

DEPARTMENT OF THE NAVY  
FISCAL YEAR (FY) 2009  
BUDGET ESTIMATES



JUSTIFICATION OF ESTIMATES  
FEBRUARY 2008

RESEARCH, DEVELOPMENT, TEST &  
EVALUATION, NAVY  
BUDGET ACTIVITY 6



## Department of Defense Appropriations Act, 2009

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### **Research, Development, Test and Evaluation, Navy**

For expenses necessary for basic and applied scientific research, development, test and evaluation, including maintenance, rehabilitation, lease, and operation of facilities and equipment, \$19,337,238,000, to remain available for obligation until September 30, 2010: *Provided*, That funds appropriated in this paragraph which are available for the V-22 may be used to meet unique operational requirements of the Special Operations Forces: *Provided further*, That funds appropriated in this paragraph shall be available for the Cobra Judy program.

**"In accordance with the President's Management Agenda, Budget and Performance Integration initiative, this program has been assessed using the Program Assessment Rating Tool (PART). Remarks regarding program performance and plans for performance improvement can be located at the Expectmore.gov website."**

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DEPARTMENT OF DEFENSE  
FY 2009 RDT&E PROGRAM

22 JAN 2008

SUMMARY  
(\$ IN THOUSANDS)

APPROPRIATION -----	FY 2007 -----	FY 2008 -----	FY 2009 -----
Research, Development, Test & Eval, Navy	1,182,081	1,075,823	954,672
Total Research, Development, Test & Evaluation	1,182,081	1,075,823	954,672

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DEPARTMENT OF DEFENSE  
FY 2009 RDT&E PROGRAM

22 JAN 2008

SUMMARY  
(\$ IN THOUSANDS)

Summary Recap of Budget Activities -----	FY 2007 -----	FY 2008 -----	FY 2009 -----
RDT&E Management Support	1,182,081	1,075,823	954,672
Total Research, Development, Test & Evaluation	1,182,081	1,075,823	954,672
Summary Recap of FYDP Programs -----			
Intelligence and Communications	1,000	1,498	1,998
Research and Development	1,172,218	1,069,355	947,526
Training Medical and Other	5,049	4,970	5,148
Administration and Associated Activities	3,814		
Total Research, Development, Test & Evaluation	1,182,081	1,075,823	954,672

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DEPARTMENT OF THE NAVY  
FY 2009 RDT&E PROGRAM

22 JAN 2008

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(\$ IN THOUSANDS)

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DEPARTMENT OF THE NAVY  
FY 2009 RDT&E PROGRAM

EXHIBIT R-1

APPROPRIATION: 1319N Research, Development, Test &amp; Eval, Navy

Date: 22 JAN 2008

Line No --	Program Element Number -----	Item ----	Act ---	Thousands of Dollars			S E C -
				FY 2007 -----	FY 2008 -----	FY 2009 -----	
135	0604256N	Threat Simulator Development	06	23,307	23,505	24,959	U
136	0604258N	Target Systems Development	06	38,653	31,684	80,337	U
137	0604759N	Major T&E Investment	06	75,709	40,885	42,391	U
138	0605152N	Studies and Analysis Support - Navy	06	10,296	7,338	8,084	U
139	0605154N	Center for Naval Analyses	06	47,583	47,422	49,745	U
140	0605155N	Fleet Tactical Development	06	2,526			U
141	0605502N	Small Business Innovative Research	06	360,006	201,450		U
142	0605804N	Technical Information Services	06	25,728	21,059	713	U
143	0605853N	Management, Technical & International Support	06	43,752	48,441	51,568	U
144	0605856N	Strategic Technical Support	06	3,244	3,382	3,597	U
145	0605861N	RDT&E Science and Technology Management	06	70,396	67,747	69,913	U
146	0605862N	RDT&E Instrumentation Modernization	06	1,206	1,393		U
147	0605863N	RDT&E Ship and Aircraft Support	06	74,562	180,589	195,017	U
148	0605864N	Test and Evaluation Support	06	327,886	329,026	356,254	U
149	0605865N	Operational Test and Evaluation Capability	06	11,761	12,094	12,195	U
150	0605866N	Navy Space and Electronic Warfare (SEW) Support	06	4,051	2,386	2,708	U
151	0605867N	SEW Surveillance/Reconnaissance Support	06	18,098	23,915	25,358	U
152	0605873M	Marine Corps Program Wide Support	06	33,454	27,039	24,687	U
153	0305885N	Tactical Cryptologic Activities	06	1,000	1,498	1,998	U
154	0804758N	Service Support to JFCOM, JNTC	06	5,049	4,970	5,148	U

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DEPARTMENT OF THE NAVY  
 FY 2009 RDT&E PROGRAM

EXHIBIT R-1

APPROPRIATION: 1319N Research, Development, Test & Eval, Navy

Date: 22 JAN 2008

Line No --	Program Element Number -----	Item ----	Act ---	Thousands of Dollars			S E C -
				FY 2007 -----	FY 2008 -----	FY 2009 -----	
155	0909999N	Financing for Cancelled Account Adjustments	06	3,814			U
		RDT&E Management Support		----- 1,182,081	----- 1,075,823	----- 954,672	
		Total Research, Development, Test & Eval, Navy		----- 1,182,081	----- 1,075,823	----- 954,672	

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0604256N  
PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

COST: (Dollars in Thousands)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
<b>Total PE</b>	23,307	23,505	24,959	25,831	26,358	26,858	27,363
0602 ELECTRONIC WARFARE ENVIRONMENT SIMULATION (ECHO)	11,427	11,476	12,239	12,645	12,884	13,115	13,352
0672 EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSTEMS (ENEWS)	11,880	12,029	12,720	13,186	13,474	13,743	14,011

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This is a continuing program that consolidates the design, fabrication and integration of Naval Electronic Warfare (EW) threat simulators for increased managerial emphasis and coordination. These simulator development efforts provide realistic Developmental and Operational Test and Evaluation (DT&E/OT&E) environments to test Tri-service EW systems and defensive tactics. These projects develop former Soviet and Free-World Anti-Air and Anti-Ship weapon system simulators in accordance with the Services' requirements.

The 0602 Project, Electronic Warfare Environment Simulation (ECHO), directly supports the Test and Evaluation resource requirements for all Naval Air EW development programs to include multi-spectral situational awareness and countermeasures. Programs in development and future programs include: Advanced Anti-Radiation Guided Missile (AARGM), ALR-67 (v) 2 and (v) 3, Integrated Defensive Electronic Countermeasures (IDECM) Suite ALQ-214, AAR-47 (v) 2 and the AAR-47 (v) 3, AVR-2, Advanced 6" Expendable, Advanced Strategic Tactical Expendable (ASTE), ALQ-144A, Strike and Assault Directed Infrared Countermeasures (DIRCM), Joint Strike Fighter, EA-18G, EA-6B Improved Capability Program (ICAP III), LR700 and the Low Band Transmitter.

The 0672 Project, Effectiveness of Navy EW Systems (ENEWS), is a Department of Navy (DON) unique project that supports Test and Evaluation (T&E) of Ships EW efforts. ENEWS provides T&E for surface and subsurface shipboard systems and tactics in digitally modeled battle scenarios at the component, fully integrated single ship, multi-ship and full-up multi-platform battle group levels. ENEWS also provides a secure anechoic closed

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FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
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DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0604256N  
PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

loop T&E facility specifically designed to test shipboard systems at the stand alone subsystem or fully integrated systems level. The last and largest portion of this project addresses the flyable Infrared and Radio Frequency simulators flown on specially configured NP-3D aircraft to provide at-sea open air T&E for systems and tactics. All ENEWS assets are developed, operated and maintained by the Naval Research Laboratory, Washington, DC.

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FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0604256N  
PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

## B. PROGRAM CHANGE SUMMARY:

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY 2008/FY 2009 President's Budget Submission	23,578	23,924	25,139
Congressional Undistributed Reductions/Rescissions	0	-152	0
Non-Pay Inflation Adjustments	0	0	-65
Rate Adjustments	0	0	-115
SBIR Assessment	-271	-267	0
FY 2009 President's Budget Submission	23,307	23,505	24,959

## PROGRAM CHANGE SUMMARY EXPLANATION:

Technical: Not applicable.

Schedule: Not applicable.

## C. OTHER PROGRAM FUNDING SUMMARY:

Not applicable.

## D. ACQUISITION STRATEGY:

Not applicable.

## E. PERFORMANCE METRICS:

Performance metrics are discussed within each project (R2a).

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FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0602

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: ELECTRONIC WARFARE ENVIRONMENT SIMULATION (ECHO)

COST: (Dollars in Thousands)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
0602 ELECTRONIC WARFARE ENVIRONMENT SIMULATION (ECHO)	11,427	11,476	12,239	12,645	12,884	13,115	13,352

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** The objective of this project is development of necessary simulation facilities and approaches to allow determination of the effectiveness of Electronic Warfare (EW) in real world engagement situations and to support the introduction of modern, effective systems into Naval Aviation. The heavy use of test resources by all Services demonstrates the importance of these assets. The Navy has been very successful in executing all of its major programs, and to date has had no major technical problems.

The Electronic Warfare Environment Simulation (ECHO) project is unique in that it is the only program within the Department of Defense (DoD) which develops and provides Naval anti-air warfare threat assets for Testing and Evaluation (T&E), and is a critical part of the Office of the Secretary of Defense (OSD) Test Resource Master Plan. The OSD Master Plan employs many ECHO project resources for planning, analysis, testing, and verification of airborne EW equipment.

This project directly supports the Test and Evaluation resource requirements for all Naval Air EW development programs, to include multi-spectral situational awareness and countermeasures. Programs in development and future programs include: Advanced Anti-Radiation Guided Missile (AARGM), ALR-67 (v) 2 and (v) 3, Integrated Defensive Electronic Countermeasures (IDECM) Suite ALQ-214, AAR-47 (v) 2 and the AAR-47 (v) 3, AVR-2, Advanced 6" Expendable, Advanced Strategic Tactical Expendable (ASTE), ALQ-144A, Strike and Assault Directed Infrared Countermeasures (DIRCM), Joint Strike Fighter, EA-18G, EA-6B Improved Capability Program (ICAP III), LR700 and the Low Band Transmitter (LBT).

This project provides for the development of an Integrated Air Defense T&E capability to be fielded at each of the three sites comprising the Navy's Tri-Center complex: Naval Air Warfare Center Weapons Division, China Lake and Point Mugu in CA, and Naval Air Warfare Center Aircraft Division, Patuxent River, MD.

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FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0602

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: ELECTRONIC WARFARE ENVIRONMENT SIMULATION (ECHO)

## B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2007	FY 2008	FY 2009
<b>ELECTRO-OPTICAL/INFRA-RED (EO/IR) THREAT CAPABILITIES</b>	5,083	2,675	2,395

FY 2007 - FY 2009: Provide the test community with the modern threat systems necessary for T&E of airborne EO/IR passive alert systems and airborne EO/IR active response systems. Develop many versus many (MvM) InfraRed Countermeasure Assessment System which provides spectral, power, and temporal systems to test and evaluate Missile Warning Systems (MWS) and measure the end-game effectiveness of IR expendables and DIRCM systems by simulating high speed IR missile engagements against airborne targets. Combine the capability of the existing IR seeker vans to enable testing of up to 12 seekers simultaneously to expedite data collection against tier 1 IR Surface to Air Missiles (SAMs). Upgrade the IR Sensor Stimulator (IRSS) with the capability for IR plume simulators to react to threat missile seeker guidance commands; to enable the plume stimulator to receive immediate feedback from the instrumentation observing the countermeasure's effectiveness; and to relay that "response" to the controlling software that generates the plume signature.

Funding decrease from FY 2007 to FY 2008 and FY 2009 is due to the fact that funds get aligned to different efforts based on the priority of the test shortfall. Funding for the EO/IR effort decreases due to the completion of the one versus many (1vM) and MvM portions of the InfraRed Countermeasure Assessment System (ICAS) in FY 2007 and FY 2008 respectively. These systems will support testing for Assault DIRCM and other Navy programs.

	FY 2007	FY 2008	FY 2009
<b>RADIO FREQUENCY (RF) THREAT CAPABILITIES</b>	4,242	6,818	7,747

FY 2007 - FY 2009: Provide the test community with the modern threat systems necessary for T&E of airborne RF alert, Situation Awareness, targeting systems and airborne RF response systems. Upgrade the existing open air range and laboratory threat simulators to provide a new generation, high fidelity double digit threat I-34 (Advanced Threat Simulator). Provide advanced modulation and millimeter wave capability to the Advanced Multiple Environment Simulators. Procurement and integration of an advanced threat system through Foreign Materials Acquisition channels. Continue intel updates to missile, radar, and gun simulations. Upgrade the I-32 Open Air Antenna with side lobe canceling, and replace the aging transmitter; provide the I-32 simulator at the Electronic Combat Range with a second frequency for multiple-missile launch, side lobe canceling, and

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FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

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PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0602

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: ELECTRONIC WARFARE ENVIRONMENT SIMULATION (ECHO)

improved Electronic Counter-Counter Measure (ECCM) capabilities. Develop long range threat systems to simulate double digit Surface to Air Missiles, using recent intelligence and available exploitation data gathered by the Missile and Space Intelligence Center (MSIC).

Funding increases from FY 2007 to FY 2008 and FY 2009 are due to the fact that funds get aligned to different efforts based on the priority of the test shortfall. Funding for the RF effort increases from FY 2007 to FY 2008 and FY 2009 due to the need to address double digit threat systems (I-32, I-34), and to start development of another high priority long range threat system. These systems are required to test the Joint Strike Fighter, EA-18G, and other Navy platforms.

	FY 2007	FY 2008	FY 2009
<b>REQUIREMENTS AND VALIDATION</b>	2,102	1,983	2,097

FY 2007 - FY 2009: Validate and track intel updates of the threat systems necessary for the operation and continuous improvement of Navy laboratories and ranges which provide engineering support, testing and analysis to the developers, integrators, testers and users of systems and technologies that counter or penetrate air defenses. Provide program management and systems engineering support for the development of simulators and the acquisition of foreign material to accurately reflect current and future threat scenarios.

**C. OTHER PROGRAM FUNDING SUMMARY - NAVY RELATED RDT&E::**

Not applicable.

**OTHER PROGRAM FUNDING SUMMARY - NON-NAVY RELATED RDT&E::**

Not applicable.

**D. ACQUISITION STRATEGY:**

Not applicable.

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FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06  
 PROGRAM ELEMENT: 0604256N      PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT  
 PROJECT NUMBER: 0672      PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSTEMS (ENEWS)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
0672 EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSTEMS (ENEWS)	11,880	12,029	12,720	13,186	13,474	13,743	14,011

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** The objective of the Effectiveness of Navy Electronic Warfare (EW) Systems (ENEWS) Project is the development and application of necessary simulation assets to determine the effectiveness of EW for navy ships in simulated real-world engagement situations. The project primarily supports the introduction of modern, effective shipboard and offboard EW systems, and tactics for the Surface Navy. The heavy use of ENEWS resources by Naval Sea Systems Command, Operational Test and Evaluation (OT&E) Force, Special Operations, and other EW Research, Development, Test and Evaluation (T&E) agencies speaks to the overall importance of this project. The project provides support for EW system design Engineering Test (ET), Development Test (DT), Operational Test (OT), and the development of utilization tactics. Its quick reaction capabilities have had great impact on crisis situations such as the Lebanon and Libyan crises, Iran Harpoon threat, Persian Gulf crisis, and Operation Desert Shield/Storm. Simulation Display is another ENEWS modeling tool that was developed to support T&E. The display has been adopted by most Department of Defense (DoD) T&E and training ranges to provide visualization of T&E and training scenarios. The primary threat to surface ships is Anti-Ship Capable Missile systems. The ENEWS Project is unique in that it is the only project within DoD dedicated to developing and providing realistic Anti-Ship Capable Missile assets to test and evaluate the effectiveness of shipboard EW systems and tactics against these type threats. The ENEWS Project is a critical part of the Office of the Secretary of Defense Test Resource Master Plan. This plan employs many of the ENEWS assets for planning, analysis, testing, and verification of shipboard and offboard EW systems techniques and tactics. As part of its normal activities, ENEWS provides Development Test and Evaluation (DT&E), OT&E, and Follow-on Operational Test and Evaluation (FOT&E) support to the surface Navy for all ship classes. DT, OT and FOT&E support includes AN/SLQ-32 Surface Electronic Warfare Improvement Program (SEWIP), R17.OX NULKA, Rapid Anti-ship Integrated Defense System, all MK245 Giant tests, advanced InfraRed (IR) decoys, decoy placement, ship IR signature and radar cross section measurement of DDG-51, LPD-17, DD-21 and PC class ships, High Power Microwave program, and other ship self-defense initiatives, including T&E of Future Naval Capability process. In addition, ENEWS assets are regularly employed to test the effectiveness of North Atlantic Treaty Organization ships' EW systems in joint allied exercises.



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FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0672

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSTEMS (ENEWS)

## B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2007	FY 2008	FY 2009
<b>SIMULATOR HARDWARE UPGRADES</b>	77	236	248

Provides simulator upgrades to ENEWS flyable and shore based IR and RF simulators.

The increase between FY 2007 and FY 2008 is due to an increased tempo of operational testing.

### FY 2007 Accomplishments:

- Completed intelligence upgrades to MIKE 3 and VICTOR 1 Standard Instrumentation Pods (SIPs).
- Initiated intelligence upgrades to FOXTROT 3 and MIKE 4 SIPs.

### FY 2008 Plans:

- Complete intelligence upgrades to FOXTROT 3 and MIKE 4 SIPs.
- Initiate intelligence upgrades to FOXTROT 2 and VICTOR 2 SIPs.

### FY 2009 Plans:

- Complete intelligence upgrades to FOXTROT 2 and VICTOR 2 SIPs.

	FY 2007	FY 2008	FY 2009
<b>SIMULATOR SOFTWARE UPGRADES</b>	68	128	99

Provides software upgrades to existing ENEWS flyable and shore based simulations required due to either hardware upgrades or new intelligence information. FY 2007 focus is on upgrades to existing simulators.

The increase between FY 2007 and FY 2008 is due to an increased tempo of operational testing.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0672

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSTEMS (ENEWS)

## **FY 2007 Accomplishments:**

- Completed software intelligence upgrades to MIKE 3 and VICTOR 1 SIPs.
- Initiated software intelligence upgrades to FOXTROT 3 and MIKE 4 SIPs.

## **FY 2008 Plans:**

- Complete software intelligence upgrades to FOXTROT 3 and MIKE 4 SIPs.
- Initiate software intelligence upgrades to FOXTROT 2 and VICTOR 2 SIPs.

## **FY 2009 Plans:**

- Complete software intelligence upgrades to FOXTROT 2 and VICTOR 2 SIPs.

	FY 2007	FY 2008	FY 2009
<b>SIMULATOR CHARACTERIZATION</b>	29	34	40

Provides characterization of IR and RF simulators as part of the periodic checks on simulator performance and collects performance data for comparison with previously recorded data.

Operational requirements demand that these simulators be available to support testing events. Simulator baselines must be established, updated and documented in order to ensure the simulators are operating in accordance with their design specifications.

## **FY 2007 Accomplishments:**

- Initiated and completed characterization of NOVEMBER Va, NOVEMBER Vb and 3rd generation INDIA II control panel.

## **FY 2008 Plans:**

- Initiate and complete characterization of KILO, QUEBEC AND TANGO.

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FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0672

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSTEMS (ENEWS)

## **FY 2009 Plans:**

- Initiate and complete characterization of INDIA III and PAPA.

	FY 2007	FY 2008	FY 2009
<b>SIMULATOR MAINTENANCE</b>	998	975	1,167

Provides required simulator maintenance to ensure that the hardware simulators are available for customer testing. Preventative maintenance, troubleshooting, and repairs are performed as required.

Operational requirements demand that these simulators be available to support testing events. Maintenance is the key to having them available.

## **FY 2007 Accomplishments:**

- Continued annual maintenance on 21 simulators - 15 RF and 6 IR simulators to support 15 flight/shore based tests.
- Initiated and completed transition of NOVEMBER and QUEBEC simulators into the Naval Research Laboratory Learjet Electronics Pod (NRL LEP).

## **FY 2008 Plans:**

- Continue all efforts of FY 2007.
- Initiate and complete transition of the ROMEO simulator into the NRL LEP.

## **FY 2009 Plans:**

- Continue all efforts of FY 2008.
- Initiate and complete transition of the INDIA III into the NRL LEP.

