### **CLASSIFICATION:**

# **UNCLASSIFIED**

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
-							Februa	ry 2005
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMEN	ICLATURE		
RESEARCH DEVELOPMENT TEST & EVALUATI	ON, NAVY /	BA-6			0604759N Major	T&E Investment		
COST (\$ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total PE Cost	40.385	42.573	39.682	39.836	41.968	44.086	45.377	46.694
2195 T&E Investment	40.385	40.518	39.682	39.836	41.968	44.086	45.377	46.694
9605 Adapting Fleet Support and Readiness Training	0.000	2.055	0.000	0.000	0.000	0.000	0.000	0.000

# 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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Exhibit R-2, RDTEN Budget Item Justification

### CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:		
							February 2005		
APPROPRIATION/BUDGET ACTIVITY									
RDT&E, N / BA-6	0604759N Major T								
COST (\$ in Millions)	COST (\$ in Millions)						FY 2010	FY2011	
Project Cost	oject Cost 40.385 40.518 39.682 39.836 41.968 44.086					45.377	46.694		
RDT&E Articles Qty Not Applicable									

# 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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### CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:	
				February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND N	IAME	
RDT&E, N / BA-6	0604759N Major T&E Investment	2195 T&E Investment		

# (U) B. Accomplishments/Planned Program

	FY 04	FY 05	FY 06	FY07
Accomplishments/Effort/Subtotal Cost	4.489	6.650	4.610	3.050
RDT&E Articles Quantity				

FY04 - NAVUNSEAWARCEN DET AUTEC. Continued Instrumentation Component Replacement (ICR) efforts. Completed the Underwater Range Data Communications Project. Continued Range Ware Improvement Project. Continued the Off-Board Advanced Systems Stimulator Project. Initiated AUTEC Lightning Protection project.

FY05 - NAVUNSEAWARCEN DET AUTEC. Continue Instrumentation Component Replacement (ICR) efforts. Continue Range Ware Improvement Project. Continue AUTEC Lightning Protection project. Complete Off-Board Advanced Systems Stimulator project.

FY06 - NAVUNSEAWARCEN DET AUTEC. Continue Instrumentation Component Replacement (ICR) efforts. Complete Range Ware Improvement Project. Complete AUTEC Lightning Protection project. Initiate AUTEC Local Area Network project. Initiate Weapons Range Repair project.

FY07 - NAVUNSEAWARCEN DET AUTEC. Continue Instrumentation Component Replacement (ICR) efforts. Complete AUTEC Local Area Network project. Complete Weapons Range Repair project. Initiate Signal Processor Replacement project.

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#### CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification				DATE:	
				F	ebruary 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMI	BER AND NAME	PROJECT NUMBER AND N	AME	
RDT&E, N / BA-6	0604759N Major T&E Invest	tment			
(U) B. Accomplishments/Planned Program					
	FY 04	FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost	18.532	15.916	19.179	25.228	
RDT&E Articles Quantity				<u> </u>	

FY04 - NAVAIRWARCENWPNSDIV. Continued to modernize core instrumentation capability. Completed modernization of air traffic control radar with integration of new R-2508 surveillance radar. Completed development of capability to test and evaluate effects and performance of hypersonic penetrators. Completed replacement of remote van equipment, vintage tracking antennas and allowed multiple participant operations coverage at San Nicolas Island. Continued to modernize frequency monitoring capabilities at Electronic Combat Range, Land Range, and Sea Range. Completed replacement of obsolete data acquisition and electronic equipment at Skytop facility. Completed moving target launch capability/instrumentation from C130A to C130F. Completed upgrade of fifth metric radar electronic systems and control consoles and added moving target indicators, automatic calibration and computer controls of chart recorders at San Nicolas Island. Continued P-3/C-130 Instrumentation Replacement Project. Completed procurement and integration of Advanced Range Telemetry Program (ARTM) equipment. Continued upgrade Land, Sea, and ECR Range's video capabilities. Initiated procurement and integration of new voice system for the Sea Range. Initiated upgrade of target control pedestals. Initiated modernization of Land range communication infrastructure. Total includes a \$4.159 below threshold reprogramming for the USS Dolphin.

FY05 - 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. Complete procurement and integration of new voice system for the Sea Range. Continue upgrade of target control pedestals. Complete modernization of Land range communication infrastructure. Initiate Service Life Extension Program of fifth FPS-16 radar system. Initiate replacement of VHF, UHF, and HF radio transmitters at the ECR, Land, and Sea Ranges. Initiate the replacement of the mobile radio communications system in compliance with current FAA mandates.

