

CLASSIFICATION:

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
							February 2003	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE			
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-6					0604759N Major T&E Investment			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Total PE Cost	40.674	41.473	43.908	45.737	45.839	45.794	46.613	47.465
W2195 Test and Evaluation Investment	39.686	41.473	43.908	45.737	45.839	45.794	46.613	47.465
W9092 Flight Operations Safety at Pax River	0.988							
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:								
This project improves visibility of Test and Evaluation (T&E) resources across the Services for Major T&E investment funding. These funds correct major deficiencies, improve T&E capabilities, and increase T&E support effectiveness. The T&E Investment project provides support for the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center (NAVUNSEAWARCEN DET AUTECH), 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.								

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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 W2195 T&E Investment			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	39.686	41.473	43.908	45.737	45.839	45.794	46.613	47.465
RDT&E Articles Qty								

### A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project improves visibility of Test and Evaluation (T&E) resources across the Service for Major T&E investment funding. These funds correct major deficiencies, improve T&E capabilities, and increase T&E support effectiveness. The T&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 the Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV), Patuxent River, MD.

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<b>(U) B. Accomplishments/Planned Program</b>				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	8.794	7.697	3.740	5.907
RDT&E Articles Quantity				
<p>-NAVUNSEAWARCEN DET AUTEC. 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. Initiated Range Ware Improvement Project.</p> <p>-NAVUNSEAWARCEN DET AUTEC. Continue Instrumentation Component Replacement (ICR) efforts. Complete Radar Systems Improvement efforts. Complete the Off-Board Advanced Systems Stimulator Project. Continue the Underwater Range Data Communications Project. Continue Range Ware Improvement Project.</p> <p>-NAVUNSEAWARCEN DET AUTEC. Continue Instrumentation Component Replacement (ICR) efforts. Complete the Underwater Range Data Communications Project. Continue Range Ware Improvement Project. Initiate AUTEC Lightning Protection project. Initiate AUTEC Local Area Network modernization project.</p> <p>-NAVUNSEAWARCEN DET AUTEC. Continue Instrumentation Component Replacement (ICR) efforts. Continue Range Ware Improvement Project. Continue AUTEC Lightning Protection project. Complete the AUTEC Local Area Network modernization project. Initiate the AUTEC minefield improvement project.</p>				

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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 W2195 T&E Investment																	
<b>(U) B. Accomplishments/Planned Program</b>																			
<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <th style="width: 30%;"></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 style="text-align: center;">16.723</td> <td style="text-align: center;">19.863</td> <td style="text-align: center;">25.515</td> <td style="text-align: center;">25.492</td> </tr> <tr> <td>RDT&amp;E Articles Quantity</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>- 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 added 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 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. Initiated and completed 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. Initiated replacement of remote van equipment, vintage tracking antennas and allowed multiple participant operations coverage at San Nicolas Island. Modernized frequency monitoring capabilities at Electronic Combat Range, Land Range, and Sea Range. Initiate replacement of obsolete data acquisition and electronic equipment at Skytop facility. Initiated moving target launch capability/instrumentation from C130A to C130F.</p> <p>- NAVAIRWARCENWPNSDIV. Continue to modernize core instrumentation capability. Continue modernization of air traffic control radar processing systems and voice switches to systems that will be compatible with the Federal Aviation Administration (FAA) and 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. Continue replacement of 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 fifth metric radar 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/C-130 Instrumentation Replacement Project. Initiate procurement of Advanced Range Telemetry Program (ARTM) equipment. Initiate upgrade Range's need to gather, distribute, record/store and perform post test data analysis with Digital Video.</p> <p>- NAVAIRWARCENWPNSDIV. Continue to modernize core instrumentation capability. Complete modernization of air traffic control radar with integration of new R-2508 surveillance radar. Complete development of capability to test and evaluate effects and performance of hypersonic penetrators. Complete replacement of 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. Complete replacement of obsolete data acquisition and electronic equipment at Skytop facility. Complete moving target launch capability/instrumentation from C130A to C130F. Complete upgrade of fifth metric radar electronic systems and control consoles and add moving target indicators, automatic calibration and computer controls of chart recorders at San Nicolas Island. Continue P-3/C-130 Instrumentation Replacement Project. Complete procurement and integration of Advanced Range Telemetry Program (ARTM) equipment. Continue upgrade Land, Sea, and ECR Range's video capabilities. Initiate procurement and integration of new voice system for the Sea Range. Initiate upgrade of target control pedestals. Initiate modernization of Land range communication infrastructure.</p> <p>-NAVAIRWARCENWPNSDIV. Continue to modernize core instrumentation capability. Complete modernization of frequency monitoring capabilities at Electronic Combat Range, Land Range, and Sea Range. Initiate upgrade of sixth metric radar electronic systems and control consoles and add moving target indicators, automatic calibration and computer controls of chart recorders. Continue with P-3/C-130 Instrumentation Replacement Project. Complete upgrade of Land, Sea, and ECR Range's video capabilities. Continue procurement and integration of new voice system for the Sea Range. Continue upgrade of target control pedestals. Continue modernization of Land range communication infrastructure. Initiate replacement of VHF/UHF/HF and mobile radios. Initiate modernization of warhead/explosives instrumentation. Initiate modernization of ECR radars and threat system interfaces. Initiate non destructive weapon evaluation (x-ray capabilities).</p>						FY 02	FY 03	FY 04	FY 05	Accomplishments/Effort/Subtotal Cost	16.723	19.863	25.515	25.492	RDT&E Articles Quantity				
	FY 02	FY 03	FY 04	FY 05															
Accomplishments/Effort/Subtotal Cost	16.723	19.863	25.515	25.492															
RDT&E Articles Quantity																			