# UNCLASSIFIED

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PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0672

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSTEMS (ENEWS)

	FY 2007	FY 2008	FY 2009
<b>SIMULATOR CONTROL PANELS</b>	244	213	268

Supports the development and maintenance of all simulator control panels.

Operational requirements demand that these simulator control panels be available to support testing events.

**FY 2007 Accomplishments:**

- Completed INDIA II simulator control panel.

**FY 2008 Plans:**

- Initiate QUEBEC control panel.

**FY 2009 Plans:**

- Complete QUEBEC control panel.
- Initiate and complete VICTOR 1 SIP control panel.

	FY 2007	FY 2008	FY 2009
<b>LABORATORY FACILITIES</b>	981	885	933

Provides maintenance and upgrades to the indoor laboratory and outdoor land based facilities required to perform testing of surface EW systems.

Change reflects slowdown of upgrades and increased tempo of operational testing.

**FY 2007 Accomplishments:**

- Initiated maintenance and upgrades to shore based test facilities and mobile test vans as required to conduct tests in support of SEWIP, NULKA and multi function EW programs.

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PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0672

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSTEMS (ENEWS)

## **FY 2008 Plans:**

- Continue all efforts of FY 2007.

## **FY 2009 Plans:**

- Continue all efforts of FY 2008.

	FY 2007	FY 2008	FY 2009
<b>SIMULATION THREAT REPOSITORY</b>	43	29	35

Provides management, access, and configuration control of the classified document and simulations library.

Operational requirements demand that these digital simulators be available to support testing events. It requires the most up-to-date and accurate information on threat systems in order to model the realistic simulators.

## **FY 2007 Accomplishments:**

- Continued transitioning NRL Codes 5750 and 5770's environmental, threat and platform simulations to the subversion software configuration management program. Upgraded subversion software library as new releases became available - 100 updates annually.
- Continued new digital models of Anti-ship Cruise Missile (ASCM) threats as they became available.
- Completed evaluation of subversion database software analyzing new capabilities to improve configuration management.

## **FY 2008 Plans:**

- Continue all efforts of FY 2007 less those noted as completed above.

## **FY 2009 Plans:**

- Continue all efforts of FY 2008.

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FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
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DATE: February 2008

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 PROJECT NUMBER: 0672      PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSTEMS (ENEWS)

	FY 2007	FY 2008	FY 2009
<b>SIMULATION INSTRUMENTATION</b>	566	546	665

Provides development and maintenance of flight support instrumentation such as oscilloscopes, global positioning systems, videocassette systems, and monitors.

Operational capabilities demand that these instrumentation systems be available to support testing events.

**FY 2007 Accomplishments:**

- Continued upgrades and maintenance of flight support systems as necessary to support the IR/RF ENEWS simulators. There are 15 RF and 6 IR simulators.

**FY 2008 Plans:**

- Continue all efforts of FY 2007.

**FY 2009 Plans:**

- Continue all efforts of FY 2008.

	FY 2007	FY 2008	FY 2009
<b>SIMULATION VALIDATION</b>	606	521	586

Provides for the validation of hardware simulators and digital models. Develops reports that contain detailed descriptions and parametric data of the threat simulators or digital models and compares the simulator's parametric data to the actual threat parametric data.

DoD and Department of the Navy regulations require validation of all threat simulations used in an OT&E event.

**FY 2007 Accomplishments:**

- Completed INDIA II, MIKE 3, NOVEMBER III and IV, FOXTROT 1 SIP, and QUEBEC hardware validation reports.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0604256N      PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT  
PROJECT NUMBER: 0672      PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSTEMS (ENEWS)

Provided reports to Simulator Validation Working Group (SVWG).  
- Initiated TANGO, NOVEMBER Va and Vb hardware validation reports.

#### **FY 2008 Plans:**

- Continue all efforts of FY 2007 less those noted as completed above.
- Complete NOVEMBER Va and submit report to the SVWG.
- Initiate INDIA I, PAPA and KILO hardware validation reports.

#### **FY 2009 Plans:**

- Continue all efforts of FY 2008 less those noted as completed above.
- Complete NOVEMBER Vb and TANGO hardware validation reports and submit to the SVWG.

	FY 2007	FY 2008	FY 2009
<b>ELECTRONIC ATTACK/ELECTRONIC SUPPORT SIMULATIONS</b>	498	477	444

Provides improvements and intelligence upgrades to ASCM Digital Models to include fly-out models, NULKA and other off-board decoys including chaff models. Also, supports the maintenance of the Threat Database to provide threat intelligence for the development of T&E digital scenarios.

Operational requirements demand that these digital models and scenarios simulations be available to support testing events.

#### **FY 2007 Accomplishments:**

- Continued improvements and intelligence upgrades to ALPHA I, INDIA I, II, III, LIMA, NOVEMBER III, QUEBEC, TANGO, and TANGO II. In all, a total of 9 digital models.
- Continued upgrade to cruise missile simulation suite to improve capability to model advanced threats by adding graphical user interface (GUI).

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0672

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSTEMS (ENEWS)

## **FY 2008 Plans:**

- Continue all efforts of FY 2007.

## **FY 2009 Plans:**

- Continue all efforts of FY 2008.

- Complete upgrade to cruise missile simulation suite to improve capability to model advanced threats by adding GUI.

	FY 2007	FY 2008	FY 2009
<b>PROGRAM MANAGEMENT</b>	416	393	461

Provides technical management functions in support of the ENEWS project; engineering and technical support required for the overall efforts of ASCM Simulator and Digital Models development to meet DT/OT testing requirements, development of detailed test resource requirements, and provides an interface between N-912, N-433, Office of Naval Research, and other ENEWS oversight activities. Also, provides technical leadership to the Navy Surface ASCM Threat SVWG.

Needed operational capabilities require increased effort towards these simulators and simulations to be available for testing of critical systems for future deployment. This results in additional management costs.

## **FY 2007 Accomplishments:**

- Continued management of the SVWG.

- Initiated and completed update of FY 2007 Program Management Plan.

- Initiated and completed FY 2007 quarterly reports, earned value management analysis, progress tracking and analysis.

## **FY 2008 Plans:**

- Continue all efforts of FY 2007.

- Initiate and complete update of FY 2008 Program Management Plan.



# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0672

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSTEMS (ENEWS)

- Initiate and complete FY 2008 quarterly reports, earned value management analysis, progress tracking and analysis.

## **FY 2009 Plans:**

- Continue all efforts of FY 2008.
- Initiate and complete update of FY 2009 Program Management Plan.
- Initiate and complete FY 2009 quarterly reports, earned value management analysis, progress tracking and analysis.

	FY 2007	FY 2008	FY 2009
<b>CLASSIFIED PROGRAM</b>	7,354	7,592	7,774

Details about this program are classified.

## **FY 2007 Accomplishments:**

- Details are of a higher classification.

## **FY 2008 Plans:**

- Details are of a higher classification.

## **FY 2009 Plans:**

- Details are of a higher classification.

## **C. OTHER PROGRAM FUNDING SUMMARY - NAVY RELATED RDT&E:**

Not applicable.

## **OTHER PROGRAM FUNDING SUMMARY - NON-NAVY RELATED RDT&E:**

Not applicable.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0604256N  
PROJECT NUMBER: 0672

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT  
PROJECT TITLE: EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSTEMS (ENEWS)

**D. ACQUISITION STRATEGY:**

Not applicable.

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EXHIBIT R-2, RDT&E Budget Item Justification					DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE		
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-6					0604258N, TARGET SYSTEMS DEVELOPMENT		
COST (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	38.653	31.684	80.337	80.758	73.083	63.709	49.417
0609 AERIAL TARGET SYSTEMS DEV	21.352	12.896	50.915	56.474	42.825	26.427	15.783
9999 CONGRESSIONAL ADD	2.241						
0610 WPN SYS T&E TRG DEV/PRC	13.881	17.570	27.075	23.054	28.823	35.822	32.149
0612 SURFACE TARGETS DEVELOPMENT	1.179	1.218	2.347	1.230	1.435	1.460	1.485

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This program element funds the development and procurement of aerial targets, surface targets, and associated Target Augmentation and Auxiliary Systems (TA/AS) necessary to duplicate or simulate threat characteristics. This requirement is necessary to support weapons systems test and evaluation as well as training. This program element includes the development of: Subsonic Subscale Aerial Target (SSAT), various TA/AS, Supersonic Sea Skimming Target (SSST), Navy Full Scale Aerial Target (FSAT) for conversions, the FSAT follow-on Air Superiority Target (AST), surface targets for test and evaluation, surface towed targets, improved control systems, and an anti-radiation missile target. This program element also includes procurement of TA/AS Vector Scoring.

\$ 2.241 M Air Coyote Cong Add in support of SSST development.

B. PROGRAM CHANGE SUMMARY

Funding:	FY 2007	FY 2008	FY 2009
Previous President's Budget:	47.734	32.376	52.338
Current President's Budget	38.653	31.684	80.337
Total Adjustments	-9.081	-0.692	27.999

Summary of Adjustments

Congressional Reductions			
Congressional Rescissions			
Congressional Undistributed Reductions	-1.079	-0.206	
Congressional Increases			
Economic Assumptions			-0.520
Miscellaneous Adjustments	-8.002	-0.486	28.519
Subtotal	-9.081	-0.692	27.999

Schedule:N/A

Technical:N/A

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2008			
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6		PROGRAM ELEMENT NUMBER AND NAME 0604258N, TARGET SYSTEMS DEVELOPMENT				PROJECT NUMBER AND NAME 0609, AERIAL TARGET SYSTEMS DEV				
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013		
0609 AERIAL TARGET SYSTEMS DEV		21.352	12.896	50.915	56.474	42.825	26.427	15.783		
RDT&E Articles Qty										

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Aerial Target Systems and associated target augmentation and auxiliary systems are developed to test and provide training for Joint Strike and Littoral Warfare Systems required to defend fleet surface and air units in a hostile environment. The threat envelope covered extends from the surface to 100K feet for speeds in the low subsonic range to MACH 4. This project includes:

- Subsonic Subscale Aerial Target (SSAT) development (including pre-planned product improvements to the existing recoverable, remote-controlled subsonic target - upgraded engine, fuselage, swept wing configuration). The SSAT emulates subsonic anti-ship cruise missile threats in support of test & evaluation of major defensive weapon system programs in development and fleet training.
- Supersonic Sea Skimming Target (SSST) development. The SSST emulates supersonic anti-ship cruise missile threats in support of test & evaluation of major defensive weapon system programs in development.
- Target Control (TC) and Target Augmentation Auxiliary System (TAAS) Task Development: TAAS items allow each target to be uniquely configured for specific mission profiles. TAAS configured targets are used for radar acquisition test, electronic countermeasures (jamming) evaluation, infrared measurement/test, radar cross section evaluation, decoy effectiveness, maneuver analysis, electronic warfare, warhead effectiveness and evaluation of fleet tactics, readiness and effectiveness.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Supersonic Sea Skimming Target	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	13.540	2.938	36.885
RDT&E Articles Qty			

- Continue GQM-163A Supersonic, Sea-Skimming Target (SSST) upgrades/evolutionary development to keep pace with evolving threat and associated ORD requirements. Efforts include: (1) Continue development of high-diver capability. (2) Continue efforts to establish operational capability at Pacific Missile Range Facility (PMRF). (3) Continue efforts to establish a GQM-163A air launch capability. (4) Upgrade GQM-163A to support integration of ULQ-21. (5) Investigate and initiate efforts for booster enhancement, flight termination improvement and Front End Section upgrades.

- Continue efforts to meet Threat D requirements including post milestone B and post-contract award activities associated with the competitive award of a developmental contract for a Threat D Target System. Perform a Specification Requirements Review and conduct preliminary development activities leading to a preliminary design review.

Subsonic Aerial Target	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	1.742	4.044	5.977
RDT&E Articles Qty			

Continue Subsonic Subscale Aerial Target (SSAT) development. To include:

- Product improvements to the existing SSAT to meet performance and payload requirements.
- Evaluation of alternate subsonic subscale aerial targets to meet evolving subsonic threat emulation requirements.
- Prepare and conduct a potential competitive contract award for a target to meet requirements for a follow-on SSAT.

TC/TAAS	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	6.070	5.914	8.053
RDT&E Articles Qty			

Continue TC and TAAS development.

C. OTHER PROGRAM FUNDING SUMMARY:	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost
228000 Aerial Target System	82.938	66.856	83.313	66.858	68.509	81.419	83.076	Cont	Cont
612020 Spares and Repair Parts (WPN B.A. 6)	1.777	1.159	0.993	0.850	0.545	0.663	0.592		

D. Acquisition Strategy :

Not Applicable

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2008			
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6		PROGRAM ELEMENT NUMBER AND NAME 0604258N, TARGET SYSTEMS DEVELOPMENT				PROJECT NUMBER AND NAME 9999 Congressional Add				
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013		
0609C Air Coyote Supersonic Sea Skimming Target		2.241								
RDT&E Articles Qty										

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Congressional Add.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

	FY 2007	FY 2008	FY 2009
0609C			
Air Coyote	2.241		
RDT&E Articles Qty			

Air Coyote supersonic sea skimming development.

EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2008			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME				
RDT&E,N / BA-6	0604258N, TARGET SYSTEMS DEVELOPMENT					0610, WPN SYS T&E TRG DEV/PRC				
COST (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013			
0610 WPN SYS T&E TRG DEV/PRC	13.881	17.570	27.075	23.054	28.823	35.822	32.149			
RDT&E Articles Qty										
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:										
<p>This project provides for the development and procurement of Aerial Targets used exclusively for test and evaluation of Naval Weapons Systems which closely replicate current and projected threats to fleet units in the Joint Strike and the Littoral Warfare environments. This replication must include characteristics related to size, performance envelope, and electromagnetic and infrared signatures. As threats change, changes must be made to keep the targets as threat representative as possible. This is done in response to changes in the requirements of the developers of Naval weapons.</p>										
B. ACCOMPLISHMENTS / PLANNED PROGRAM:										
Air Superiority Target	FY 2007	FY 2008	FY 2009							
Accomplishments / Effort / Sub-total Cost	1.063	1.071	8.242							
RDT&E Articles Qty										
<p>The Air Superiority Target (AST) is being developed as the follow-on to the current FSAT. AST will be a supersonic, high altitude, remote-controlled aerial target. This target will have full command and control capability through normal flight maneuvers. Continue support of the follow-on FSAT development.</p>										
QF-4 Full Scale Aerial Target	FY 2007	FY 2008	FY 2009							
Accomplishments / Effort / Sub-total Cost	10.644	15.530	17.788							
RDT&E Articles Qty										
<p>The Full Scale Aerial Target is a supersonic, high altitude, remote-controlled aerial target. This target has full command and control capability through normal flight maneuvers. Continued program, engineering and logistics support for the Full Scale Aerial Target (FSAT), including Aviation Depot Level Repairables (AVDLR), procurement of kit material and conversion of F-4 aircraft into FSAT targets. The Navy began joint procurement of QF-4 T&amp;E assets with USAF in FY03. FY09 QF-4 procurements deliver FSATs in FY11 supporting JSF, AIM-9X, AMRAAM and SM-6.</p>										
TASS Vector Scorer	FY 2007	FY 2008	FY 2009							
Accomplishments / Effort / Sub-total Cost	2.174	.969	1.045							
RDT&E Articles Qty										
<p>Target Augmentation and Auxiliary Systems items allow each target to be uniquely configured for specific mission profiles. TAAS configured targets are used for radar acquisition test, electronic countermeasures (jamming) evaluation, infrared measurement/test, radar cross section evaluation, decoy effectiveness, maneuver analysis, electronic warfare, warhead effectiveness and evaluation of fleet tactics, readiness and effectiveness. Continue T&amp;E Target Augmentation and Auxiliary Systems (TA/AS) Vector Scorer development/procurement/support.</p>										
C. OTHER PROGRAM FUNDING SUMMARY:	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	#REF!	To Complete	Total Cost
228000 Aerial Target System	82.938	66.856	83.313	66.858	68.509	81.419	83.076		Cont	Cont
612020 Spares and Repair Parts (WPN B.A. 6)	1.778	1.159	0.993	0.850	0.545	0.663	0.592		Cont	Cont
D. ACQUISITION STRATEGY:N/A										

**UNCLASSIFIED**

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>					
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>					<b>DATE</b>		
					February 2008		
<b>APPROPRIATION/BUDGET ACTIVITY</b>		<b>PROGRAM ELEMENT NUMBER AND NAME</b>			<b>PROJECT NUMBER AND NAME</b>		
<b>RD TEN/BA 6</b>		<b>0604258N/TARGET SYSTEMS DEVELOPMENT</b>			<b>0612/SURFACE TARGETS DEV</b>		
<b>COST (In Millions)</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
Project Cost	1.179	1.218	2.347	1.230	1.435	1.460	1.485
RDT&E Articles Qty	0	0	0	0	0	0	0
<b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b>							
<p>This project develops seaborne targets systems and their related target augmentation systems in support of air-to-surface and surface-to-surface weapons test and evaluation and fleet training.</p>							

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<b>CLASSIFICATION:</b>	<b>UNCLASSIFIED</b>	
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>		<b>DATE</b> February 2008
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RD TEN/BA 6</b>	<b>PROGRAM ELEMENT NUMBER AND NAME</b> <b>0604258N/TARGET SYSTEMS DEVELOPMENT</b>	<b>PROJECT NUMBER AND NAME</b> <b>0612/SURFACE TARGETS DEV</b>

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 2007	FY 2008	FY 2009
<b>Accomplishments/Effort/Subtotal Cost</b>	1.179	1.218	2.347
RDT&E Articles Quantity	0	0	0

- Continued requirements Study Analysis of target requirements in response to weapons systems development and upgrades.
- Continued testing of real-time surface target scoring systems, including shift to seaborne platform based vector scorer.
- Continued command and control upgrade development including LEO uplink/downlink.
- Continued Weapons System/Emitter, Target Augmentation System(TAS) upgrade.
- Continued Target/Threat Characterization and Validation.
- Complete technical effort for 40M MST T&E platform procurement.
- Integration of on-board system for 40M MST.
- Refine performance spec based on prototype FACT results prior to follow-on FY08 procurement.
- Finalize reports and prepare procurement recommendations to sponsors.
- Prepare TDP with updated design package for FY09 procurement of 40M MST platform.
- Conduct testing of improved EO/IR augmentation on powered platforms.
- Adapt augmentation for use on tow platforms to enhance powered vessel survivability.



**UNCLASSIFIED**

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>						
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>							<b>DATE</b>	
							February 2008	
<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>PROGRAM ELEMENT NUMBER AND NAME</b>				<b>PROJECT NUMBER AND NAME</b>			
<b>RD TEN/BA 6</b>	<b>0604258N/TARGET SYSTEMS DEVELOPMENT</b>				<b>0612/SURFACE TARGETS DEV</b>			
<b>C. OTHER PROGRAM FUNDING SUMMARY:</b>								
								Total
	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Cost
OPN Line 545500 ASW Range Spt Equipment	7.154	8.861	9.199	7.424	7.224	6.249	7.403	60.650
<b>D. ACQUISITION STRATEGY:</b>								
Not applicable								

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EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
APPROPRIATION/BUDGET ACTIVITY							February 2008	
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-6							R-1 ITEM NOMENCLATURE	
							0604759N, MAJOR T&E INVESTMENT	
COST (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	
Total PE Cost	75.709	40.885	42.391	46.239	48.460	49.310	50.439	
2195 T & E INVESTMENT	67.024	36.811	42.391	46.239	48.460	49.310	50.439	
9999 CONGRESSIONAL ADDS	8.685	4.074						

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project improves visibility and commonality 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 improved test capabilities at the following test facilities: the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center (NAVUNSEAWARCEN DET AUTECE), Andros Island, Bahamas; the Nanoose and Dabob ranges of the Naval Undersea Warfare Center Division Keyport (NAVUNSEAWARCENDIV Keyport), Keyport, WA; the Sea Range, Land Range, Electronic Combat Range, Targets, Ordnance T&E Facility, Test Wing Pacific, and the Air Vehicle Modification and Instrumentation facility located at the Naval Air Warfare Center Weapons Division (NAVAIRWARCENWPNDIV), Point Mugu, CA and China Lake, CA; and the Atlantic Test Range, Air Combat Environment T&E Facility, Electromagnetic Environmental Effects, Test Wing Atlantic, Targets, and the Propulsion Systems Evaluation Facility (PSEF) located at the Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV), Patuxent River, MD; and the test capabilities located at the Pacific Missile Range Facility, Kauai, HI.