FY06 - NAVAIRWARCENWPNSDIV. Continue to modernize core instrumentation capability. Continue 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 target control pedestals. Complete Service Life Extension Program of fifth FPS-16 radar system. Complete replacement of VHF, UHF, and HF radio transmitters at the ECR, Land, and Sea Ranges. Complete the replacement of the mobile radio communications system in compliance with current FAA mandates. Initiate Range Timing & Data Re-Engineering.

FY07 - NAVAIRWARCENWPNDIV. Continue to modernize core instrumentation capability. Continue with P-3/C-130 Instrumentation Replacement Project. Continue upgrade of sixth metric radar electronic systems and control consoles and add moving target indicators, automatic calibration and computer controls of chart recorders. Continue Range Timing & Data Re-Engineering. Initiate and complete Enhanced Flight Termination System (EFTS). Initiate Telemetry Antenna Systems Upgrades (LR & SR). Initiate Post Test Data Warehouse. Initiate Electronic Combat Range (ECR) Radar Upgrade. Initiate and complete ECR Telemetry Modernization. Initiate Digital Video Implementation.

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### CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification	tion			DATE:				
					February 2005			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUM	IAME						
RDT&E, N / BA-6	T&E, N / BA-6 0604759N Major T&E Investment 2195 T&E Investment							
(U) B. Accomplishments/Planned Program								
	FY 04	FY 05	FY 06	FY 07				
Accomplishments/Effort/Subtotal Cost	17.364	17.952	15.893	11.558				
RDT&E Articles Quantity		<u> </u>						

FY04 - NAVAIRWARCENACDIV. Continued to modernize core instrumentation capability. Completed replacement of aging Telemetry acquisition and processing equipment. Continued integration of analog National Television Systems Committee (NTSC) video with digital systems based on industry and Advanced Television Systems Committee formats. Continued Advanced Radar Environment Stimulator (ARES). Continued upgrade of mechanical/machining capabilities. Continued a development of a High Cycle Fatigue (HCF) Test. Capability. Continued upgrade for semi-automatic and video reader capabilities under the Next Generation Video Project. Initiated procurement and integration of communication and security equipment required to support operations within the Advanced Systems Integration Laboratory (ASIL) MILCON. Initiated modernization and upgrades to the existing radar cross section pedestals.

FY05 - 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. Continue Advanced Radar Environment Stimulator (ARES). 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 of fiber channel bus monitoring and stimulation capability. Initiate encryption/modernization of down range video capability. Initiate and complete voice communications system for Atlantic Test Range.

FY06 - NAVAIRWARCENACDIV. Continue to modernize core instrumentation capability. Complete Advanced Radar Environment Stimulator (ARES). Continue modernization and upgrades to the existing radar cross section pedestals. Complete procurement of fiber channel bus monitoring and stimulation capability. Complete encryption/modernization of down range video capability. Complete voice communications system for Land Range. Initiate Telemetry Acquisition Modernization. Initiate Comstron Modernization. Initiated Modern Tempest Test System. Initiate Solid State Recorder.

FY07 - NAVAIRWARCENACDIV. Continue to modernize core instrumentation capability. Complete modernization and upgrades to the existing radar cross section pedestals. Continue Telemetry Acquisition Modernization. Continue Comstron Modernization. Complete Modern Tempest Test System. Complete Solid State Recorder. Initiate Communications Facility Radio Systems. Initiate Helicopter Transmission Test Facility (HTTF) Installation Envelop Expansion. Initiate Pax River Infra-red Signature Measurement (PRISM) Improvements. Initiate Electromagnetic Environmental Effects (E3) Test Equipment.

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# **CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification					DATE:			
,						February 2005		
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER A	ND NAME		PROJECT NUMBER AND	NAME			
RDT&E, N / BA-6	0604759N Major T&E Investment			2195 T&E Investment				
(U) C. PROGRAM CHANGE SUMMARY:								
(U) Funding:	FY 04	FY 05	FY 06	FY 07				
Previous President's Budget:	44.178	39.787	39.457	39.021				
Current BES/President's Budget	40.385	40.518	39.682	39.836				
Total Adjustments	-3.793	0.731	0.225	0.815				
Summary of Adjustments								
Congressional undistributed reduction	S	-0.360						
Program Adjustments		-0.009	-0.054	-0.031				
Economic Assumptions	-0.041		0.279	0.846				
Reprogrammings	-3.752							
Congressional increases		1.100						
Subtotal	-3.793	0.731	0.225	0.815				
(U) Schedule:								
Not Applicable.								
407								
(U) Technical:								
Not Applicable.								
		NINO LIOT. II						

