing	Continuing	
Remarks:												
Total Cost			66.989	43.838		41.435		42.453		Continuing	Continuing	
Remarks: There are no Support cost, T&E cost or Management Support costs.												

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APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA: 6</b>	PROGRAM ELEMENT NUMBER AND NAME 0604759N Major T&E Investment					PROJECT NUMBER AND NAME W9091 T&E Range & Airborne Telemetry																					
COST (\$ in Millions)	Prior Years Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program																
Project Cost				1.685							1.685																
RDT&E Articles Qty																											
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides improved airborne telemetry receiving instrumentation for use onboard NAWCWD current (P-3) and future (C130) range support airframes.</p> <p style="margin-left: 40px;">(U) PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p style="margin-left: 80px;">1. FY 2002 PLANS:</p> <p style="margin-left: 120px;">- (U) (\$1.685) Procure telemetry antenna, receiver, recorder, and processing equipment for use on NAWCWD's airborne telemetry aircraft.</p> <p>(U) B. PROGRAM CHANGE SUMMARY:</p> <table style="margin-left: 40px; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY2001</u></th> <th style="text-align: center;"><u>FY2002</u></th> <th style="text-align: center;"><u>FY2003</u></th> </tr> </thead> <tbody> <tr> <td>(U) FY 2002 President's Budget:</td> <td></td> <td style="text-align: center;">0.000</td> <td></td> </tr> <tr> <td>(U) Adjustments from the FY 2002 President's Budget:</td> <td></td> <td style="text-align: center;">1.685</td> <td></td> </tr> <tr> <td>(U) FY 2003 President's Budget Submit:</td> <td></td> <td style="text-align: center;">1.685</td> <td></td> </tr> </tbody> </table> <p>CHANGE SUMMARY EXPLANATION:</p> <p style="margin-left: 40px;">(U) Funding: The FY 2002 increase is a Congressional Add for Test and Evaluation Range and Airborne Telemetry Systems Modernization.</p> <p style="margin-left: 40px;">(U) Schedule: Not Applicable.</p> <p style="margin-left: 40px;">(U) Technical: Not Applicable.</p> <p>(U) C. OTHER PROGRAM FUNDING SUMMARY:</p> <p style="margin-left: 40px;"><u>Related RDT&amp;E</u></p> <p style="margin-left: 80px;">(U) PE 0605864N: Test and Evaluation (Navy)</p> <p>(U) D. ACQUISITION STRATEGY: Not Applicable.</p> <p>(U) E. SCHEDULE PROFILE: Not Applicable.</p>													<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	(U) FY 2002 President's Budget:		0.000		(U) Adjustments from the FY 2002 President's Budget:		1.685		(U) FY 2003 President's Budget Submit:		1.685	
	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>																								
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(U) FY 2003 President's Budget Submit:		1.685																									

R-1 SHOPPING LIST - Item No. 152

# UNCLASSIFIED

**Exhibit R-2a, RDTE Project Justification**  
(Exhibit R-2a, page 9 of 12)



# UNCLASSIFIED

**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification								DATE: <b>February 2002</b>																			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA: 6</b>	PROGRAM ELEMENT NUMBER AND NAME 0604759N Major T&E Investment					PROJECT NUMBER AND NAME W9092 Flight Operations Safety at Pax River																					
COST (\$ in Millions)	Prior Years Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program																
Project Cost				<b>0.991</b>							<b>0.991</b>																
RDT&E Articles Qty																											
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides expansion of Identification, Friend or Foe (IFF) Multi-lateration Dependent Surveillance (MDS) System for Airspace Surveillance at Pax River. These sensors will increase aircraft position information coverage and increase accuracy of aircraft control.</p> <p>(U) PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p style="margin-left: 40px;">1. FY 2002 PLANS:</p> <p style="margin-left: 80px;">(U) (\$0.991) Procure additional IFF ground receiving stations and integrate/upgrade existing surveillance display systems.</p> <p>(U) B. PROGRAM CHANGE SUMMARY:</p> <table style="margin-left: 40px; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;"><u>FY2001</u></th> <th style="text-align: center;"><u>FY2002</u></th> <th style="text-align: center;"><u>FY2003</u></th> </tr> </thead> <tbody> <tr> <td>(U) FY 2002 President's Budget:</td> <td></td> <td style="text-align: center;">0.000</td> <td></td> </tr> <tr> <td>(U) Adjustments from the FY 2002 President's Budget:</td> <td></td> <td style="text-align: center;">0.991</td> <td></td> </tr> <tr> <td>(U) FY 2003 President's Budget Submit:</td> <td></td> <td style="text-align: center;">0.991</td> <td></td> </tr> </tbody> </table> <p>CHANGE SUMMARY EXPLANATION:</p> <p style="margin-left: 40px;">(U) Funding: The FY 2002 increase is a Congressional Add for Flight Operation Safety at Patuxent River, Maryland.</p> <p style="margin-left: 40px;">(U) Schedule: Not Applicable.</p> <p style="margin-left: 40px;">(U) Technical: Not Applicable.</p> <p>(U) C. OTHER PROGRAM FUNDING SUMMARY: <u>Related RDT&amp;E</u></p> <p style="margin-left: 40px;">(U) PE 0605864N: Test and Evaluation (Navy)</p> <p>(U) D. ACQUISITION STRATEGY: Not Applicable.</p> <p>(U) E. SCHEDULE PROFILE: Not Applicable.</p>													<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	(U) FY 2002 President's Budget:		0.000		(U) Adjustments from the FY 2002 President's Budget:		0.991		(U) FY 2003 President's Budget Submit:		0.991	
	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>																								
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(U) Adjustments from the FY 2002 President's Budget:		0.991																									
(U) FY 2003 President's Budget Submit:		0.991																									

**UNCLASSIFIED**

**CLASSIFICATION:**

Exhibit R-3 Cost Analysis (page 1)										DATE: <b>February 2002</b>		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
<b>RDT&amp;E, N / BA-6</b>			0604759N Major T&E Investment			W9092 Flight Operations Safety at Pax River						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Flight Operations Safety at Pax River	WX	NAWCAD, PAX RIVER				0.991	03/02				0.991	
Subtotal Product Development						0.991					0.991	
Remarks:												
Total Cost						0.991					0.991	
Remarks: There are no Support cost, T&E cost or Management Support costs.												