B. PROGRAM CHANGE SUMMARY

Funding:	FY 2007	FY 2008	FY 2009
Previous President's Budget:	75.908	37.614	44.602
Current BES Budget:	75.709	40.885	42.391
Total Adjustments	-0.199	3.271	-2.211

Summary of Adjustments			
Congressional Reductions			
Congressional Rescissions			
Congressional Undistributed Reductions	-0.195	-0.265	
Congressional Increases		4.100	
Economic Assumptions			-0.211
Miscellaneous Adjustments	-0.004	-0.564	-2.000
Subtotal	-0.199	3.271	-2.211

Schedule: Not Applicable.

Technical: Not Applicable.

EXHIBIT R-2a, RDT&E Project Justification							DATE:	
							February 2008	
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME		
RDT&E,N / BA-6			0604759N, MAJOR T&E INVESTMENT			2195, T & E INVESTMENT		
COST (\$ in Millions)			FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012
2195 T & E INVESTMENT			67.024	36.811	42.391	46.239	48.460	49.310
RDT&E Articles Qty			Not Applicable.					

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

This project improves visibility and commonality 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 improved test capabilities at the following test facilities: the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center (NAVUNSEAWARCEN DET AUTECH), Andros Island, Bahamas; the Nanoose and Dabob ranges of the Naval Undersea Warfare Center Division Keyport (NAVUNSEAWARCENDIV Keyport), Keyport, WA; the Sea Range, Land Range, Electronic Combat Range, Targets, Ordnance T&E Facility, Test Wing Pacific, and the Air Vehicle Modification and Instrumentation facility located at the Naval Air Warfare Center Weapons Division (NAVAIRWARCENWPNDIV), Point Mugu, CA and China Lake, CA; and the Atlantic Test Range, Air Combat Environment T&E Facility, Electromagnetic Environmental Effects, Test Wing Atlantic, Targets, and the Propulsion Systems Evaluation Facility (PSEF) located at the Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV), Patuxent River, MD and the test capabilities located at the Pacific Missile Range Facility, Kauai, HI.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Undersea Range Investments	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	4.932	7.794	9.883
RDT&E Articles Qty			

Undersea Range Investments - This effort funds the modernization, upgrades, and new test capabilities required at the Navy's Major Range Test Facility Base (MRTFB) undersea ranges (Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center (NAVUNSEAWARCEN DET AUTECH), Andros Island, Bahamas; the Nanoose and Dabob ranges of the Naval Undersea Warfare Center Division Keyport (NAVUNSEAWARCENDIV Keyport), Keyport, WA.

AUTECH - The installation of improved lightning protection and grounding systems at the AUTECH main sites and downrange sites one and two; the replacement and extension of the AUTECH range classified and unclassified local area networks; the installation and integration a hydrophone string to regain 90 square nautical miles of the AUTECH deep water range; the modernization of the deep water hydrophone acoustic signal processors; the modernization of communication links from AUTECH's main site to its downrange sites two, three and four; the modernization and upgrade of voice and data communications links to submarines on the range; the development of new range post-processing software and modernized hardware.

Nanoose and Dabob - The procurement and integration of additional hydrophone arrays; the addition of broadband capable bottom mounted targets to the Nanoose and Dabob ranges; the modernization of acoustic acquisition and processing systems.

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EXHIBIT R-2a, RDT&E Project Justification

DATE:

February 2008

APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0604759N, MAJOR T&E INVESTMENT	PROJECT NUMBER AND NAME 2195, T & E INVESTMENT
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Spectrum Relocation	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	27.492		
RDT&E Articles Qty			

Spectrum Relocation - This effort funds the modification or replacement of range instrumentation in order to vacate the 1710-1755 magahertz band recently auctioned off for commercial use.

Patuxent River, MD - Procurement and integration of transmitter and receiver systems for all land and airborne video, telemetry, and microwave systems.

Point Mugu and China lake, CA - Procurement and integration of transmitter and receiver systems for all land and airborne video and telemetry systems.

Keyport, WA - Procurement and integration of transmitter and receiver systems for the land based microwave systems.

Panama City, FL - Procurement and integration of transmitter and receiver systems for the land based video and telemetry systems.

APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0604759N, MAJOR T&E INVESTMENT	PROJECT NUMBER AND NAME 2195, T & E INVESTMENT
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Open Air Range Investments	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	27.778	25.068	26.444
RDT&E Articles Qty			

Open Air Range Investments - This effort funds the modernization and upgrades of existing capabilities and the development of new test capabilities required at the MRTFB open air ranges :

Sea Range - The modernization of the fifth tracking radar; the development of target launch, airborne telemetry, optics, flight termination capabilities for the range support aircraft; the upgrade of video capabilities; the modernization of the mobile radio communications system; the modernization of range timing and sensor interface; the addition of enhanced flight termination system; the modernization of the telemetry antenna systems; the modernization of the post flight analysis system; the upgrade of telemetry instrumentation recorders; the modernization of Global Positional System (GPS) tracking systems; development of a Range Condition Assessment (RCA) report; the development of a Range Capabilities Master Plan (RCMP); the replacement of fiber terminal equipment to upgrade communications links from San Nicolas Island to the mainland; the procurement of a doppler radar system; and the modernization of sea surface surveillance radars.

Land Range - The upgrade of video capabilities; the modernization of the mobile radio communications system; the modernization of range timing and sensor interface; the addition of enhanced flight termination system; the modernization of the telemetry antenna systems; the modernization of the post flight analysis system; the upgrade of telemetry instrumentation recorders; the modernization of Global Positional System (GPS) tracking systems; the development of a Range Condition Assessment (RCA) report; and the development of a Range Capabilities Master Plan (RCMP).

Electronic Combat Range -The upgrade of video capabilities; the modernization of the mobile radio communications system; the modernization of range timing and threat system interface; the modernization of the Post Test Data Warehouse system; the modernization of two tracking radars; the replacement and upgrade of telemetry instrumentation recorders; the modernization of Global Positional System (GPS) tracking systems; the development of a Range Condition Assessment (RCA) report; the development of a Range Capabilities Master Plan (RCMP); the modernization of the communication and fiber infrastructure.

Air Vehicle Modification and Instrumentation - The procurement of aircraft machining and prototyping equipment.

Atlantic Test Range - The modernization of the radar cross section emitters pedestals; the modernization and addition of telemetry antennas; the upgrade of the Infra-Red signature measurement system; the replacement and upgrade of telemetry instrumentation recorders; the modernization of Global Positional System (GPS) tracking systems; the development of a Range Condition Assessment (RCA) report; and the development of a Range Capabilities Master Plan (RCMP); the modernization of the Multiple Target Instrumented Radar (MIR).

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EXHIBIT R-2a, RDT&E Project Justification

DATE:

February 2008

APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0604759N, MAJOR T&E INVESTMENT	PROJECT NUMBER AND NAME 2195, T & E INVESTMENT
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Test Facilities Investments	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	6.822	3.949	6.064
RDT&E Articles Qty			

Test Facilities Investments - This effort funds the modernization and upgrades of existing capabilities and the development of new test capabilities required at the MRTFB test facilities (Air Combat Environment Test and Evaluation Facility (ACETEF), Electromagnetic Environmental Effects (E3), Propulsional Systems Evaluation Facility (PSEF), Ordnance T&E Facility).

ACETEF - The development and integration of an advanced radar environment stimulator; the modernization of manned flight simulator computer systems and software; the upgrade of identification friend/foe (IFF) test set capability to include Mode 5 and Mode S simulations; the development of a simulation environment visualization and debriefing system and software; the development of High Power Radio Frequency (RF) Carts.

E3 - The modernization of Electromagnetic Environmental Effects (E3) laboratory test equipment.

PSEF - The upgrade of the Helicopter Transmission Test Facility (HTTF) to support greater horsepower/torque and provide quicker setup time.

Ordnance T&E Facility - The modernization of the Warhead Insensitive Munitions, and Safety Test site.

C. OTHER PROGRAM FUNDING SUMMARY:	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete Total Cost
Not Applicable.								

D. ACQUISITION STRATEGY: Not Applicable

EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2008	
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6			PROGRAM ELEMENT NUMBER AND NAME 0604759N, MAJOR T&E INVESTMENT			PROJECT NUMBER AND NAME 9999, CONGRESSIONAL ADDS	
COST (\$ in Millions)			FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Project Cost			8.685	4.074			
RDT&E Articles Qty			Not Applicable.				

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Congresstional Adds.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

2195C, Upgrade Range Instrumentation to Support Network Centric Operations	FY 2007	FY 2008	FY 2009	
Accomplishments / Effort / Sub-total Cost	2.590			
RDT&E Articles Qty				

This project will upgrade the ractical data links, communication networks, tracking systems, and electronic warfare system at the Atlantic Test Range to provide more realistic test and training for the Navy's warfighters and their systems.

9A60N, Low Cost Coyote Ramjet Demonstration	FY 2007	FY 2008	FY 2009	
Accomplishments / Effort / Sub-total Cost	.996			
RDT&E Articles Qty				

Research design options to lower the production cost for the Coyote Ramjet Engine.

9A61N, Network Expansion & Integration of Navy/NASA RDT&E Ranges and Facilities	FY 2007	FY 2008	FY 2009	
Accomplishments / Effort / Sub-total Cost	3.157	4.074		
RDT&E Articles Qty				

This project designs and develops (including environmetal permits) fiber optic replacement of some of the existing microwave links between NASA instrumentation and the Atlantic Test Range.

9A62N, Network Expansion of RDT&E Ranges	FY 2007	FY 2008	FY 2009	
Accomplishments / Effort / Sub-total Cost	1.942			
RDT&E Articles Qty				

This project modernizes and extends existing microwave and fiber optic networks between the Atlantic Test Range, Pt. Lookout, St. Inigoes (Webster Field), and other test facilities on Naval Center Aircraft Division.

**UNCLASSIFIED**

EXHIBIT R-2, RDT&E Budget Item Justification							DATE:																																					
APPROPRIATION/BUDGET ACTIVITY							February 2008																																					
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-6							R-1 ITEM NOMENCLATURE																																					
							0605152N, STUDIES AND ANALYSIS SUPPORT - NAVY																																					
COST (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013																																					
Total PE Cost	10.296	7.338	8.084	8.681	9.118	9.371	9.539																																					
0133 NATIONAL ACAD SCI/STUD BOARD	1.741	1.655	1.635	1.759	1.654	1.760	1.779																																					
2092 NAVAL WARFARE STUDIES	8.283	5.400	6.158	6.625	7.159	7.301	7.443																																					
2097 MANPOWER PERSONNEL & TRAINING	.272	.283	.291	.297	.305	.310	.317																																					
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program provides analytical support to the Secretary of the Navy and the Chief of Naval Operations as a basis for major policy, planning and acquisition program execution decisions. It supports research and development strategy development and planning. It supports studies in the areas of manpower, personnel, training, and aviation. It also develops analytical tools for evaluating effectiveness of U.S. weapons against potential foreign threat ships and submarines.</p> <p>FY 2008 funding does not include \$150K previously requested for GWOT requirements.</p> <p>B. PROGRAM CHANGE SUMMARY</p> <table border="0"> <tr> <td>Funding:</td> <td>FY 2007</td> <td>FY 2008</td> <td>FY 2009</td> </tr> <tr> <td>Previous President's Budget:</td> <td>7.066</td> <td>7.516</td> <td>8.139</td> </tr> <tr> <td>Current BES Budget:</td> <td>10.296</td> <td>7.338</td> <td>8.084</td> </tr> <tr> <td>Total Adjustments</td> <td>3.230</td> <td>-0.178</td> <td>-0.055</td> </tr> <tr> <td colspan="4">Summary of Adjustments</td> </tr> <tr> <td>Congressional Undistributed Reductions</td> <td>-0.170</td> <td>-0.066</td> <td>-0.010</td> </tr> <tr> <td>Economic Assumptions</td> <td></td> <td></td> <td>-0.045</td> </tr> <tr> <td>Miscellaneous Adjustments</td> <td>3.400</td> <td>-0.112</td> <td></td> </tr> <tr> <td>Subtotal</td> <td>3.230</td> <td>-0.178</td> <td>-0.055</td> </tr> </table> <p>Schedule: Not Applicable</p> <p>Technical: Not Applicable</p>									Funding:	FY 2007	FY 2008	FY 2009	Previous President's Budget:	7.066	7.516	8.139	Current BES Budget:	10.296	7.338	8.084	Total Adjustments	3.230	-0.178	-0.055	Summary of Adjustments				Congressional Undistributed Reductions	-0.170	-0.066	-0.010	Economic Assumptions			-0.045	Miscellaneous Adjustments	3.400	-0.112		Subtotal	3.230	-0.178	-0.055
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**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification					DATE: <b>February 2008</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>		0605152N / STUDIES AND ANALYSIS SUPPORT			PROJECT NUMBER AND NAME 0133 NATIONAL ACADEMY OF SCIENCES/NAVAL STUDIES BOARD			
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
*Project Cost		1.741	1.655	1.635	1.759	1.654	1.760	1.779
RDT&E Articles Qty								

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

This project supports the core program for the Naval Studies Board. As agreed upon between the Chief of Naval Operations (CNO) and the President of the National Academy of Sciences and with appropriate attention to the influence of the domestic economy, national objectives, social imperatives and anticipated military requirement, the Naval Studies Board will conduct and report upon surveys, investigations, and analyses in the field of scientific research and development applicable to the operation and function of the Navy. Reports consist of a briefing to the Assistant Secretary of the Navy (Research Development and Acquisition) (ASN (RD&A)) and the CNO and staff, and written technical reports.

**Performance Metrics:**

Conduct and report upon surveys, investigations, and analyses in the field of scientific research and development applicable to the operations and function of the Navy in a timely manner.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>												
PROGRAM ELEMENT NUMBER AND NAME 0605152N / STUDIES AND ANALYSIS SUPPORT, NAVY		PROJECT NUMBER AND NAME 0133 NATIONAL ACADEMY OF SCIENCES/NAVAL STUDIES BOARD												
<b>B. ACCOMPLISHMENTS/PLANNED PROGRAM:</b>														
<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <td style="width: 30%;"></td> <td style="width: 30%;"></td> <td style="width: 15%; text-align: center;">FY 07</td> <td style="width: 15%; text-align: center;">FY 08</td> <td style="width: 10%; text-align: center;">FY 09</td> </tr> <tr> <td>Accomplishments/Effort/Subtotal Cost</td> <td></td> <td style="text-align: center;">1.741</td> <td style="text-align: center;">1.655</td> <td style="text-align: center;">1.635</td> </tr> </table>							FY 07	FY 08	FY 09	Accomplishments/Effort/Subtotal Cost		1.741	1.655	1.635
		FY 07	FY 08	FY 09										
Accomplishments/Effort/Subtotal Cost		1.741	1.655	1.635										
<p><b>FY 2007 ACCOMPLISHMENTS:</b></p> <ul style="list-style-type: none"> <li>• Completed studies for 1000-ship Navy - A Distributed and Global Maritime Network and Manpower and Personnel Needs for a Transformed Naval Force.</li> <li>• Continued research efforts and investigations in areas of interest to the Navy.</li> <li>• Continued to support annual Navy authorized activities of importance, such as the Weinblum Memorial Lecture Series.</li> <li>• Initiated two new studies to be selected by the CNO during the fourth quarter of FY07.</li> </ul> <p><b>FY 2008 PLANS:</b></p> <ul style="list-style-type: none"> <li>• Complete the CNO selected studies initiated in FY07.</li> <li>• Continue research efforts and investigations in areas of interest to the Navy.</li> <li>• Continue to support annual Navy authorized activities of importance, such as the Weinblum Memorial Lecture Series.</li> <li>• Initiate new studies to be selected by the CNO during FY08</li> </ul> <p><b>FY 2009 PLANS:</b></p> <ul style="list-style-type: none"> <li>• Complete the CNO selected studies initiated in FY08.</li> <li>• Continue research efforts and investigations in areas of interest to the Navy.</li> <li>• Continue to support annual Navy authorized activities of importance, such as the Weinblum Memorial Lecture Series.</li> <li>• Initiate new studies to be selected by the CNO during FY09.</li> </ul>														

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
PROGRAM ELEMENT NUMBER AND NAME 0605152N / STUDIES AND ANALYSIS SUPPORT, NAVY	PROJECT NUMBER AND NAME 0133 NATIONAL ACADEMY OF SCIENCES/NAVAL STUDIES BOARD	
<p><b>OTHER PROGRAM FUNDING SUMMARY:</b></p> <p>Navy Related RDT&amp;E: Not applicable. Non-Navy Related RDT&amp;E: Not applicable.</p> <p><b>D. ACQUISITION STRATEGY:</b></p> <p>Not applicable.</p>		

EXHIBIT R-2a, RDT&E Project Justification

DATE:  
#####

APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605152N, STUDIES AND ANALYSIS SUPPORT - NAVY	PROJECT NUMBER AND NAME 2092, NAVAL WARFARE STUDIES					
COST (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
2092 NAVAL WARFARE STUDIES	8.283	5.400	6.158	6.625	7.159	7.301	7.443
RDT&E Articles Qty							

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project supports detailed mission, capability and technical analysis of future naval warfighting requirements. This work provides the analytical basis for integration and prioritization of overall military capability requirements and acquisition programs in support of executing the Naval Capability Development Process and development/delivery of MCP, NCP and ISCP briefs for CNO. This project replaces warfare analysis efforts (other than system-level Analyses of Alternatives) previously funded separately by all sponsors.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	8.283	5.400	6.158
RDT&E Articles Qty			

This project supports future Naval warfighting capability assessments, including cost-to-capability assessments; mission level Modeling & Simulation (M&S); analysis integration across all warfare areas; and assessments of legacy and future Programs of Record contribution to future warfighting requirements. These efforts include support for the alignment of Science & Technology (S&T) and Future Naval Capability (FNC) programs to future warfighting capability gaps and integration of Naval warfighting requirements into the Joint Capability Integration and Development System (JCIDS) process. This work provides the analytical underpinning for investment recommendations to CNO; serves as the analytical basis to integrate and prioritize overall warfighting capability requirements and acquisition programs to support the Naval Capability Development Process; and supports the development of Mission Capabilities Packages (MCPs), Naval Capability Packages (NCPs), Integrated Strategic Capability Plans (ISCPs), and a capabilities-based and balanced Integrated Sponsor's Program Proposals (ISPPs). This project replaces warfare analysis efforts (other than system-level Analyses of Alternatives) previously funded separately by all sponsors.