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# CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:							
	_								F	ebruary 2005
APPROPRIATION/BUDGET ACTIVITY			BER AND NAM	IE	PROJECT NU		AME			
RDT&E, N / BA-6	0604759N Ma	ajor T&E Invest	ment		2195 T&E Inve	estment				
D. OTHER PROGRAM FUNDING SUMMARY:									То	Total
Line Item No. & Name	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	<u>Complete</u>	Cost
Related RDT&E: (U) PE 0605759F: Test and Evaluation (Air Force) (U) PE 0605864N: Test and Evaluation (Navy)										
E. ACQUISITION STRATEGY:  Not Applicable.										

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### CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE:		
							February 2005		
APPROPRIATION/BUDGET ACTIVITY									
RDT&E, N / BA-6	0604759N Major T	0604759N Major T&E Investment 9605 Adapting Fleet Support and Readines							
COST (\$ in Millions)	COST (\$ in Millions)					FY 2009	FY 2010	FY2011	
Project Cost	0.000	2.055	0.000	0.000	0.000	0.000	0.000	0.000	
RDT&E Articles Qty Not Applicable									

# A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project augments and improves existing Test and Evaluation instrumentation located at Naval Air Warfare Center Aircraft Division, Patuxent River, MD in order to better support fleet training requirements. Project will upgrade capabilities at the air ops, ship's ground station, and atlantic test range facilities.

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# **CLASSIFICATION:**

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PROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND	NAME IP	ROJECT NUMBER AND N		iry 2005
T&E, N / BA-6	0604759N Major T&E Investment		605 Adapting Fleet Suppor		
	occinion raz integrina		200 / taapting / root cappor	realis readilises framing	
B. Accomplishments/Planned Program					
	FY 04	FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost		2.055			
RDT&E Articles Quantity					
		:	instinution links and since		
roject will acquire and integrate a manpad si	imulator, blue force target replicas, portable emi	itter control, commun	ication links and airspace	management improvements.	
	- FV 04	EV 05		F1/ 07	
A   -   -   -   -   -   -   -	FY 04	FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost					
RDT&E Articles Quantity					
		_			
	FY 04	FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost	FY 04	FY 05	FY 06	FY 07	
	FY 04	FY 05	FY 06	FY 07	
Accomplishments/Effort/Subtotal Cost RDT&E Articles Quantity	FY 04	FY 05	FY 06	FY 07	
	FY 04	FY 05	FY 06	FY 07	
	FY 04	FY 05	FY 06	FY 07	
	FY 04	FY 05	FY 06	FY 07	
	FY 04	FY 05	FY 06	FY 07	
	FY 04	FY 05	FY 06	FY 07	
	FY 04	FY 05	FY 06	FY 07	

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# **CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification						DATE:	
							February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMEN	T NUMBER AND	O NAME	F	ROJECT NUMBER AN	D NAME	
RDT&E, N / BA-6	0604759N Major T&I	E Investment		g	605 Adapting Fleet Sup		
(U) C. PROGRAM CHANGE SUMMARY:							
(U) Funding:		FY 04	FY 05	FY 06	FY 07		
Previous President's Budget:		0.000	0.000	0.000	0.000		
Current BES/President's Budget		0.000	2.055	0.000	0.000		
Total Adjustments	_	0.000	2.055	0.000	0.000		
Summary of Adjustments							
Congressional undistributed reductions	3		-0.044				
Program Adjustments			-0.001				
Congressional increases			2.100				
Subtotal		0.000	2.055	0.000	0.000		
(U) Schedule:							
Not Applicable.							
40-11							
(U) Technical:							
Not Applicable.							
		D 4 01 10 DD14					

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# CLASSIFICATION:

EXHIBIT R-2a, RDT&E Pro	KHIBIT R-2a, RDT&E Project Justification									_	
APPROPRIATION/BUDGET AC	TIVITY	PROGRAM EL	EMENT NUMI	BER AND NAM	ΛΕ	PROJECT NU	MBER AND N	AME		F	ebruary 2005
RDT&E, N /	BA-6	0604759N Ma	jor T&E Invest	ment		9605 Adapting	Fleet Support	and Readiness	s Training		
D. OTHER PROGRAM F	UNDING SUMMARY:									To	Total
Line Item No. & Name		FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	<u>Complete</u>	Cost
	est and Evaluation (Air Force) est and Evaluation (Navy)										
E. ACQUISITION STRATEO	5Y:										
Not Applicable.											

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