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<b>(U) B. Accomplishments/Planned Program</b>				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	12.093	12.513	14.653	14.338
RDT&E Articles Quantity				
<p>- 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 completed 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 supported 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.</p> <p>- NAVAIRWARCENACDIV. Continue to modernize core instrumentation capability. Continue 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. Complete replacement of obsolete data collection system with new collection and distribution system. Complete modernization of the Range Control Center display systems. Complete 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. Continue integration 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. Initiate upgrade of 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.</p> <p>- NAVAIRWARCENACDIV. Continue to modernize core instrumentation capability. Complete replacement of aging Telemetry acquisition and processing equipment. Continue integration of analog National Television Systems Committee (NTSC) video with digital systems based on industry and Advanced Television Systems Committee formats. Complete upgrade of universal radar moving target transponder to support all Navy radar systems. Continue upgrade of mechanical/machining capabilities. Continue a development of a High Cycle Fatigue (HCF) Test Capability. Continue upgrade for semi-automatic and video reader capabilities under the Next Generation Video Project. Initiate procurement and integration of communication and security equipment required to support operations within the Advanced Systems Integration Laboratory (ASIL) MILCON. Initiate modernization and upgrades to the existing radar cross section pedestals.</p> <p>-NAVAIRWARCENACDIV. Continue to modernize core instrumentation capability. Complete integration of analog National Television Systems Committee (NTSC) video with digital systems based on industry and Advanced Television Systems Committee formats. Complete upgrade of mechanical/machining capabilities. Complete development of a High Cycle Fatigue (HCF) Test Capability. Complete upgrade for semi-automatic and video reader capabilities under the Next Generation Video Project. Complete procurement and integration of communication and security equipment required to support operations within the ASIL MILCON. Continue modernization and upgrades to the existing radar cross section pedestals. Initiate procurement and integration of a reconfigurable cockpit simulator. Initiate replacement of range's voice communication system. Initiate upgrades to test instrumentation calibration equipment. Initiate rotor spin facility instrumentation improvements. Initiate procurement to improve measurements of aircraft coupling of electromagnetic radiation. Initiate modernization of Air Combat Environment Test &amp; Evaluation Facility (ACETEF's) visual display systems.</p>				

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<b>(U) B. Accomplishments/Planned Program</b>				
	FY 02	FY 03	FY 04	FY 05
Accomplishments/Effort/Subtotal Cost	2.100	1.400		
RDT&E Articles Quantity				
<p>-Joint Modeling and Simulation System (JMASS). 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.</p>				

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**(U) C. PROGRAM CHANGE SUMMARY:**

	FY 2002	FY 2003	FY 2004	FY 2005
(U) Funding:				
Previous President's Budget:	41.435	42.453	45.777	47.969
Current BES/President's Budget	39.686	41.473	43.908	45.737
Total Adjustments	-1.749	-0.980	-1.869	-2.232
Summary of Adjustments				
Congressional program reductions				
Congressional undistributed reductions		-0.248		
Congressional rescissions	-0.098			
SBIR/STTR Transfer	-0.042			
Economic Assumptions	-0.136	-0.732	-1.385	-1.317
Misc. Adjustments				
Reprogrammings	-1.473			
SPONSOR/FMB/NAVAIR Adjustments				
Other Navy/OSD Adjustments			-0.484	-0.915
Congressional increases				
Subtotal	-1.749	-0.980	-1.869	-2.232

(U) Schedule:

Not Applicable.

  
  

(U) Technical:

Not Applicable.

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**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
<p><u>Related RDT&amp;E:</u> List PE numbers and names. It is not necessary to include related RDT&amp;E funding profile unless there is a funding dependency between the RDT&amp;E programs.</p> <p>(U) PE 0605759F: Test and Evaluation (Air Force)</p> <p>(U) PE 0605864N: Test and Evaluation (Navy)</p>										

  

**E. ACQUISITION STRATEGY:**

Not Applicable.

  
  
  

**F. MAJOR PERFORMERS:**

Not Applicable.

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