C. OTHER PROGRAM FUNDING SUMMARY:

	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	#REF!	To Complete	Total Cost
Not Applicable										

D. ACQUISITION STRATEGY: Not Applicable

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CLASSIFICATION: UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification						DATE: <b>February 2008</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605013N Information Technology Development			PROJECT NUMBER AND NAME 2097/Manpower, Personnel, and Training			
COST (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost	<b>0.272</b>	<b>0.283</b>	<b>0.291</b>	<b>0.297</b>	<b>0.305</b>	<b>0.310</b>	<b>0.317</b>
RDT&E Articles Qty	<b>4</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
<p><b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b>                  The Chief of Naval Personnel has a continuing need for studies and analysis of manpower and personnel (M&amp;P) policies and programs and critical M&amp;P issues that have Navy-wide implications. Th project provides an essential management tool to: (a) assess the effectiveness of existing M&amp;P policies and programs; (b) identify needs for new policies and programs; (c) determine the required manpower and training mix relative to changing demographic, societal and legislative/regulatory actions, and to evolving strategic and geopolitical factors; (d) study the impact of M&amp;P programs on Navy accession, attrition, retention, and performance; and, to (e) develop, validate and/or refine a broad range of M&amp;P forecasting models. The program permits Navy to more effectively utilize Research and Development expertise to respond to emergent M&amp;P issues on a continuing basis.</p>							

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME		
<b>RDT&amp;E, N / BA-6</b>	0605152N Studies and Analysis Support	2097/Manpower, Personnel, and Training	
<b>B. Accomplishments/Planned Program</b>			
	FY 07	FY 08	FY 09
Accomplishments/Effort/Subtotal Cost	0.272	0.283	0.291
RDT&E Articles Quantity	4	4	3
<p>(U) FY 2007 ACCOMPLISHMENTS:</p> <ul style="list-style-type: none"> <li>• (U) Assessed Return on Investment (ROI) for Assignment Incentive Pay (AIP) programs/pilots</li> <li>• (U) Assessed impact of Individual Augmentation on enlisted and officer retention</li> <li>• (U) Assessed Return on Investment (ROI) of Joint Professional Military Education (JPME) Phase I programs (NWC, NPS, Distance Learning, Seminar)</li> <li>• (U) Assessed the potential use and determine appropriate areas to employ Smart Card/CAC Technology.</li> </ul> <p>(U) FY 2008 PLAN:</p> <ul style="list-style-type: none"> <li>• (U) Assess Return on Investment (ROI) and workload impacts of Integrated Learning Environment (ILE)</li> <li>• (U) Assess Return on Investment (ROI) of Officer Bonus Programs - ACCP and SWOCP</li> <li>• (U) Evaluate and recommend alternate enlisted and officer bonus programs and schema</li> <li>• (U) Assess Return on Investment (ROI) for CIVSUB of Headquarters Officer billets from 2000-2007</li> </ul> <p>(U) FY 2009 PLAN:</p> <ul style="list-style-type: none"> <li>• (U) Conduct a cost-benefit analysis of Naval Post Graduate School (NPS) vs. Civilian Institution School (CIVINS) for graduate degrees</li> <li>• (U) Assess effectiveness of Active and Reserve Recruiting merger</li> <li>• (U) Assess manpower/personnel growth of DDG-51 and CG-47 mid-life upgrade programs</li> </ul>			

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FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605154N  
PROGRAM ELEMENT TITLE: CENTER FOR NAVAL ANALYSES

COST: (Dollars in Thousands)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
<b>Total PE</b>	47,583	47,422	49,745	51,438	52,261	52,863	53,511
0031 MARINE CORPS OPERATIONS ANALYSIS GROUP (MCOAG)	7,185	7,449	7,981	8,055	8,135	8,313	8,544
0148 CENTER FOR NAVAL ANALYSES, NAVY	40,398	39,973	41,764	43,383	44,126	44,550	44,967

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** The Center for Naval Analyses (CNA) is the Department of the Navy's (DoN) only Federally Funded Research and Development Center (FFRDC). CNA provides independent, objective, and expert analyses based on its unique access to sensitive data and hands-on exposure to fleet operations gained through its world-wide field program. CNA's research program is centrally funded by this program element and is primarily concentrated along one Marine Corps category and twelve Navy categories of study called product areas. These product areas are structured to enhance CNA's focus of research and analysis upon the major present and future needs and issues of the Navy and the Marine Corps. Because of rapid advances in technology, changes in the fleet, the increasing complexity of weapon systems, and reductions in manpower, force structure, budgets, the current security environment, and Department of Defense (DoD) transformation, the Navy and Marine Corps have a greater need for analyses that are sophisticated, relevant, and timely. CNA is highly qualified to meet that need.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605154N  
PROGRAM ELEMENT TITLE: CENTER FOR NAVAL ANALYSES

**B. PROGRAM CHANGE SUMMARY:**

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY 2008/FY 2009 President's Budget Submission	47,439	49,360	45,867
Congressional Undistributed Reductions/Rescissions	0	-1,820	0
Execution Adjustments	144	0	0
Non-Pay Inflation Adjustments	0	0	-258
Program Adjustments	0	0	4,136
SBIR Assessment	0	-118	0
FY 2009 President's Budget Submission	47,583	47,422	49,745

**PROGRAM CHANGE SUMMARY EXPLANATION:**

Technical: Not applicable.

Schedule: Not applicable.

**C. OTHER PROGRAM FUNDING SUMMARY:**

Not applicable.

**D. ACQUISITION STRATEGY:**

Not applicable.

**E. PERFORMANCE METRICS:**

CNA is reviewed throughout the research year on several different levels to ensure that research produced is not duplicated elsewhere. The primary (and most effective) method of review for duplication is the Contracting Officer's Technical Representative (COTR) review and approval of each and every project proposal submitted by CNA. This method is highly effective in providing the necessary oversight to ensure that duplication of effort does not occur. The Marine Corps Studies System (MCSS) maintains a comprehensive listing of all CNA studies performed for the USMC. The MCSS ensures there are no duplicate analytical efforts within the USMC. Additionally, the Studies and Analysis Division of Marine Corps Combat Development Command (MCCDC) provides analytical review of all CNA products for the USMC and integrates the results and



# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605154N  
PROGRAM ELEMENT TITLE: CENTER FOR NAVAL ANALYSES

recommendations into a quarterly newsletter and an annual plan for research and analysis. Other evaluation processes are as follows:

- A) DoN Contract Status Meetings - As part of the CNA oversight process, the ONR Contracting Officer chairs a monthly meeting with the COTR, the USMC, and members of the CNA Business Support Group to provide guidance regarding contract management. Issues range from reviewing the Defense Technical Information Center (DTIC) database requirements to emphasize the contractual requirement that all ongoing research be submitted to DTIC to ensure against duplication to reviewing CNA's cost effectiveness and efficiency.
- B) Award Fee Evaluation Process - As required by CNA's contract with DoN, CNA is evaluated on a semi-annual basis by the government throughout the entire five-year performance period of Contract N00014-05-D-0500. Over 200 sponsors of CNA deliverables provide input regarding CNA's value to their respective organizations. CNA's support to DoN leadership and management, their timeliness and quality of research, as well as their cost effectiveness and efficiency are evaluated. CNA's overall performance rating is the primary basis for determining the amount, if any, of the available award fee earned by CNA.
- C) Two-Star Flag Officers and VCNO Corporate Board Meetings. DoN Two- and Three-Star Flag officers and their equivalent civilian counterparts meet several times a year to review the current fiscal year's research and provide guidance to CNA regarding their future research for DoN. These high-level meetings are essential to provide CNA with DoN's guidance to ensure that the research conducted is of the greatest value to DoN. The meetings also serve as the catalyst for the formation of the CNA Annual Plan, CNA's roadmap for research during the upcoming fiscal year. The CNA Annual Plan is then submitted to the VCNO Corporate Board for their final review and acceptance.
- D) CNA Comprehensive Review - Prior to contract renewal, CNA, as a FFRDC, must be evaluated to ensure that the DoN wants to renew their contract for an additional five-years. DoN recently completed an exhaustive review of sponsors' technical needs and mission requirements; DoN's consideration of alternative sources; CNA's efficiency and effectiveness; CNA's management and cost effectiveness, as well as the establishment criteria and sponsorship agreement. The CNA Comprehensive Review was approved by ASN (RDA) and accepted by OSD (AT&L).

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# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06  
 PROGRAM ELEMENT: 0605154N      PROGRAM ELEMENT TITLE: CENTER FOR NAVAL ANALYSES  
 PROJECT NUMBER: 0031      PROJECT TITLE: MARINE CORPS OPERATIONS ANALYSIS GROUP (MCOAG)

COST: (Dollars in Thousands)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
0031 MARINE CORPS OPERATIONS ANALYSIS GROUP (MCOAG)	7,185	7,449	7,981	8,055	8,135	8,313	8,544

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This project supports the Marine Corps portion of the DoN CNA Research Program, and is managed as an element of the Marine Corps Studies System. This program provides the Marine Corps with independent and objective research and analysis of specific issues/topics appropriately performed by a FFRDC. As a result of the findings and recommendations of the Fiscal Year 1997 Defense Science Board, the Marine Corps refocused the type of support CNA provides. The CNA maintains a varied number of field representatives for the Operational Forces Commanders and eight program areas for CNA to establish and maintain. The program areas are linked to the Marine Corps Advocacy (prepotency), which are: (1) Policy and Operations; (2) Systems and Tactics; (3) Research, Development and Acquisition; (4) Infrastructure and Readiness; (5) Manpower, Medical and Training; (6) Resources, Planning and Assessments; (7) Capabilities, Force Structure and Systems and (8) Intelligence, Surveillance and Reconnaissance. Scientific Analyst support provides six scientific analysts for the following six focus areas: Deputy Commandant (DC), Plans, Policies and Operations; DC Aviation; DC Installation and Logistics; DC Programs and Resources; DC Manpower Reserve Affairs; and Director, Manpower Plans (MP) - Manpower and Reserve Affairs (M&RA). The program continues analytical support for field exercises, Ad Hoc and Quick Response study requirements.

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 2007	FY 2008	FY 2009
MARINE CORPS OPERATIONS AND ANALYSIS GROUP	7,185	7,449	7,981

**FY 2007 Accomplishments:**

- Initiated and completed the following study and analysis projects approved in FY07 Marine Corps Studies System Master Plan (MCSSMP): Stress on the Force - Assistant Commandant of the Marine Corps (ACMC), Headquarters Alignment (ACMC), USMC Force Posture in the Pacific (ADMC), Seabasing (ACMC), Analysis of Career

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605154N

PROJECT NUMBER: 0031

PROGRAM ELEMENT TITLE: CENTER FOR NAVAL ANALYSES

PROJECT TITLE: MARINE CORPS OPERATIONS ANALYSIS GROUP (MCOAG)

Paths for Special Ops Marines, Analysis of Entry Level Training, Marine Air Ground Task Force (MAGTF) Electronic Warfare Requirements, Unmanned Aircraft Systems (Tier II and Tier III) Sensor Suite Analysis, Distributed Operations (DO) Implementation Analysis, USMC Headquarters Alignment, Improving How the Marine Corps Gets to the Fight, USMC Reserve End-Strength Model, Marine Aviation Requirements Study, DC Aviation Support of Desert Talon and Mojave Viper Exercise of June 2007 and Exercise Support to Commanding Officer, Marine Aviation for Desert Talon.

## **FY 2008 Plans:**

- Provide formal study and analysis support to the operating forces and headquarters elements included in the annual MCSSMP.
- Initiate high priority study and analysis projects approved in FY08 MCSSMP.
- Continue all efforts of FY07 less those noted as complete above.

## **FY 2009 Plans:**

- Initiate high priority study and analysis projects approved in FY09 MCSSMP.
- Continue all efforts of FY08 less those noted as complete above.

## **C. OTHER PROGRAM FUNDING SUMMARY - NAVY RELATED RDT&E::**

PE 0605873M Marine Corps Program Wide Support

### **OTHER PROGRAM FUNDING SUMMARY - NON-NAVY RELATED RDT&E::**

Not applicable.

## **D. ACQUISITION STRATEGY:**

Not applicable.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605154N      PROGRAM ELEMENT TITLE: CENTER FOR NAVAL ANALYSES  
PROJECT NUMBER: 0148      PROJECT TITLE: CENTER FOR NAVAL ANALYSES, NAVY

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
0148 CENTER FOR NAVAL ANALYSES, NAVY	40,398	39,973	41,764	43,383	44,126	44,550	44,967

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This project supports the Navy's portion of the CNA Research Program, which is primarily concentrated along twelve Navy categories of study called product areas. These product areas include the following: 1) Policy and Operations; 2) Resources, Planning, and Assessments; 3) Research, Development, and Acquisition; 4) Infrastructure and Readiness; 5) Manpower, Medical, and Training; 6) Systems and Tactics; 7) Capabilities, Force Structure, and Systems; 8) Intelligence, Surveillance, and Reconnaissance; 9) Navy Field Program; 10) Navy Scientific Analyst Program; 11) Navy Quick Response Projects; and (12) CNA Initiated Projects. CNA's analyses have resulted in substantial improvements in force structure, fleet effectiveness, and significant cost avoidance.

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 2007	FY 2008	FY 2009
CENTER FOR NAVAL ANALYSES, NAVY	40,398	39,973	41,764

**FY 2007 Accomplishments:**

- Continued to address issues of major importance to Navy leadership in the above research areas. CNA's Research Program will be continually updated to support the Navy efficiently and effectively. Support for the CNA field program, which assigns analysts to thirty four locations around the world, including at sea, will continue to comprise approximately 20% of the funding.

**FY 2008 Plans:**

- Continue all efforts of FY 2007.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605154N

PROJECT NUMBER: 0148

PROGRAM ELEMENT TITLE: CENTER FOR NAVAL ANALYSES

PROJECT TITLE: CENTER FOR NAVAL ANALYSES, NAVY

## **FY 2009 Plans:**

- Continue all efforts of FY 2008.

## **C. OTHER PROGRAM FUNDING SUMMARY - NAVY RELATED RDT&E:**

PE 0605873M Marine Corps Program Wide Support

### **OTHER PROGRAM FUNDING SUMMARY - NON-NAVY RELATED RDT&E:**

Not applicable.

## **D. ACQUISITION STRATEGY:**

Not applicable.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605155N  
PROGRAM ELEMENT TITLE: FLEET TACTICAL DEVELOPMENT AND EVALUATION

COST: (Dollars in Thousands)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
<b>Total PE</b>	2,526	0	0	0	0	0	0
0151 INTERTYPE TACT D&E	2,526	0	0	0	0	0	0

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This program element develops and updates tactics, techniques, and procedures (TTP) for new and existing weapons systems that directly improve the fleet's use of the Navy's weapon systems. Due to the evolving force structures and changing threat scenarios of 21st century warfare, the Navy faces a growing and continuous need to update fleet operational tactics. Through technical and analytical evaluations of fielded weapon systems, the Fleet Tactical Development and Evaluation (TAC D&E) Program funds the development and updating of fleet tactical procedures to better employ current and new weapon systems.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605155N  
PROGRAM ELEMENT TITLE: FLEET TACTICAL DEVELOPMENT AND EVALUATION

## B. PROGRAM CHANGE SUMMARY:

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY 2008/FY 2009 President's Budget Submission	2,585	0	0
SBIR Assessment	-59	0	0
FY 2009 President's Budget Submission	2,526	0	0

## PROGRAM CHANGE SUMMARY EXPLANATION:

Technical: Not applicable.

Schedule: Not applicable.

## C. OTHER PROGRAM FUNDING SUMMARY:

Not applicable.

## D. ACQUISITION STRATEGY:

## E. PERFORMANCE METRICS:

Tactical Development and Evaluation Projects are submitted by fleet commands and Warfare Centers of Excellence to the Numbered Fleet Commanders on an annual basis. The Numbered Fleets vet and prioritize shortfalls for Tactical Memorandum (TACMEMO) development. Once prioritized by the Expeditionary Strike Group (ESG), Navy Warfare Development Command (NWDC) competes each TAC D&E project through qualified subject matter expert (SME) contractors or Navy laboratories using performance based contracting. This process ensures the best value by targeting industry SMEs for short-term contracts while minimizing unnecessary or duplicative government infrastructure. Milestones are based on completed TACMEMOs and their use in fleet/unit operations. Currently we have 100% completion rate of projects funded over the last 5 years. Additional milestones are based on validation of TACMEMOs and their incorporation into operational doctrine.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605155N

PROJECT NUMBER: 0151

PROGRAM ELEMENT TITLE: FLEET TACTICAL DEVELOPMENT AND EVALUATION

PROJECT TITLE: INTERTYPE TACT D&E

COST: (Dollars in Thousands)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
0151 INTERTYPE TACT D&E	2,526	0	0	0	0	0	0

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This project develops and updates TTPs for new and existing weapons systems that directly improve the fleet's use of the Navy's weapon systems. Due to the evolving force structures and changing threat scenarios of 21st century warfare, the Navy faces a growing and continuous need to update fleet operational tactics. Through technical and analytical evaluations of fielded weapon systems, the Fleet TAC D&E Program funds the development and updating of fleet tactical procedures to better employ current and new weapon systems.

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 2007	FY 2008	FY 2009
<b>CHANGING THREAT SCENARIOS TO IMPROVE AND MEASURE FORCE READINESS</b>	430	0	0

The current asymmetric mode of warfare, as evidenced by the attacks on USS Cole and other U.S. interests, requires a detailed look at development of tactics and procedures to provide Naval forces protection, afloat and ashore. These projects provide a tactical advantage to Naval forces enabling continuous operation from an expanded and secure maneuver area on both land and sea. Additionally, these TTPs provide the means to accomplish this advantage thereby assuring freedom of access throughout the battle space.

**FY 2007 Accomplishments:**

- Completed TTP for Unmanned Air Vehicle (UAV) into Close Air Support (CAS).
- Completed TTP for Threat Specific SSK Diesel Submarine Tactical Memorandum (TACMEMO).
- Completed TTP for Submarine Mast Radar Vulnerability.
- Completed TTP for MK 234 NULKA Protection in vicinity of High Value Units (HVU).



# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605155N

PROJECT NUMBER: 0151

PROGRAM ELEMENT TITLE: FLEET TACTICAL DEVELOPMENT AND EVALUATION

PROJECT TITLE: INTERTYPE TACT D&E

- Developed TTP for Ship Stationing Tactical Decision Aid.
- Developed TTP to employ Air related Nontraditional Intelligence, Surveillance and Reconnaissance (NTISR).
- Developed TTP to maximize Mine Hunting Sonar's.
- Developed TTP to develop tactics for Jamming Coordination and Control.
- Established TTP from a detailed analysis of multiple target motion analysis (TMA) algorithms which are currently utilized to support submarine tactical and sonar systems.
- Established TTP for Integrating Naval Special Warfare and Information Operations.

## FY 2008 Plans:

Program Terminated

	FY 2007	FY 2008	FY 2009
<b>NEWLY EVOLVING FORCE STRUCTURES</b>	993	0	0

The TTPs being developed around evolving force structures provide the operational construct and architectural framework for Naval Warfare in the Information Age. They integrate warriors, sensors, networks, command and control, platforms and weapons into a distributed combat system scalable across the spectrum of conflict from seabed to space and sea to land.

## FY 2007 Accomplishments:

- Completed TTP for Cross Track Error and Channel Width Determination.
- Completed TTP for Maritime Interdiction Operations (MIO) Crisis Response Plan.
- Completed TTP for Integrated Hard Kill and Soft Kill Planning.
- Completed TTP for P-3C Aircraft Diesel Anti-Submarine Warfare (ASW) Tactics and Performance Validation.
- Developed TTP to Optimize Joint Forces Maritime Component Commander Airspace Control Authority.
- Developed TTP for SSN (Nuclear Submarine) Mine Susceptibility.
- Developed TTP to determine effectiveness of precision ammunition from a MK45 5"54 Light Weight Gun Mount, against small homing Unmanned Air Vehicles (UAVs) in vertical terminal dives.
- Developed TTP for Information Operations Tactics across all Warfare Areas.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605155N

PROGRAM ELEMENT TITLE: FLEET TACTICAL DEVELOPMENT AND EVALUATION

PROJECT NUMBER: 0151

PROJECT TITLE: INTERTYPE TACT D&E

- Developed TTP for Fusing Electronic Warfare (EW) and Automatic Identification System (AIS) Data to Enhance Maritime Domain Awareness.
- Developed TTP for Coordinated Airborne EW in a Campaign Scenario.
- Developed TTP to optimize against FA-18 Infrared-Red (IR) Vulnerabilities and Counter-Attack.

## FY 2008 Plans:

Program Terminated

	FY 2007	FY 2008	FY 2009
<b>NEW AND EXISTING WEAPON SYSTEMS EMPLOYMENT</b>	1,103	0	0

The emerging development and updating of advanced sensors and weapons systems requires continuous revision and promulgation of advanced tactics and procedures to assure that the Navy can project decisive and persistent offensive power anywhere in the world. TACMEMO's, i.e. TTP, that are developed maximize the Navy's Sea Strike capability through Network Centric Warfare and Navy Fires Networks.

## FY 2007 Accomplishments:

- Completed TTP for Standoff Land Attack Missile Expanded Response (SLAM-ER) Platform Specific Surface Warfare (SUW) Tactics.
- Completed TTP for SLAM-ER call for fires.
- Completed TTP MK-50/54 Torpedo Surface Mode Modeling.
- Completed TTP MK-50/54 Torpedo Re-Attack Guidance.
- Completed TTP for Threat Specific Torpedo Evasion TACMEMO.
- Developed TTP for Air ASW Tactics to counter sprint and drift Submarines.
- Developed TTP to employ MK 54 Lightweight Hybrid Torpedo.
- Developed TTP for the Analysis of preferred Aircraft placement of MK 54 Torpedoes.
- Developed TTP to conduct Reevaluation of Mine Warfare Bottom Types employment.
- Developed TTP for Tactical use of Kingfisher to detect torpedoes, low Doppler (hovering/bottomed) and 'midget' submarines.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605155N

PROJECT NUMBER: 0151

PROGRAM ELEMENT TITLE: FLEET TACTICAL DEVELOPMENT AND EVALUATION

PROJECT TITLE: INTERTYPE TACT D&E

- Established TTP for Torpedo Selection and Employment in a specified geographic area to support the current Operations Plan.
- Established TTP for Launch Platform Mission Planning (LPMP) Supporting Time Sensitive Targeting (TST).
- Established TTP for preemptive launch of IR decoys in a hostile landing zone.

## **FY 2008 Plans:**

Program Terminated

### **C. OTHER PROGRAM FUNDING SUMMARY - NAVY RELATED RDT&E:**

Not applicable.

### **OTHER PROGRAM FUNDING SUMMARY - NON-NAVY RELATED RDT&E:**

Not applicable.

### **D. ACQUISITION STRATEGY:**

Not applicable.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605502N  
PROGRAM ELEMENT TITLE: SMALL BUSINESS INNOVATIVE RESEARCH

COST: (Dollars in Thousands)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
<b>Total PE</b>	360,006	201,450	0	0	0	0	0
1812 NAVAIR SBIR PROGRAM	128,547	77,846	0	0	0	0	0
1813 SPAWAR SBIR PROGRAM	34,866	23,972	0	0	0	0	0
1814 NAVSEA SBIR PROGRAM	70,717	37,108	0	0	0	0	0
1824 CMC SBIR PROGRAM	14,706	7,952	0	0	0	0	0
1862 SSPO SBIR PROGRAM	2,841	1,669	0	0	0	0	0
1863 NAVSUP SBIR PROGRAM	800	500	0	0	0	0	0
1864 CNR SBIR PROGRAM	42,154	15,699	0	0	0	0	0
1865 SBIR ADMINISTRATION	3,712	1,371	0	0	0	0	0
2016 NAVFAC SBIR PROGRAM	500	500	0	0	0	0	0
2204 SMALL BUSINESS TECH TRANSFER PROGRAM	36,104	18,247	0	0	0	0	0
2240 NAVY DUAL USE TECHNOLOGY PROGRAM	964	719	0	0	0	0	0

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605502N  
PROGRAM ELEMENT TITLE: SMALL BUSINESS INNOVATIVE RESEARCH

2241 SBIR ADMIN - SPAWAR								
2,194	2,017	0	0	0	0	0	0	0
2242 SBIR ADMIN - NAVSEA								
5,672	3,173	0	0	0	0	0	0	0
2243 SBIR ADMIN - NAVAIR								
7,904	6,551	0	0	0	0	0	0	0
2244 SBIR ADMIN - NAVFAC								
13	30	0	0	0	0	0	0	0
2245 SBIR ADMIN - NAVSUP								
23	30	0	0	0	0	0	0	0
2248 SBIR ADMIN - SSPO								
173	140	0	0	0	0	0	0	0
2813 SBIR - NSMA								
4,704	2,000	0	0	0	0	0	0	0
2814 SBIR ADMIN - NSMA								
403	300	0	0	0	0	0	0	0
3201 SBIR CPP - NAVAIR								
1,279	778	0	0	0	0	0	0	0
3202 SBIR CPP - SPAWAR								
350	240	0	0	0	0	0	0	0
3203 SBIR CPP - NAVSEA								
674	371	0	0	0	0	0	0	0
3204 SBIR CPP - MARINE CORPS								
154	80	0	0	0	0	0	0	0
3205 SBIR CPP - ONR								
552	157	0	0	0	0	0	0	0

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605502N  
PROGRAM ELEMENT TITLE: SMALL BUSINESS INNOVATIVE RESEARCH

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** The Small Business Technology Transfer Program Reauthorization Act of 2001 (Section 9(n)(1) of 15 U.S.C. 638(n)(1)), requires "...each Federal agency that has an extramural budget for research or research and development, in excess of \$1,000,000,000..." "shall expend with small business concerns not less than the percentage of that extramural budget specified in subparagraph (B)...". This Program Element is funded in accordance with the Small Business Technology Transfer Program Reauthorization Act of 2001.

**B. PROGRAM CHANGE SUMMARY:**

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
SBIR Assessment	360,006	201,450	0
FY 2009 President's Budget Submission	360,006	201,450	0

**PROGRAM CHANGE SUMMARY EXPLANATION:**

Technical: Not applicable.

Schedule: Not applicable.

**C. OTHER PROGRAM FUNDING SUMMARY:**

Not applicable.

**D. ACQUISITION STRATEGY:**

Not applicable.

**E. PERFORMANCE METRICS:**

No Activity Information

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605804N  
PROGRAM ELEMENT TITLE: TECHNICAL INFORMATION SERVICES

COST: (Dollars in Thousands)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
<b>Total PE</b>	25,728	21,059	713	739	712	754	760
0835 TECHNICAL INFORMATION SERVICES	667	689	713	739	712	754	760
2296 FEDERAL LAB CONSORTIUM	392	0	0	0	0	0	0
9999 CONGRESSIONAL PLUS-UPS	24,669	20,370	0	0	0	0	0

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** The Technical Information Services program provides support to achieve affordability in the development of Navy systems by reducing life-cycle costs through the facilitation of advanced technology associations between U.S. industry and the Navy. Warfighting effectiveness is enhanced through strategic relationships with industry to commercialize the science and technology developed by the Naval Research Enterprise and to gain: strategic understanding of industry Independent Research and Development Programs and plans; access concepts and technologies; and access to business practices within the civil sector.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605804N  
PROGRAM ELEMENT TITLE: TECHNICAL INFORMATION SERVICES

**B. PROGRAM CHANGE SUMMARY:**

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY 2008/FY 2009 President's Budget Submission	24,976	694	708
Congressional Action	1,000	20,500	0
Congressional Undistributed Reductions/Rescissions	0	-135	0
Federal Technology Transfer	392	0	0
Rate Adjustments	0	0	5
SBIR Assessment	-640	0	0
FY 2009 President's Budget Submission	25,728	21,059	713

**PROGRAM CHANGE SUMMARY EXPLANATION:**

Technical: Not applicable.

Schedule: Not applicable.

**C. OTHER PROGRAM FUNDING SUMMARY:**

Not applicable.

**D. ACQUISITION STRATEGY:**

Not applicable.

**E. PERFORMANCE METRICS:**

Demonstrate support for technological transitions from the Naval Research Enterprise into industrial and commercial enterprises supporting Navy programs of record and warfighter needs, by being responsive to Offices of Research and Technology Applications focal points for technology transfer in their development of Cooperative Research and Development Agreements, and reducing transaction/information exchange timeframes by 25%.



# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06  
 PROGRAM ELEMENT: 0605804N      PROGRAM ELEMENT TITLE: TECHNICAL INFORMATION SERVICES  
 PROJECT NUMBER: 0835            PROJECT TITLE: TECHNICAL INFORMATION SERVICES

COST: (Dollars in Thousands)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
0835 TECHNICAL INFORMATION SERVICES	667	689	713	739	712	754	760

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** The goal for this project is to enhance warfighter effectiveness by: leveraging industry independent R&D science and technology base; developing strategic partnerships with industry to transition private sector technology; and transferring appropriate Navy-developed innovative concepts and inventions to the private sector for purposes of commercialization. (Public Law 96-480, Federal Technology Transfer Act of 1986)

This project also provides the Department of the Navy (DoN) interface to the Office of the Deputy Under Secretary of Defense for Science and Technology, Office of Technology Transition, and to the Assistant Secretary of Commerce for Technology Policy for matters relating to policy and reporting requirements for technology transfer.

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 2007	FY 2008	FY 2009
<b>TECHNICAL INFORMATION SERVICES</b>	667	689	713

Technical Information Services supports the spin-in and spin-out of research and development performed by Navy laboratories and industry. This program develops the tools and provides management oversight of the DoN Domestic Technology Transfer (T2) Program.

**FY 2007 Accomplishments:**

- Continued on-line job performance support and training tools for DoN technology transfer professionals.
- Continued to maintain the network tracking of technology transfer efforts required for Congressional reporting.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605804N

PROGRAM ELEMENT TITLE: TECHNICAL INFORMATION SERVICES

PROJECT NUMBER: 0835

PROJECT TITLE: TECHNICAL INFORMATION SERVICES

- Continued to revise 2002 Navy CRADA Handbook.
- Completed collaboration for industrialized "Cymbal" technology applicable to mine identification support.
- Increased outreach and marketing efforts.
- Initiated three new pilot programs: Evaluation of "commercial-off-the-shelf" (COTS) software to enable the Office of Research and Technology Applications (ORTA) to bundle patents across labs to enhance the Navy licensing program; Leveraging MBA technology commercialization course to perform intellectual property assessments, conduct market studies and find potential licensing partners; and Major overhaul and update of the online ORTA/Technology Transfer training site.

## **FY 2008 Plans:**

- Continue all Technical Information Services efforts of FY 2007 less those noted as completed above.
- Complete on-line job performance support and training tools for DoN technology transfer professionals.
- Complete Evaluation of COTS software to enable the ORTA to bundle patents across labs to enhance the Navy licensing program.
- Complete revising NAVY CRADA Handbook.
- Initiate three new pilot programs: Revising the Defense Technology Transfer Information System (DTTIS) database; Revising the ONR technology transfer website; and Leveraging with the Naval Research Enterprise Intern Program (NREIP) to fund student interns to support Navy ORTA activities.

## **FY 2009 Plans:**

- Continue all Technical Information Services of FY 2008 less those noted as completed above.
- Complete revising the DTTIS database.
- Complete revising the ONR technology transfer website.
- Initiate SECNAVINST 5700.16A revision.
- Initiate two new pilot programs.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605804N

PROJECT NUMBER: 0835

PROGRAM ELEMENT TITLE: TECHNICAL INFORMATION SERVICES

PROJECT TITLE: TECHNICAL INFORMATION SERVICES

**C. OTHER PROGRAM FUNDING SUMMARY - NAVY RELATED RDT&E::**

Not applicable.

**OTHER PROGRAM FUNDING SUMMARY - NON-NAVY RELATED RDT&E::**

Not applicable.

**D. ACQUISITION STRATEGY:**

Not applicable.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605804N

PROJECT NUMBER: 2296

PROGRAM ELEMENT TITLE: TECHNICAL INFORMATION SERVICES

PROJECT TITLE: FEDERAL LAB CONSORTIUM

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
2296 FEDERAL LAB CONSORTIUM	392	0	0	0	0	0	0

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** The Federal Laboratory Consortium for Technology Transfer (FLC) was established by Congress under the Federal Technology Transfer Act of 1986 (P.L. 99-502, 20 October 1986, as amended). The FLC, in cooperation with federal laboratories and the private sector, provides services to enhance the transfer of federally-developed technology to include activities such as: developing and administering technology transfer training courses and materials; assisting Federal agencies and laboratories in their technology transfer programs; and providing a clearinghouse for technology transfer requests.

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 2007	FY 2008	FY 2009
FEDERAL LAB CONSORTIUM	392	0	0

**FY 2007 Accomplishments:**

Funded the Federal Laboratory Consortium for Technology Transfer in compliance with the Federal Technology Transfer Act of 1986. (P.L. 99-502, 20 October 1986, as amended)

**C. OTHER PROGRAM FUNDING SUMMARY - NAVY RELATED RDT&E:**

Not applicable.

**OTHER PROGRAM FUNDING SUMMARY - NON-NAVY RELATED RDT&E:**

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605804N

PROJECT NUMBER: 2296

PROGRAM ELEMENT TITLE: TECHNICAL INFORMATION SERVICES

PROJECT TITLE: FEDERAL LAB CONSORTIUM

Not applicable.

**D. ACQUISITION STRATEGY:**

Not applicable.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605804N

PROJECT NUMBER: 9999

PROGRAM ELEMENT TITLE: TECHNICAL INFORMATION SERVICES

PROJECT TITLE: CONGRESSIONAL PLUS-UPS

**CONGRESSIONAL PLUS-UPS:**

	FY 2007	FY 2008
COMMERCIALIZATION OF ADVANCED TECHNOLOGY (CAT)	4,662	2,384

FY 2007: The Center for Commercialization of Advanced Technology (CCAT) facilitated the development of commercial and alternative applications of government-sponsored technologies and developed high-tech solutions using advances in technology from academia and the private sector for use in government defined priority issues. CCAT executed product development awards and provided business development expertise and market identification and analysis to small businesses.

FY 2008: Continue to support the CCAT efforts.

	FY 2007	FY 2008
HTDV	3,885	9,938

FY 2007: Hawaii Technology Development Venture (HTDV) provided 15-25 grants awarded in a competitive proposal process to support continued investment in local technology companies research on UAV sensor packages, robotics applications, force protection and IED detection, prevention and threat elimination; conducted workshops on project management, business enterprise and proposal preparation; and initiated a mentoring program linking large DoD contractors with local small businesses.

FY 2008: Continue to support HTDV efforts.

	FY 2007	FY 2008
ILLINOIS TECHNOLOGY TRANSITION CENTER	1,603	0

The Illinois Technology Transition Center being managed by the Illinois Technology Development Alliance (ITDA) provided technology transition and commercialization services by identifying technology needs within the Navy, identifying small businesses and technologies with possible solutions to these needs, performing technology transition and commercialization assistance to these companies, and administering an award program where ITDA will bridge the resource gap between technology development and commercialization.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605804N

PROJECT NUMBER: 9999

PROGRAM ELEMENT TITLE: TECHNICAL INFORMATION SERVICES

PROJECT TITLE: CONGRESSIONAL PLUS-UPS

	FY 2007	FY 2008
INTEGRATED MANUFACTURING ENTERPRISE	1,603	1,589

FY 2007: The Integrated Manufacturing Enterprise program continued to significantly impact the cost quality and schedule of Navy ships through the implementation of state-of-the-art best practices, across a wide spectrum of disciplines, including information processing, business practices, manufacturing process controls and supply chain management and planning. The Louisiana Center of Manufacturing Sciences (LCMS) and its membership of commercial manufacturers continued and extended the benefits previously demonstrated by the exploitation of previous investment in best practices and technologies by their organizations for application to the Navy's shipbuilding program. The processes implemented in this program will be readily transferable to other ship construction and overhaul activities, both public and private, multiplying the benefit to the Navy several-fold.

FY 2008: The LCMS is developing approaches and tools to improve shipbuilding production planning in order to reduce ship acquisition cost. This effort involves increasing the integration of ship design with production and reducing the cost of delivering relevant production information to the shop floor.

	FY 2007	FY 2008
JOINT INFORMATION TECHNOLOGY CENTER (JITC)	5,632	0

The Joint Interoperability Test Command (JITC) project funded early stage development to directly link the current and projected Service / Defense Agency information systems, applications and capabilities to Global Command Support System requirements; identified the Joint Decision Support Tool that will provide for mission analysis and operational collaboration capabilities; and identified those data elements that will provide for a Common Data Representation.

	FY 2007	FY 2008
PACIFIC-BASED JOINT INFO TECH CENTER	7,284	6,459

FY 2007: The Pacific-Based Joint Information Technology Center supported research and development of theater medical surveillance networks and the joint medical logistics web site development for DoD asset visibility. Both programs were jointly funded by ONR and the Defense Medical Logistics project. In support of the J4 Staff, Joint Chiefs of Staff funds continued research and development for developing cross domain solutions

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605804N

PROGRAM ELEMENT TITLE: TECHNICAL INFORMATION SERVICES

PROJECT NUMBER: 9999

PROJECT TITLE: CONGRESSIONAL PLUS-UPS

capable of sharing information between networks of differing security levels for both U.S. and coalition network environments. Supported research and development of methods for the extraction of information from U.S. logistics information systems to develop a comprehensive supply chain management tool for the Joint Staff and Combatant Commanders. Supported educational outreach K-12 in Hawaii to engage students in emerging technology applications.

FY 2008: Continue to support the Pacific-Based Joint Info Tech Center efforts.



## CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification						DATE: February 2008	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-6				R-1 ITEM NOMENCLATURE 0605853N Management, Technical and International Support			
COST (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	43.752	48.441	51.568	52.762	53.737	55.436	56.604
0149 International Cooperative RDT&E	3.181	4.797	4.925	4.973	4.772	5.131	5.231
1767 Naval War College/Center for Naval Warfare Studies	2.996	3.634	4.136	4.193	4.274	4.356	4.438
2221 Assessment Program	21.008	21.645	22.529	22.693	23.262	23.929	24.399
3025 Mid-Range Financial Improvement Plans	1.481	1.584	1.571	1.636	1.585	1.685	1.702
3039 CHENG	15.086	16.781	18.407	19.267	19.844	20.335	20.834
Quantity of RDT&E Articles	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

International Cooperative RDT&E: This project provides program management, execution, and support to implement a broad range of cooperative Naval Research and Development, Test and Evaluation (RDT&E) initiatives to improve coalition interoperability, harmonize U.S. Navy requirements with allied and friendly nations, and identify cooperative international opportunities. In addition, it develops coordinated approaches in consultation with Combatant Commanders (COCOMs), Chief of Naval Operations (CNO), Office of Naval Research (ONR) and Maritime Partner nations, to sea-based missile defense, command, control, communications, computers and intelligence (C4I), cooperative acquisition programs, and identifies technology to support the Global Maritime Partnership Initiative. The project scope in FY07 was expanded from primarily North Atlantic Treaty Organization (NATO)-centric to include a Maritime Domain Awareness/Maritime Situational Awareness (MDA/MSA), Global War on Terrorism (GWOT), and Irregular War emphasis. Relationships have been, and are being initiated with a greatly expanded and diverse group of maritime countries, particularly those with nascent and littoral navies, located in new regions critical to U.S. security. The project was restructured internally to both maintain ongoing international relationships and current projects, while facilitating support to a growing global network of maritime nations under MDA/MSA and increasing Irregular Warfare requirements.

Naval War College (NWC) research, analysis and gaming activities serve as a focal point, stimulus, and major source of strategic and operational thought within the Navy, Joint and Interagency communities. These efforts generate strategic and operational alternatives, quantitative analysis, war gaming and political military assessments, and provide recommendations to the Chief of Naval Operations (CNO) and Navy Component Commanders regarding the formulation and execution of options for the President of the United States.

## CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY / BA-6</b>	R-1 ITEM NOMENCLATURE 0605853N Management, Technical and International Support
<p><b>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION (Cont.):</b></p> <p>Assessment Program: Provides capability based planning assessment for Joint Capabilities Integration and Development System (JCIDS), conducts analysis to affect warfighting capability trades and enterprise resources, identifies needs, gaps, and overlaps, and assesses alternative solutions to Joint needs. Manages Office of the Chief of Naval Operations (OPNAV) support to Office of the Secretary of Defense (OSD)/Navy's analytic agenda. Provides overarching Planning, Programming and Budgeting System (PPBS) analyses and guidance for Planning, Programming and Budgeting Execution (PPBE) which provides gap analysis and investment strategy and Total Obligation Authority (TOA) allocation. Provides independent capability analysis directly to Chief of Naval Operations (CNO) and assists in structuring follow-on OPNAV analyses. The program coordinates Navy's position for the Enhanced Planning Process and conducts Net Assessments. This program serves as the lead campaign analysis for Office of the Chief of Naval Operations (OPNAV) and supports Concept of Operations (CONOPS) analysis and Chief of Naval Operations Investment Strategy assessments, all of which prove analytical underpinnings/basis for programmatic decisions of the Navy's top leadership regarding the integration of all Navy warfare and support requirements. This program is dual-hated as the head of CNO's Capability Analysis Group and serves the CNO directly as an independent assessor providing a broad-view perspective across the Navy staff apart from resource sponsors, with an integrated look at both warfighting and warfighting support programs. Program supports the world class modeling efforts to attain a level of modeling and simulation capability that is world class and establishes OPNAV as a leader in the Department of Defense (DoD) modeling and simulation community. Provides the CNO alternatives in assessing the implications imbedded within resource decisions in a quantified context of costs versus capability versus risk. This program provides independent analytic support to Navy leadership in conjunction with various executive level decision forums. The Assessment Program develops tools and analytical methodologies that assist in evaluating Navy programs and provides technical leadership for the analysis functional area of Naval Modeling and Simulation.</p> <p>Capital Asset Management System: This project supports the Research Development Test &amp; Evaluation, Navy (RDT&amp;E,N) and Office of Naval Research (ONR) portion of the larger DoD and Navy-wide effort to implement the Financial Improvement Plan (FIP). Corrective actions required to resolve known deficiencies and determine resource requirements (people and systems) have been identified. Funding beyond FY 2007 is for the sustainment of the clean and auditable statements for RDT&amp;E,N/ONR.</p> <p>CHENG: funds the Assistant Secretary of the Navy for Research, Development and Acquisition (ASN RD&amp;A) Chief Engineer (RDA CHENG) to develop and implement architecture-based systems engineering processes, methods and tools that assure integrated and interoperable systems are delivered to the fleet. This project provides the mission-oriented technical basis for implementing capability-based acquisition management within the Department of Navy (DON) to engineer and field Navy and Marine Corps combat systems, weapon systems, and command, control, communication, computer and intelligence (C4I) programs that must operate as family-of-systems (FoS) or system-of-systems (SoS). The focus of this project is on identifying the functions, relationships, and connections between systems at both the force and unit level and across warfare mission areas, and encompasses three key elements: Systems Engineering to provide the framework for making engineering decisions by warfighting capability at the FoS/SoS level and supports consistent engineering and investment decision-making across Navy and Marine Corps programs within capability-based acquisition portfolios. Naval Collaborative Engineering Environment development and implementation as a DON enterprise resource for Naval integration and interoperability information to enable collaboration and decision support among Fleet organizations, Program Executive Offices, Program Managers, Systems Commands, prime contractors, Resource/Warfare Sponsors and Comptroller organizations. Standards, Policies and Guidelines engineering and technical staff to implement DON, OSD and Joint integration and interoperability and Anti-Tamper requirements. Program increase in FY 2007 implements DON Anti-Tamper program to protect critical technology investments.</p>	

Exhibit R-2 RDTEN Budget Item Justification

## CLASSIFICATION:

EXHIBIT R-2 RDT&amp;E Budget Item Justification

DATE:

February 2008

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

RDT&amp;E, N / BA-6

0605853N Management, Technical and International Support

**C. PROGRAM CHANGE SUMMARY:**

Funding:	FY 2007	FY 2008	FY 2009
FY08/09 PB Submit	45.126	49.498	50.311
FY09 PB Submit	43.752	48.441	51.568
Total Adjustments	-1.374	-1.057	1.257

## Summary of Adjustments:

SBIR	-0.913	-0.629	0.000
Misc. Congressional Adjustments	-0.001	-0.428	0.000
Miscellaneous Adjustments	-0.460	0.000	1.257
	-1.374	-1.057	1.257

## Schedule:

Not Applicable

## Technical:

Not Applicable

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification				DATE: <b>February 2008</b>				
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>		PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support		PROJECT NUMBER AND NAME 0149 INTERNATIONAL COOP RDT&E				
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost		3.181	4.797	4.925	4.973	4.772	5.131	5.231
RDT&E Articles Qty								

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

The increase from FY07 to FY08 will facilitate the expanding support in Global Maritime Partnership Initiatives including cooperative exchanges and projects contributing to Maritime Domain Awareness/Maritime Situational Awareness (MDA/MSA), Global War on Terrorism (GWOT), Maritime Safety and Security and Irregular Warfare. Funds will be used to promote projects that fill capability gaps in the near-term and that develop promising technologies.

This project provides program management, execution, and support to implement a broad range of cooperative Naval Research and Development, Test and Evaluation (RDT&E) initiatives to improve coalition interoperability, harmonize U.S. Navy requirements with allied and friendly nations, and identify cooperative international opportunities. In addition, it develops coordinated approaches in consultation with Combatant Commanders (COCOMs), Chief of Naval Operations (CNO), Office of Naval Research (ONR) and Maritime Partner nations, to sea-based missile defense, command, control, communications, computers and intelligence (C4I), cooperative acquisition programs, and identifies technology to support the Global Maritime Partnership Initiative.

The project scope in FY07 was expanded from primarily North Atlantic Treaty Organization (NATO)-centric to include a Maritime Domain Awareness/Maritime Situational Awareness (MDA/MSA), Global War on Terrorism (GWOT), and Irregular War emphasis. Relationships have been, and are being initiated with a greatly expanded and diverse group of maritime countries, particularly those with nascent and littoral navies, located in new regions critical to U.S. security. The project was restructured internally to both maintain ongoing international relationships and current projects, while facilitating support to a growing global network of maritime nations under MDA/MSA and increasing Irregular Warfare requirements.

On-going cooperative RDT&E programs, projects and exchanges are pursued to identify cooperative acquisition programs, enhance Irregular Warfare efforts and MDA/MSA development, fill capability gaps, improve U.S. and coalition interoperability, and set standardization with international partners. Such efforts have resulted in:

1. Negotiating and developing approximately 57 International RDT&E Agreements annually with allied and friendly nations;
2. Executing over 300 Information Exchange Annexes (IEAs) with foreign partners;
3. Improving IEA information dissemination with allied and friendly countries and within Department of the Navy (DoN);
4. Leading Office of the Chief of Naval Operations (OPNAV) input to Office of the Under Secretary of Defense (OUSD) Acquisition, Technology, and Logistics (AT&L) Foreign Comparative Test (FCT) Program, Coalition Warfare Program, and Technology Transfer Security Assistance Review Boards (TTSARB).
5. Represent the US Navy in Office of the Secretary of Defense (OSD)-directed Armaments Cooperation Forums, including the Conference of NATO Armaments Directors' groups (NATO Naval Armaments Group (NNAG)), and Senior National Representative-Maritime (SNR-M);
6. Leading the Engineering and Scientist Exchange Program (ESEP);
7. Funding of various international support databases including Information/Data Exchange Agreements, ESEP and Project Agreements/Memorandums of Understanding.

R-2a RD TEN Project Justification

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 0149 INTERNATIONAL COOP RDT&E
<p><b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION (continued):</b></p> <p>Performance Metrics:  The Navy International Cooperative RDT&amp;E Project 0149 supports the implementation of many international cooperative program activities throughout the Department of the Navy (DoN) RDT&amp;E communities. The project funds DoN participation in NATO and OSD-lead Armaments Cooperation as well as DoN-lead international cooperation that promote coalition interoperability and set standards with international partners. The focused activities under Project 0149 maximize the DoN's efforts by leveraging international technologies and funding to fill capabilities gaps, gain access to foreign research and testing data, and avoid duplication of research and development efforts. The performance goals/metrics are, in cooperation with Maritime Partner nations, to set and harmonize requirements, utilize respective technologies, encourage financial contributions and facilities use, and support forums and work that reduce DoN funding requirements.</p>		

R-2a RDTEN Project Justification

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 0149 INTERNATIONAL COOP RDT&E

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 07	FY 08	FY 09
<b>International Coop</b>	3.181	4.797	4.925

## FY07:

- Initiated and supported Maritime Theater Missile Defense Forum that obtained \$9.6M in R&D monies from partner nation contributions. The multi-lateral forum (7 Maritime Partner countries and the US Navy) entered into four International Agreements (Battle Management, Command, Control, Communications, Computers and Intelligence (BMC4I); Distributed Engineering Plant, Open Architecture and Modeling and Simulation (M&S).
- Funded various evolving potential cooperative exchanges and projects contributing to MDA/MSA and Irregular Warfare including Multi-Mission Aircraft, Broad Area Maritime Surveillance, Submarine Littoral Weapons System, and Swimmer Engagement.
- Initiated and linked up US Navy International Bench, a new internet-based connector and composeable tool to enhance collaboration between US military and agency personnel engaged in international work.
- Maintained internal DoN international databases to support international cooperative activities and projects with allies. Assessed functional ability to integrate DoN international databases across OPNAV departments to improve leveraging of program dollars, fielding of better products and speeding delivery.
- Continued to lead US Navy's participation in OUSD AT&L's Foreign Comparative Test (FCT) Program and the Coalition Warfare Program (CWP) selection processes to meet emerging military capability requirements.
- Continued execution of over 300 Information/Data Exchange Agreements (IEA/DEA) with more than 30 countries.
- Continued execution and support of placement of US Navy and partner nation engineers and scientists under OSD's Engineer and Scientist Exchange Program (ESEP).
- Coordinated US Navy support to OUSD (AT&L) International Cooperation office.
- Supported new CNO-initiated Strategy Dialogue with Australia, including Air and Expeditionary Warfare Working Groups for mutual development of requirements and projects.
- Supported NATO Naval Armaments Group (NNAG) and Five Power Groups on cooperative programs including Harbor Protection, Electronic Warfare, and Defense Against Terrorism (DAT) trials.

## FY 08:

- Continue all efforts of FY 07.

## FY 09:

- Continue all efforts of FY 08.

**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 0149 INTERNATIONAL COOP RDT&E
<p><b>C. OTHER PROGRAM FUNDING SUMMARY:</b></p> <p>Not Applicable</p> <p><b>D. ACQUISITION STRATEGY:</b></p> <p>Not Applicable</p> <p><b>E. MAJOR PERFORMERS</b></p> <p>Not Applicable</p>		

R-2a RD TEN Project Justification

**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification					DATE: <b>February 2008</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>		PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support			PROJECT NUMBER AND NAME 1767 NAVAL WAR COLLEGE STRATEGIC STUDIES SUPT		
COST (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost	2.996	3.634	4.136	4.193	4.274	4.356	4.438
RDT&E Articles Qty							

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

Naval War College (NWC) research, analysis and gaming activities serve as a focal point, stimulus, and major source of strategic and operational thought within the Navy, Joint and Interagency communities. These efforts generate strategic and operational alternatives, tactical imperatives, quantitative analysis, war gaming, political-military assessments, and provide recommendations to the Chief of Naval Operations (CNO), Fleet Commanders and numbered Fleet Commanders regarding the formulation and execution of maritime options for the President of the United States.

**Performance Metrics:**

This project provides research, analysis and war gaming to meet the needs of the Secretary of the Navy, the Chief of Naval Operations, and Fleet Commanders. Performance is measured in terms of both the quantity and quality of war games, analysis and the extent to which demand for war games and research products can be accommodated within funding levels. Results of research products and war games are evaluated through customer feedback and the extent to which findings are incorporated into follow-on research and practical applications such as Navy doctrine, operational tactics, and programming decisions made during the Planning, Programming, Budgeting & Execution (PPBE) process.

R-2a RD TEN Project Justification



## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 1767 NAVAL WAR COLLEGE STRATEGIC STUDIES SUPT	
<b>B. ACCOMPLISHMENTS/PLANNED PROGRAM:</b>			
	FY 07	FY 08	FY 09
<b>Strategic Studies</b>	1.348	1.721	1.871
<p>Naval War College (NWC) conducts research in strategic studies in response to tasking from the Secretary of the Navy (SECNAV), CNO, Fleet Commanders, numbered Fleet Commanders, and Combatant Commanders. NWC also hosts the activities of the Chief of Naval Operations (CNO's) Strategic Studies Group (SSG). The CNO SSG is a select group of senior naval officers handpicked by the CNO, who report to him in the development of revolutionary warfighting and operational concepts, such as Sea Strike and FORCEnet.</p> <p><b>FY07:</b></p> <ul style="list-style-type: none"> <li>- Continued to conduct research and analysis projects and provide supporting events for Office of the Chief of Naval Operations (OPNAV), the numbered Fleets, Navy Component Commanders, and the Combatant Commanders. Projects were in direct support of warfighting analysis requirements for numbered fleet commanders and were expanded to include Commander Seventh Fleet (C7F) with particular focus on India and the Indian Ocean.</li> <li>- Continued to support the OPNAV Staff on the Proliferation Security Initiative (PSI) and supported Office of Naval Intelligence (ONI) on Chinese maritime developments.</li> <li>- CNO SSG completed tasking from the CNO to SSG XXVI to address "fighting in cyberspace in 2030."</li> </ul> <p><b>FY08:</b></p> <ul style="list-style-type: none"> <li>- Continue to conduct research and analysis projects and provide supporting events for OPNAV, the numbered Fleets, Navy Component Commanders, and the Combatant Commanders. Projects in direct support of numbered fleet commanders are expected to grow in scope.</li> <li>- Continue to support the OPNAV Staff on the PSI and support ONI on Chinese maritime developments.</li> <li>- Initiate revolutionary operating and warfighting concepts for 2035 and beyond under CNO tasking.</li> </ul> <p><b>FY09:</b></p> <ul style="list-style-type: none"> <li>- Continue all efforts of FY08.</li> </ul>			

R-2a RDTEEN Project Justification

**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 1767 NAVAL WAR COLLEGE STRATEGIC STUDIES SUPT

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 07	FY 08	FY 09
<b>Naval War Gaming Support</b>	0.907	1.058	1.090

NWC conducts strategic and operational war gaming and research for OPNAV, the numbered Fleets, Fleet Commanders, and the Combatant Commanders. Each year, 50-60 major war games and associated events provide support to efforts that explore and analyze military, political, informational and economic aspects of differing strategic and operational scenarios and tactical imperatives.

**FY07:**

- Continued to conduct 55-60 major war games and related events in support of OPNAV, the numbered Fleets, Fleet Commanders, and the Combatant Commanders.
- Continued to conduct operational research and experimentation for Joint Force Maritime Component Commander (JFMCC) concept development via JFMCC Center of Excellence.
- Continued to conduct analytical research on key operational challenges such as theater Anti Submarine Warfare (ASW), submarine payloads, seaborne maritime missile defense, global maritime security, maritime homeland defense, maritime domain awareness, and Sea Basing.
- Continued to conduct research supporting war games co-sponsored with Naval Warfare Development Command (NWDC) and US Joint Forces Command.
- Continued to develop advanced war gaming analytical methods and tools.
- Continued to conduct analytic research on effects based operations and systems thinking for Naval Forces Europe (NAVEUR) and Navy Component for Central Command (NAVCENT).
- Continued to conduct research in advanced adaptive Command and Control (C2) for Office of Naval Research (ONR).
- Continued to develop educational materials for Naval Operations Planners Course (NOPC).
- Continued to conduct high level policy analytic research and gaming addressing Proliferation Security Initiatives for Office of the Secretary of Defense (OSD).
- Continued to support CNO Maritime Strategy and operational concepts through analytical war gaming.

**FY08:**

- Continue all efforts of FY07.
- Initiate Maritime Operations Training for officer and enlisted personnel.

**FY09:**

- Continue all efforts of FY08.
- Initiate Maritime Operations Training for officer and enlisted personnel to raise throughput.

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 1767 NAVAL WAR COLLEGE STRATEGIC STUDIES SUPT

## B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 07	FY 08	FY 09
<b>Warfare Analysis and Research</b>	0.266	0.414	0.424

NWC supports senior decision-makers from the Department of Defense, Department of the Navy, the numbered Fleets, Fleet Commanders and Combatant Commanders in reaching well-informed, objective decisions on strategic, operational and programmatic issues through collaborative research which integrates traditional research and analysis with advanced decision support tools. Each year, 30-40 events provide support to efforts that explore and analyze a wide range of issues and their associated factors which address future needs of the Service. These issues and decisions can then be further tested and evaluated in conjunction with our wargaming center.

## FY07:

- Continued to conduct major decision events in support of OPNAV, the numbered Fleets, Fleet Commanders, and the Combatant Commanders. 30-40 major decision events were conducted.
- Conducted analytical research on key strategic and operational challenges such as maritime ballistic missile defense, proliferation security initiative, global maritime security, maritime situational awareness, maritime operations headquarters, interconnectivity, and multi-service force deployment.
- Continued additional evaluation of concepts and decision events in conjunction with war gaming center.
- Continued to provide direct support to NWC student research groups and war gaming.

## FY08:

- Continue all efforts of FY07.

## FY09:

- Continue all efforts of FY08.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
<b>RDT&amp;E, N / BA-6</b>	0605853N Management, Technical and International Support	1767 NAVAL WAR COLLEGE STRATEGIC STUDIES SUPT

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 07	FY 08	FY 09
<b>NWC Student Research Projects</b>	0.150	0.149	0.152

Selected, top performing Naval War College (NWC) students to conduct focused research and analysis of current and future strategic and operational challenges and tactical imperatives. These students are organized under the supervision of the Mahan Scholars Program and the Halsey Group Program.

FY07:

- Conducted focused research, analysis and war gaming of current and future strategic/operational challenges and tactical imperatives by the Halsey Group and Mahan Scholars programs.
- Conducted research targeted at the strategic and policy level decision making within China.
- Research groups continued to conduct focused research, analysis and free-play war gaming of current and future operational challenges and tactical imperatives arising from regional threats, homeland defense and access denial efforts at the high end of the conflict spectrum in the Pacific, European Command (EUCOM), Central Command (CENTCOM) and Northern Command (NORTHCOM) area of responsibility (AOR). Research and analysis efforts continued in those areas above, and was expanded to include a detailed focus on counter-targeting, operational deception, and countering information denial and missile defense at the theater joint operational level.
- Conducted research for Deputy Secretary of Defense (DEPSECDEF) on matters tasked to the College.

FY08:

- Continue all efforts of FY07.

FY09:

- Continue all efforts of FY08.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 1767 NAVAL WAR COLLEGE STRATEGIC STUDIES SUPT

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 07	FY 08	FY 09
<b>Maritime Headquarters (MHQ)/Maritime Operations (MOC) Analysis</b>	0.000	0.292	0.599

Formerly JFMCC/Worldwide Naval Component Commanders (WNCC). Naval War College (NWC) conducts research and analysis at the operational level of war, including direct support for the Maritime Headquarters (MHQ) with Maritime Operations Center (MOC) and Combined/Joint Forces Maritime Component Commander (C/JFMCC) activities. These activities include support for concept and doctrine development of numbered fleet war games, exercises, education, research and analysis. NWC is responsible for development of Professional Military Education for Naval Component Commanders and Numbered Fleet Staff personnel, and the Numbered Fleet Commander, including education and research initiatives in support of concept of operations development, training and C/JFMCC advisory and assist team.

FY07: Not Applicable

FY08:

- Conduct research and analysis projects and provide support of MHQ with MOC and C/JFMCC activities and direct support for the numbered Fleet Commanders. Efforts include assist team visits in support of analysis and definition of maritime operational processes, including execution battle management, tasking subordinates, operational level planning and operational/effects assessment.

FY09:

- Continue all efforts of FY08.

**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 1767 NAVAL WAR COLLEGE STRATEGIC STUDIES SUPT

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 07	FY 08	FY 09
<b>Maritime Strategy</b>	0.325	0.000	0.000

Naval War College (NWC) has been directed by OPNAV N3/5 to support the development of a new maritime strategy, as called for by the CNO. NWC will serve as the lead organization to coordinate the efforts of the Naval Postgraduate School, the US Naval Academy and to integrate the results of workshops and conferences held by a range of outside agencies.

**FY07:**

- Conducted two major war games and two conferences to support the research and analysis effort. In addition, NWC carried out a program of national and international outreach as an integral part of the strategy development process. Included in this process were a series of 10 public seminars around the nation, and several high-level executive conferences to vet and socialize the maritime strategy process and to seek additional ideas from key policy makers, industry, the American public and selected elements of the international community.

**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification	DATE: <b>February 2008</b>
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APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 1767 NAVAL WAR COLLEGE STRATEGIC STUDIES SUPT
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**C. OTHER PROGRAM FUNDING SUMMARY:**

Not Applicable

**D. ACQUISITION STRATEGY:**

Not Applicable

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2008	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6		PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support			PROJECT NUMBER AND NAME 2221 Assessment Program		
COST (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY2011	FY2012	FY2013
Project Cost	21.008	21.645	22.529	22.693	23.262	23.929	24.399
RDT&E Articles Qty							

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

Project 2221, Assessment Program, provides capability based planning assessment for Joint Capabilities Integration and Development System (JCIDS), conducts analysis to affect warfighting capability trades and enterprise resources, identifies needs, gaps, and overlaps, and assesses alternative solutions to Joint needs. Manages Office of the Chief of Naval Operations (OPNAV) support to Office of the Secretary of Defense (OSD)/Navy's analytic agenda. Provides overarching Planning, Programming and Budgeting System (PPBS) analyses and guidance for Planning, Programming and Budgeting Execution (PPBE) which provides gap analysis and investment strategy and Total Obligation Authority (TOA) allocation. Provides independent capability analysis directly to Chief of Naval Operations (CNO) and assists in structuring follow-on OPNAV analyses. The program coordinates Navy's position for the Enhanced Planning Process and conducts Net Assessments. This program serves as the lead campaign analysis for Office of the Chief of Naval Operations (OPNAV) and supports Concept of Operations (CONOPS) analysis and Chief of Naval Operations Investment Strategy assessments, all of which provide analytical underpinnings/basis for programmatic decisions of the Navy's top leadership regarding the integration of all Navy warfare and support requirements. This program is dual-hatted as the head of CNO's Capability Analysis Group and serves the CNO directly as an independent assessor providing a broad-view perspective across the Navy staff apart from resource sponsors, with an integrated look at both warfighting and warfighting support programs. Program supports the world class modeling efforts to attain a level of modeling and simulation capability that is world class and establishes OPNAV as a leader in the Department of Defense (DoD) modeling and simulation community. Provides the CNO alternatives in assessing the implications imbedded within resource decisions in a quantified context of costs versus capability versus risk. This program provides independent analytic support to Navy leadership in conjunction with various executive level decision forums. The Assessment Program develops tools and analytical methodologies that assist in evaluating Navy programs and provides technical leadership for the analysis functional area of Naval Modeling and Simulation.



**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 2221 Assessment Program

**B. Accomplishments/Planned Program**

	FY 07	FY 08	FY 09
<b>Navy Standard Scenarios</b>	1.451	1.485	1.520

**FY07:**  
Developed, updated and maintained detailed level Navy Standard scenarios based on Defense Planning Guidance. Developed alternative scenarios in support of upcoming Quadrennial Defense Review (QDR), Joint studies, and Navy resource analyses. Developed, updated and maintained analytic baselines for the Major Combat Operations (MCO) based on Defense Planning Guidance.

**FY08:**  
Continue to develop, update and maintain detailed level Navy Standard scenarios based on Defense Planning Guidance. Continue to develop alternative scenarios in support of Quadrennial Defense Review (QDR), Joint studies, and Navy resource analyses. Continue to develop, update and maintain analytic baselines for the Major Combat Operations (MCO) based on Defense Planning Guidance.

**FY09:**  
Continue to develop, update and maintain detailed level Navy Standard scenarios based on Defense Planning Guidance. Continue to develop alternative scenarios in support of Quadrennial Defense Review (QDR), Joint studies, and Navy resource analyses. Continue to develop, update and maintain analytic baselines for the Major Combat Operations (MCO) based on Defense Planning Guidance.

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 2221 Assessment Program

**B. Accomplishments/Planned Program**

	FY 07	FY 08	FY 09
<b>Capability Based Assessments</b>	2.732	2.797	2.864

FY 07: Assessed capability sponsors' products for Navy senior leadership decision forums. Performed collaborative assessment with capability sponsors. Proactively participated in Capability Sponsors' Integrated Processing Teams (IPTs). Continued to present opposing analytically-based points of view to the CNO and Navy senior leadership. Provided analytically-based decision recommendations to CNO for both warfighting and support areas. Developed CNO Investment strategy recommendations and performed assessments for Program Review (PR)-09 and Program Objective Memorandum (POM)-10. Assessed capability sponsor's products for senior leadership decision forums. Conducted Verification, Validation & Accreditation (VV&A) of warfare, performance, and pricing models. Conducted Global War on Terrorism (GWOT) Capabilities-Based Assessment that provided a rapid and scalable process to utilize a Concept of Operation (CONOPS) and developed investment strategy and a capability roadmap. Conducted Tactical Aircraft (TACAIR) Recapitalization alternatives and Theater Ballistic Missile Defense (TBMD) cost capability trade off assessments. Conducted independent assessment of Anti-Submarine Warfare (ASW). Conducted weapons safety and sea basing capabilities assessments. Conducted Intelligence-Surveillance-Reconnaissance (ISR) and Meteorological and Oceanographic (METOC) assessment to determine the optimal mix of naval ISR and METOC sensors, platforms, and processing, analysis and fusion disposition to support Major Combat Operations (MCOs), the GWOT, and intelligence preparation of the environment for both MCOs and GWOT. Performed Capabilities-Based Assessments (CBAs) to meet the requirements of current and future scenarios, and make strategic decisions within a constrained economic framework.

FY 08: Continue to assess capability sponsors' products for Navy senior leadership decision forums. Continue to perform collaborative assessment with capability sponsors. Continue to proactively participate in Capability Sponsors' Integrated Processing Teams (IPTs). Continue to present opposing analytically-based points of view to the CNO and Navy senior leadership. Continue to provide analytically-based decision recommendations to CNO for both warfighting and support areas. Continue to develop CNO Investment strategy recommendations and perform assessments for Program Review-09 and POM-10. Continue to assess capability sponsor's products for senior leadership decision forums. Continue to conduct Verification, Validation & Accreditation (VV&A) of warfare, performance, and pricing models. Continue to conduct Global War on Terrorism (GWOT) Capabilities-Based Assessment that provided a rapid and scalable process to utilize a Concept of Operation (CONOPS) and develop investment strategy and a capability roadmap. Continue to conduct Tactical Aircraft (TACAIR) Recapitalization alternatives and Theater Ballistic Missile Defense (TBMD) cost capability trade off assessments. Continue to conduct independent assessment of Anti-Submarine Warfare (ASW). Continue to conduct weapons safety and sea basing capabilities assessments. Continue to conduct Intelligence-Surveillance-Reconnaissance (ISR) and Meteorological and Oceanographic (METOC) assessment to determine the optimal mix of naval ISR and METOC sensors, platforms, and processing, analysis and fusion disposition to support Major Combat Operations (MCOs), the GWOT, and intelligence preparation of the environment for both MCOs and GWOT. Continue to perform Capabilities-Based Assessments (CBAs) to meet the requirements of current and future scenarios, and make strategic decisions within a constrained economic framework.

FY09: Continue to assess capability sponsors' products for Navy senior leadership decision forums. Continue to perform collaborative assessment with capability sponsors. Continue to proactively participate in Capability Sponsors' Integrated Processing Teams (IPTs). Continue to present opposing analytically-based points of view to the CNO and Navy senior leadership. Continue to provide analytically-based decision recommendations to CNO for both warfighting and support areas. Continue to develop CNO Investment strategy recommendations and perform assessments for Program Review-11 and POM-12. Continue to assess capability sponsor's products for senior leadership decision forums. Continue to conduct Verification, Validation & Accreditation (VV&A) of warfare, performance, and pricing models. Continue to conduct Global War on Terrorism (GWOT) Capabilities-Based Assessment that provided a rapid and scalable process to utilize a Concept of Operation (CONOPS) and develop investment strategy and a capability roadmap. Continue to conduct Tactical Aircraft (TACAIR) Recapitalization alternatives and Theater Ballistic Missile Defense (TBMD) cost capability trade off assessments. Continue to conduct independent assessment of Anti-Submarine Warfare (ASW). Continue to conduct weapons safety and sea basing capabilities assessments. Continue to conduct Intelligence-Surveillance-Reconnaissance (ISR) and Meteorological and Oceanographic (METOC) assessment to determine the optimal mix of naval ISR and METOC sensors, platforms, and processing, analysis and fusion disposition to support Major Combat Operations (MCOs), the GWOT, and intelligence preparation of the environment for both MCOs and GWOT. Continue to perform Capabilities-Based Assessments (CBAs) to meet the requirements of current and future scenarios, and make strategic decisions within a constrained economic framework.

**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 2221 Assessment Program

**B. Accomplishments/Planned Program**

	FY07	FY08	FY09
<b>Campaign Analysis - Modeling and Simulation</b>	5.891	6.168	6.832

FY07: Developed and maintained common baselines from which campaign excursions and mission-level analyses are executed. Identified, developed, and improved data and modeling. Continued to lead Navy's participation in Office of the Secretary of Defense (OSD)/Joint Staff analytic agenda, baseline development, and collection of data. Provided coordination across the Navy. Continued to broker agreed upon assumptions, Concept of Operations (CONOPS), scenarios and data. Led campaign analysis for Office of the Chief of Naval Operations (OPNAV). Conducted modeling and simulation support for ongoing OPNAV missile defense analysis requirements.

FY08: Continue to develop and maintain common baselines from which campaign excursions and mission-level analyses are executed. Identify, develop, and improve data and modeling. Continue to lead Navy's participation in Office of the Secretary of Defense (OSD)/Joint Staff analytic agenda, baseline development, and collection of data. Continue to provide coordination across the Navy. Continue to broker agreed upon assumptions, Concept of Operations (CONOPS), scenarios and data. Continue to lead campaign analysis for Office of the Chief of Naval Operations (OPNAV). Continue to conduct modeling and simulation support for ongoing OPNAV missile defense analysis requirements.

FY09: Continue to develop and maintain common baselines from which campaign excursions and mission-level analyses are executed. Identify, develop, and improve data and modeling. Continue to lead Navy's participation in Office of the Secretary of Defense (OSD)/Joint Staff analytic agenda, baseline development, and collection of data. Continue to provide coordination across the Navy. Continue to broker agreed upon assumptions, Concept of Operations (CONOPS), scenarios and data. Continue to lead campaign analysis for Office of the Chief of Naval Operations (OPNAV). Continue to conduct modeling and simulation support for ongoing OPNAV missile defense analysis requirements.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 2221 Assessment Program

**B. Accomplishments/Planned Program (Cont.)**

	FY 07	FY 08	FY 09
<b>OSD/Joint Staff Study Analysis &amp; Assessment</b>	1.772	1.814	1.857

FY07: Coordinated/led Office of the Secretary of Defense (OSD)/Navy's Analytic Agenda in Defense Planning Scenario (DPS), Multi-Service Force Deployment (MSFD), Enhanced Planning Process (EPP), Strategic Planning Guidance (SPG), and participated in Capability Sponsors' Integrated Processing Teams (IPTs). Provided overarching Planning, Programming and Budgeting System (PPBS) analyses and guidance. Provided analytically-based decision recommendations to Chief of Naval Operations (CNO) for Joint warfighting and support areas. Conducted net assessments and provided independent analytic support to Navy leadership in conjunction with various executive level decision forums. Served as the Navy's lead to Joint Requirements Oversight Council (JROC), Joint Capabilities Board (JCB), and Functional Capabilities Board (FCB). Provided the lead requirements and acquisition for Office of the Chief Naval Operations (OPNAV). Coordinated/led Navy role in Defense Planning Guidance (DPG), Program Decision Memoranda (PDM), Quadrennial Defense Review (QDR), and Defense Science Board (DSB) studies. Participated in Office of the Secretary of Defense (OSD) and Joint Staff analysis assessment and provided structure for coordination across the Navy. Coordinated and supported Joint Analytical Model Improvement Program (JAMIP).

FY08: Continue to coordinate/lead Office of the Secretary of Defense (OSD)/Navy's Analytic Agenda in Defense Planning Scenario (DPS), Multi-Service Force Deployment (MSFD), Enhanced Planning Process (EPP), Strategic Planning Guidance (SPG), and participate in Capability Sponsors' Integrated Processing Teams (IPTs). Continue to provide overarching Planning, Programming and Budgeting System (PPBS) analyses and guidance. Continue to provide analytically-based decision recommendations to Chief of Naval Operations (CNO) for Joint warfighting and support areas. Continue to conduct net assessments and provide independent analytic support to Navy leadership in conjunction with various executive level decision forums. Continue to serve as the Navy's lead to Joint Requirements Oversight Council (JROC), Joint Capabilities Board (JCB), and Functional Capabilities Board (FCB). Continue to provide the lead requirements and acquisition for Office of the Chief Naval Operations (OPNAV). Continue to coordinate/lead Navy role in Defense Planning Guidance (DPG), Program Decision Memoranda (PDM), Quadrennial Defense Review (QDR), and Defense Science Board (DSB) studies. Continue to participate in Office of the Secretary of Defense (OSD) and Joint Staff analysis assessment and provide structure for coordination across the Navy. Continued to coordinate and support Joint Analytical Model Improvement Program (JAMIP).

FY09: Continue to coordinate/lead Office of the Secretary of Defense (OSD)/Navy's Analytic Agenda in Defense Planning Scenario (DPS), Multi-Service Force Deployment (MSFD), Enhanced Planning Process (EPP), Strategic Planning Guidance (SPG), and participate in Capability Sponsors' Integrated Processing Teams (IPTs). Continue to provide overarching Planning, Programming and Budgeting System (PPBS) analyses and guidance. Continue to provide analytically-based decision recommendations to Chief of Naval Operations (CNO) for Joint warfighting and support areas. Continue to conduct net assessments and provide independent analytic support to Navy leadership in conjunction with various executive level decision forums. Continue to serve as the Navy's lead to Joint Requirements Oversight Council (JROC), Joint Capabilities Board (JCB), and Functional Capabilities Board (FCB). Continue to provide the lead requirements and acquisition for Office of the Chief Naval Operations (OPNAV). Continue to coordinate/lead Navy role in Defense Planning Guidance (DPG), Program Decision Memoranda (PDM), Quadrennial Defense Review (QDR), and Defense Science Board (DSB) studies. Continued to participate in Office of the Secretary of Defense (OSD) and Joint Staff analysis assessment and provide structure for coordination across the Navy. Continued to coordinate and support Joint Analytical Model Improvement Program (JAMIP).

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EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 2221 Assessment Program

**B. Accomplishments/Planned Program (Cont.)**

	FY 07	FY 08	FY 09
<b>World Class Modeling, Simulation, and Capability Analysis</b>	9.162	9.381	9.456

FY 2007:  
 Provided the Navy with concise and innovative Modeling and Simulation (M&S) analyses and assessment to help optimize Navy Programs and investment decisions. Supported next generation research that emphasizes combat modeling, simulation, war gaming, and analysis in support of strategic, operational, and resource decision making and emphasizes the development of pricing performance models that relate investments and manpower to output performance and readiness. Evaluated new models that are able to capture Command, Control, Communication, Computers, Intelligence, Surveillance & Reconnaissance (C4ISR) interaction with sea based forces, and the challenges of new form of threat including terrorist, disruptive, and catastrophic. Supported Fleet readiness and logistics M&S. Conducted Verification, Validation, and Accreditation (VV&A) of select Navy models. Improved the ability to model emerging security challenges and operations concepts (Irregular, Catastrophic, Disruptive challenges). Developed optimization models that work across multiple warfare areas. Improved the traceability of data through the modeling hierarchy. Refined the linkages between cost and mission performance in performance-modeled acquisition programs. Conducted Joint mission warfare M&S in the Sea Strike, FORCENet Sea Shield, and Sea Basing mission areas. Conducted mission level warfare M&S of Joint Capability Areas.

FY 2008:  
 Continue to provide the Navy with concise and innovative Modeling and Simulation (M&S) analyses and assessment to help optimize Navy Programs and investment decisions. Continue to support next generation research that emphasizes combat modeling, simulation, war gaming, and analysis in support of strategic, operational, and resource decision making and emphasizes the development of pricing performance models that relate investments and manpower to output performance and readiness. Continue to evaluate new models that are able to capture Command, Control, Communication, Computers, Intelligence, Surveillance & Reconnaissance (C4ISR) interaction with sea based forces, and the challenges of new form of threat including terrorist, disruptive, and catastrophic. Continue to support Fleet readiness and logistics M&S. Continue to conduct Verification, Validation, and Accreditation (VV&A) of select Navy models. Continue to improve the ability to model emerging security challenges and operations concepts (Irregular, Catastrophic, Disruptive challenges). Continue to develop optimization models that work across multiple warfare areas. Continue to improve the traceability of data through the modeling hierarchy. Continue to refine the linkages between cost and mission performance in performance-modeled acquisition programs. Continue to conduct Joint mission warfare M&S in the Sea Strike, FORCENet Sea Shield, and Sea Basing mission areas. Continue to conduct mission level warfare M&S of Joint Capability Areas.

FY 2009:  
 Continue to provide the Navy with concise and innovative M&S analyses and assessment to help optimize Navy Programs and investment decisions. Continue to support next generation research that emphasizes combat modeling, simulation, war gaming, and analysis in support of strategic, operational, and resource decision making and emphasizes the development of pricing performance models that relate investments and manpower to output performance and readiness. Continue to evaluate new models that are able to capture Command, Control, Communication, Computers, Intelligence, Surveillance & Reconnaissance (C4ISR) interaction with sea based forces, and the challenges of new form of threat including terrorist, disruptive, and catastrophic. Continue to support Fleet readiness and logistics M&S. Continue to conduct Verification, Validation, and Accreditation (VV&A) of select Navy models. Continue to improve the ability to model emerging security challenges and operations concepts (Irregular, Catastrophic, Disruptive challenges). Continue to develop optimization models that work across multiple warfare areas. Continue to improve the traceability of data through the modeling hierarchy. Continue to refine the linkages between cost and mission performance in performance-modeled acquisition programs. Continue to conduct Joint mission warfare M&S in the Sea Strike, FORCENet Sea Shield, and Sea Basing mission areas. Continue to conduct mission level warfare M&S of Joint Capability Areas.



CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE: <b>February 2008</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>		PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support			PROJECT NUMBER AND NAME 3025 MID-RANGE FINANCIAL IMPROVEMENT PLANS			
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost		1.481	1.584	1.571	1.636	1.585	1.685	1.702
RDT&E Articles Qty								

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

One of DoD's and Navy's priority goals is to gain a clean and auditable financial statement by FY 2007. The Office of the Secretary of Defense (OSD) Comptroller, in his 8 August 2003 memorandum, directed the Military Departments and Defense Agencies, in coordination with the Defense Finance and Accounting Service (DFAS), to prepare a comprehensive mid-range financial improvement plan to identify measurable steps to ensure each material line is auditable, and ensure all major deficiencies are resolved.

This project supports the Research, Development, Test and Evaluation, Navy (RDT&E,N) and Office of Naval Research (ONR) portion of the larger DoD and Navy-wide effort to implement the Financial Improvement Plan (FIP). Corrective actions required to resolve known deficiencies and determine resource requirements (people and systems) have been identified. Funding beyond FY 2007 is for the sustainment of the clean and auditable statement for RDT&E,N.

**Performance Metrics:**

Financial records must become compliant in accordance with the Chief Financial Officers Act.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification	DATE: <b>February 2008</b>
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APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 3025 MID-RANGE FINANCIAL IMPROVEMENT PLANS
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**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 07	FY 08	FY 09
<b>Financial Improvements</b>	1.481	1.584	1.571

FY07:

- Continued posting obligations within the reporting period in which they were incurred.
- Continued expanding the practice of having major contracting activities post awards electronically to the Standard Accounting and Reporting System (STARS).
- Continued performing obligation validations to ensure that posted obligations were accurate.
- Continued revising the accounts receivable process to more accurately record collections.
- Continued monitoring duplication in vendor pay accounting system and STARS one pay, as invoices were settled.
- Continued eliminating problem disbursements older than 120 days, narrowing to 60 days, and potentially narrowing even further.
- Continued discovery phase for the Financial Improvement Program (FIP).
- Prepared and submitted validation packages containing financial business processes for the Naval Research Laboratory (NRL).
- Initiated the update of Wide Area Workflow (WAWF) in order to allow Grants and Intergovernmental Personnel Agreements (IPA) invoices to be processed using WAWF.
- Initiated the A-123 process for the Office of Naval Research (ONR). Appendix A of the Office of Management and Budget Circular No. A-123 requires that Federal agencies take responsibility for conducting a rigorous assessment of internal controls over financial reporting.

FY08:

- Continue all efforts of FY07.

FY09:

- Continue all efforts of FY08.



**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 3025 MID-RANGE FINANCIAL IMPROVEMENT PLANS
<p><b>C. OTHER PROGRAM FUNDING SUMMARY:</b></p> <p>Navy Related RDT&amp;E:  PE 0605013N (Information Technology Development)  PE 0605861N (RDT&amp;E Science and Technology Management)</p> <p>Non-Navy Related RDT&amp;E:  Not Applicable</p> <p><b>D. ACQUISITION STRATEGY:</b></p> <p>Not Applicable</p>		

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE: <b>February 2008</b>		
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support			PROJECT NUMBER AND NAME 3039 CHENG			
COST (\$ in Millions)	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
Project Cost	15.086	16.781	18.407	19.267	19.844	20.335	20.834
RDT&E Articles Qty							

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

Project 3039 funds the Assistant Secretary of the Navy (ASN) for Research, Development and Acquisition (RD&A), ASN RD&A Chief Engineer (RDA CHENG) to develop and implement architecture-based systems engineering processes, methods and tools that assure integrated and interoperable systems are delivered to the fleet. This project provides the mission-oriented technical basis for implementing capability-based acquisition management within the Department of Navy (DoN) to engineer and field Navy and Marine Corps combat systems, weapon systems, and command, control, communications, computers and intelligence (C4I) programs that must operate as family-of-systems (FoS) or system-of-systems (SoS). The focus of this project is on identifying the functions, relationships, and connections between systems at both the force and unit level and across warfare mission areas, and encompasses three key elements: Systems Engineering to provide the framework for making engineering decisions by warfighting capability at the FoS/SoS level and supports consistent engineering and investment decision-making across Navy and Marine Corps programs within capability-based acquisition portfolios. Naval Collaborative Engineering Environment development and implementation as a DON enterprise resource for Naval integration and interoperability information to enable collaboration and decision support among Fleet organizations, Program Executive Offices, Program Managers, Systems Commands, prime contractors, Resource/Warfare Sponsors and Comptroller organizations. Standards, Policies and Guidelines engineering and technical staff to implement DoN, Office of the Secretary of Defense (OSD) and Joint integration and interoperability and Anti-Tamper initiatives.

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 3039 CHENG

**B. Accomplishments/Planned Program**

	FY 2007	FY 2008	FY 2009
<b>Standards, Policy, and Guidelines</b>	4.028	4.800	5.030

## FY07:

- Continued alignment of standards, policy, and guidelines across the Naval Enterprise and with OSD and Joint Service organizations. Continued data structure, process and collaborative engineering tools for specified initiatives.
- Continued the integrated quick reference roadmap for acquisition programs on how the policies and programs fit together and provided a comprehensive summary of standards, policy, and guidelines, known issues, processes and specific engineering products for Global Information Grid (GIG) Systems Engineering, Joint Theater Air and Missile Defense Office (JTAMDO), DOD Information Technology Standards Registry (DISR), Information Support Plan (ISP) and Net Enabled Command Compatibility (NECC).
- Continued technical alignment of Naval Power (NP) 21 and Open Architecture (OA) standards with DISR standards. Established technical warrant holder roles and responsibilities for information technology standards.
- Continued to represent ASN RD&A in the OSD Systems Engineering Forums to address the impact of SOS engineering policy in acquisition.
- Continued working on the Naval Power 21 Integration and Interoperability Management Plan development. Updated Secretary of the Navy (SECNAV) Instruction 5000.2. Completed Navy Standards Working Group Draft Standard Operating Procedure.
- Continued working on the ISP and Net Ready - Key Performance Parameter (NR-KPP) assessments.
- Continued to work with the Department of Defense (DOD) Anti-Tamper Executive Agent on DON policy and Implementation. Selected and evaluated anti-tamper technologies in designated areas of interest.

## FY08:

- Continue alignment of standards, policy, and guidelines across the Naval Enterprise and with OSD and Joint Service organizations. Continue data structure, process and collaborative engineering tools for specified initiatives.
- Continue the integrated quick reference roadmap for acquisition programs on how the policies and programs fit together and provide a comprehensive summary of standards, policy, and guidelines, known issues, processes and specific engineering products for Global Information Grid (GIG) Systems Engineering, Joint Theater Air and Missile Defense Office (JTAMDO), DOD Information Technology Standards Registry (DISR), Information Support Plan (ISP) and Net Enabled Command Compatibility (NECC).
- Complete technical alignment of Naval Power 21 and OA standards with DISR standards and technical warrant holder roles and responsibilities for information technology standards.
- Continue to represent ASN RD&A in the OSD Systems Engineering Forums to address the impact of SOS engineering policy in acquisition.
- Complete Naval Power 21 Integration and Interoperability Management Plan development and Navy Standards Working Group Draft Standard Operating Procedure.
- Initiate ISP and NR-KPP implementation plans.
- Continue working with the DOD Anti-Tamper Executive Agent on DON policy and Implementation. Select and evaluate anti-tamper technologies in designated areas of interest.

## FY09:

- Continue alignment of standards, policy, and guidelines across the Naval Enterprise and with OSD and Joint Service organizations. Continue data structure, process and collaborative engineering tools for specified initiatives.
- Continue the integrated quick reference roadmap for acquisition programs on how the policies and programs fit together and provide a comprehensive summary of standards, policy, and guidelines, known issues, processes and specific engineering products for GIG Systems Engineering, JTAMDO, DISR, ISP and NECC.
- Develop Naval Power 21 and OA standards policy updates for alignment of Navy with DISR standards and technical warrant holder roles and responsibilities.
- Continue to represent ASN RD&A in the OSD Systems Engineering Forums to address the impact of SOS engineering policy in acquisition.
- Develop Naval Power 21 Integration and Interoperability Management Plan policy updates.
- Continue ISP and NR-KPP implementation plans.
- Continue working with the DOD Anti-Tamper Executive Agent on DON policy and Implementation. Select and evaluate anti-tamper technologies in designated areas of interest.
- Continue work with DOD Institutional Reform & Governance Agent on DOD/DON policy and implementation.

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 3039 CHENG

**B. Accomplishments/Planned Program**

	FY 2007	FY 2008	FY 2009
<b>Naval Collaborative Engineering Environment (NCEE)</b>	3.000	2.711	2.886

## FY07:

- Continued to develop and implement external interfaces to the NCEE with authoritative DON data bases; continued Defense Architecture Repository System (DARS) testing phase on system data; initiated Program Office interface; completed ASDB and ASN RD&A Dashboard prototypes.
- Continued Interoperability Data Management and Analysis: completed the semi-automated capability and automated capability prototype; initiated deployment to programs of interest.
- Continued Integrated Engineering Environment support to SOS Systems Engineering Integrated Product Teams (SE IPTs), Program Offices and Systems Commands: completed Anti-Submarine Warfare (ASW) IPT; continued Naval Air Systems Command (NAVAIRSYSCOM) Systems Engineering Resource Center (SERC) and OA Experiment Team; completed OA Surface Domain technical support.
- Continued integrated engineering environment tool integration development: continued working the Core Architecture Data model eXtensible Markup Language (CADM XML) and System Architect; updated core and Dynamic Object Oriented Requirements System (DOORS); initiated Visio and Bonapart.
- Continued to evolve the Decision Support Environment: completed Naval Architecture Repository (NAR) prototype and began NAR capability deployment to Program Managers; continued to organize and transition enterprise-wide websites and workspaces; initiated the Chief Engineer Architect Tool for Engineering Review (CHEATER) prototypes.
- Began Naval Force Development System (NFDS) implementation support; extended capabilities to other services and agencies to support joint initiatives.
- Continued technical support for building the Open Architecture (OA) Assess Repository (OAAAR) and its use by associated OA government and industry stakeholders.

## FY08:

- Continue to develop and implement external interfaces to the Naval Collaborative Engineering Environment (NCEE) with authoritative DON data bases: continue Defense Architecture Repository System (DARS) testing phase on technical data; continue Program Office interface; initiate Joint Forces Command database interface.
- Continue Interoperability Data Management and Analysis: update acquisition milestone document automation process and capabilities; complete deployment to programs of interest.
- Continue Integrated Engineering Environment support to Systems Engineering Integrated Product Teams (SE IPTs), Program Offices and Systems Commands: continue Naval Air Systems Command (NAVAIRSYSCOM) Systems Engineering Resource Center (SERC) and Open Architecture (OA) Experiment Team technical support; initiate Naval Sea Systems Command (NAVSEASYSKOM) programs technical support.
- Continue integrated engineering environment tool integration development: complete Visio and Bonapart plug ins; update CADM XML, System Architect, CORE and DOORS plug ins; initiate slate plug in.
- Continue to evolve the Decision Support Environment: deploy Naval Architecture Repository (NAR) prototype; complete Chief Engineer Architect Tool for Engineering Review (CHEATER) prototype; continue to organize and transition enterprise-wide websites and workspaces.

## FY09:

- Continue to develop and implement external interfaces to the NCEE with authoritative DON data bases: continue Defense Architecture Repository System (DARS) interface; continue Program Office interface; continue Joint Forces Command database interface.
- Continue Interoperability Data Management and Analysis: monitor and update acquisition milestone document automation capabilities to programs of interest; initiate cross-domains and cross-functional areas interoperability data management.
- Continue Integrated Engineering Environment support to Systems Engineering Integrated Product Teams (SE IPTs), Program Offices and Systems Commands: continue Naval Air Systems Command (NAVAIRSYSCOM) Systems Engineering Resource Center (SERC), Open Architecture (OA) Experiment Team, and NAVSEA programs technical support.
- Continue integrated engineering environment tool integration development: complete SLATE plug in; update CADM XML, System Architect, CORE, DOORS, Visio, and Bonapart plug ins.
- Continue to evolve the Decision Support Environment: continue Naval Architecture Repository (NAR) deployment for enterprise architectures review; deploy Chief Engineer Architect Tool for Engineering Review (CHEATER); continue to organize and transition enterprise-wide websites and workspaces.

## CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 3039 CHENG

**B. Accomplishments/Planned Program**

	FY 2007	FY 2008	FY 2009
<b>Systems Engineering</b>	8.058	9.270	10.491

## FY07:

- Authenticated Naval Power 21 capabilities-based, Integrated Architecture product assessments; developed the Naval Architecture Repository System (NARS) and technical views to support decision-making; formalized integrated architecture training at the Defense Acquisition University.
- Expanded the Naval Architecture Reference Guide to include 12 element lists. Provided an automated architecture alignment check and architecture development guidance for Program Managers. Issued SECNAV architecture policy.
- Continued software Acquisition Process Improvement (Section 804) initiative and began pilot project implementation.
- Revised the SOS Systems Engineering Guidebook Volumes I and II to address specialty engineering functions, e.g. Human Systems Integration, Safety.
- Initiated and established SOS SE IPTs for Battlespace Networks, Mine Warfare and Missile Defense Agency to support CNO priority capability needs.
- Continued acquisition milestone review documentation to assess Integration and Interoperability in Information Support Plans, Systems Engineering Plans and Risk Assessments and incorporated results in the ASN Research, Development and Acquisition Dashboard.
- Delivered the final NFDS assessment report. Assessed the Department of Navy mission and capability roadmaps for alignment with joint concepts and doctrines. Developed a roadmap reconciliation report.
- Developed and executed the systems engineering section of the NP 21 Integration and Interoperability Management Plan.
- Established technical warrant holder roles and responsibilities at the mission and capability level.

## FY08:

- Continue to authenticate Naval Power 21 capabilities-based Integrated Architecture product assessments; develop the Naval Architecture Repository System (NARS) and technical views to support decision-making.
- Continue Software Acquisition Process Improvement (Section 804) pilot project implementation.
- Complete System-of-Systems (SOS) Systems Engineering (SE) Guidebook Volumes I and II to address specialty engineering functions to include Human Systems Integration, Safety, etc.
- Continue SOS SE Integrated Product Team (IPTs) for Battlespace, Mine Warfare and Missile Defense Agency to support CNO priority capability needs.
- Continue acquisition milestone review documentation to assess Integration and Interoperability in Information Support Plans, Systems Engineering Plans and Risk Assessments and incorporate results in the ASN Research, Development and Acquisition Dashboard.
- Develop and promulgate integrated architecture roadmap with Mission Capability Package System View 8 and Capability Evolution Document.
- Continue NP 21 Integration and Interoperability Management Plan implementation.
- Complete mission and capability technical warrant holder roles and responsibilities.

## FY09:

- Continue to authenticate Naval Power 21 capabilities-based Integrated Architecture product assessments; complete the Naval Architecture Repository System (NARS) and technical views to support decision-making.
- Continue Software Acquisition Process Improvement (Section 804) implementation.
- Continue SOS SE Integrated Product Team (IPTs) for Battlespace, Mine Warfare and Maritime Defense Awareness or any other high priority mission, capability, and/or platform oriented integration to support CNO priority capability needs.
- Continue acquisition milestone review documentation to assess Integration and Interoperability in Information Support Plans, Systems Engineering Plans and Risk Assessments and incorporate results in the ASN Research, Development and Acquisition Dashboard.
- Implement Naval process for aligning and reusing ISP architecture information, approve Acquisition Category (ACAT) 1C and 2 ISP's, act as lead agency for review of ISPs received via Office of the Secretary of Defense/Joint Capabilities Integration and Development System (OSD/JCIDS).
- Continue development and promulgation of integrated architecture roadmap with Mission Capability Package System View 8 and Capability Evolution Document.
- Continue NP 21 Integration and Interoperability Management Plan (I&IMP) implementation.
- Conduct annual Capability Planned Assessment (CPA).
- Review all Engineering Change Proposals which may impact systems across functional areas.
- Develop and disseminate Modeling and Simulation (M&S) executable modeling process for System of Systems.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>February 2008</b>
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 3039 CHENG
<p><b>C. OTHER PROGRAM FUNDING SUMMARY:</b></p> <p><u>Line Item No. &amp; Name:</u> Not Applicable</p>		
<p><b>D. ACQUISITION STRATEGY:</b> Not Applicable</p>		
<p><b>E. MAJOR PERFORMERS:</b></p> <p>Alion Science and Technology Corporation, McLean VA - Primary professional and technical support services contract.                  Naval Surface Warfare Center, Dahlgren, VA - Conduct Navy enterprise-wide open architecture experiment to identify metrics and enable component testing for interoperability.</p>		

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605856N  
PROGRAM ELEMENT TITLE: STRATEGIC TECHNICAL SUPPORT

COST: (Dollars in Thousands)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
<b>Total PE</b>	3,244	3,382	3,597	3,688	3,772	3,844	3,921
0128 MANAGEMENT AND TECHNICAL STRATEGIC SUPPORT	1,213	1,285	1,342	1,379	1,412	1,438	1,467
1038 ACOUSTIC AND NONACOUSTIC ANALYSIS SUPPORT	2,031	2,097	2,255	2,309	2,360	2,406	2,454

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This program element supports technical studies and analyses as directed by the Director for Submarine Warfare to support major policy and procurement decisions. This program is divided into two elements to support decision making in the areas of submarine and antisubmarine warfare and undersea surveillance.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605856N  
PROGRAM ELEMENT TITLE: STRATEGIC TECHNICAL SUPPORT

## B. PROGRAM CHANGE SUMMARY:

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY 2008/FY 2009 President's Budget Submission	3,334	3,452	3,621
Congressional Undistributed Reductions/Rescissions	0	-22	0
Execution Adjustments	-10	0	0
Non-Pay Inflation Adjustments	0	0	-24
SBIR Assessment	-80	-48	0
FY 2009 President's Budget Submission	3,244	3,382	3,597

## PROGRAM CHANGE SUMMARY EXPLANATION:

Technical: Not applicable.

Schedule: Not applicable.

## C. OTHER PROGRAM FUNDING SUMMARY:

Not applicable.

## D. ACQUISITION STRATEGY:

Not applicable.

## E. PERFORMANCE METRICS:

This program element supports studies in the area of undersea surveillance missions, sensor system, payloads, force employment, communications, acoustic performance prediction systems, environmental and medical effects of acoustics systems including installations/removals, operational security and future threat analysis. Program success is measured through analytical results and constant interaction with the contractors that enable the Director for Submarine Warfare to make decisions effectively. In addition, it provides research and reports necessary to support Surveillance Towed Array Sonar Systems (SURTASS) Low Frequency Active (LFA) sonar compliance with Federal, State and Local environmental laws required for continued SURTASS LFA operations, analysis of undersea technology for application for future undersea surveillance capabilities, and assessment of current and future Integrated Undersea Surveillance System (IUSS) warfare areas and potential allied Navy



# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605856N  
PROGRAM ELEMENT TITLE: STRATEGIC TECHNICAL SUPPORT

contributions. To this goal, research is conducted by educational and research institutions renown for their expertise in the area, and by marine mammal biologists with extensive background in specific areas of underwater acoustics. This approach is deemed the most cost effective and efficient course of action for the Navy.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605856N

PROJECT NUMBER: 0128

PROGRAM ELEMENT TITLE: STRATEGIC TECHNICAL SUPPORT

PROJECT TITLE: MANAGEMENT AND TECHNICAL STRATEGIC SUPPORT

COST: (Dollars in Thousands)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
0128 MANAGEMENT AND TECHNICAL STRATEGIC SUPPORT	1,213	1,285	1,342	1,379	1,412	1,438	1,467

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This project provides analytical support to the Director, Submarine Warfare Division as a basis for major policy, planning and acquisition program decisions. It supports the development of the Submarine Force strategic vision to guide research and development investment strategy and future planning. Additionally, this line supports studies in the area of submarine and undersea surveillance missions, force structure, payloads and sensors and force employment.

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 2007	FY 2008	FY 2009
MANAGEMENT AND TECHNICAL SUPPORT, STRATEGIC	1,213	1,285	1,342

**FY 2007 Accomplishments:**

- Continued to examine specific applications for submarine mine countermeasures and develop a strategy for ensuring submarine access to contested areas of the world.
- Continued to assess the strategic deterrence (conventional and nuclear) force structure, security, and capability in the Navy.
- Continued to perform an in-depth review of undersea warfare research and development requirements, past and present, and propose an investment strategy to maximize future capabilities.
- Continued to assess implications of current and developing technologies on undersea warfare in both near and far term systems and develop strategic concepts to guide future acquisitions through partnership with the Naval Postgraduate School.
- Continued to assess the submarine forces capabilities in view of emerging technologies and changes in joint and naval strategies. This will be used to develop capability based ideas and concepts to guide research and development and science and technology efforts.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605856N

PROJECT NUMBER: 0128

PROGRAM ELEMENT TITLE: STRATEGIC TECHNICAL SUPPORT

PROJECT TITLE: MANAGEMENT AND TECHNICAL STRATEGIC SUPPORT

- Continued reviews of various submarine operations to assess the safety and security of the ships and missions assigned to identify the problems that require further analysis and study.

**FY 2008 Plans:**

- Continue all efforts of FY07.

**FY 2009 Plans:**

- Continue all efforts of FY08.

**C. OTHER PROGRAM FUNDING SUMMARY - NAVY RELATED RDT&E::**

Not applicable.

**OTHER PROGRAM FUNDING SUMMARY - NON-NAVY RELATED RDT&E::**

Not applicable.

**D. ACQUISITION STRATEGY:**

Not applicable.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605856N

PROJECT NUMBER: 1038

PROGRAM ELEMENT TITLE: STRATEGIC TECHNICAL SUPPORT

PROJECT TITLE: ACOUSTIC AND NONACOUSTIC ANALYSIS SUPPORT

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
1038 ACOUSTIC AND NONACOUSTIC ANALYSIS SUPPORT	2,031	2,097	2,255	2,309	2,360	2,406	2,454

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This project provides analytical support to the Director, Submarine Warfare Division and the Integrated Undersea Surveillance System (IUSS) Branch Head as a basis for major policy, planning, and acquisition program decisions. It supports studies in the area of undersea surveillance missions, sensor system, communications, acoustic performance prediction systems, environmental and medical effects of acoustic systems including installations/removals, operational security, and future threat analysis. Supports synthetic mission lay down simulations for IUSS strategic planning and resource allocation. Continues development/documentation of architecture for future undersea surveillance capabilities. Supports studies to determine long-term impact of IUSS active sensors on marine animals and development of SURTASS, LFA, and the Supplemental Environmental Impact Statement (EIS).

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 2007	FY 2008	FY 2009
ACOUSTIC AND NON-ACOUSTIC ANALYSIS SUPPORT	2,031	2,097	2,255

**FY 2007 Accomplishments:**

- Initiated planning and execution of Phase II of deep diving odontocete behavioral response study research strategy; in concert with ONR, oil industry, and U.K. support.
- Initiated environmental compliance requirements and actions pertinent to Compact Low Frequency Active (CLFA) at-sea testing, training and operations.
- Initiated SURTASS Engineering Measurements Program (SURTASS EMP) to provide for post-mission engineering analysis of SURTASS acoustic data.
- Initiated and completed review and concurrence on National Marine Fisheries Service (NMFS) biological Opinion and Incidental Take Statements (based on Navy-submitted Biological Assessment).

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605856N

PROJECT NUMBER: 1038

PROGRAM ELEMENT TITLE: STRATEGIC TECHNICAL SUPPORT

PROJECT TITLE: ACOUSTIC AND NONACOUSTIC ANALYSIS SUPPORT

- Initiated and completed assistance to NMFS for response to comments on the draft Proposed Rule for taking and importing marine mammals incidental to Navy operations of SURTASS LFA.
- Completed and filed Final Supplemental EIS for SURTASS LFA.
- Completed rule-making processes for 2nd 5-year rule and Letters of Authorization (LOA) under the MMPA and associated Endangered Species Act (ESA) consultation for SURTASS LFA.
- Completed planning and execution of Phase I of deep diving odontocete behavioral response study research strategy; in concert with ONR, possibly oil industry, and U.K./international support.
- Continued environmental compliance support for issuance of annual LOA under the MMPA and required quarterly reporting for SURTASS LFA vessels.
- Continued analyses to estimate the long-term effects of SURTASS LFA on marine mammals.
- Continued monitoring of undersea technology for application for future undersea surveillance capabilities.
- Continued assessment of current and future IUSS warfare areas and potential allied Navy contributions.

#### **FY 2008 Plans:**

- Complete planning and execution of Phase II of deep diving odontocete behavioral response study research strategy; in concert with ONR, oil industry, and U.K. support.
- Continue all efforts of FY07 less those noted as complete above.

#### **FY 2009 Plans:**

- Continue all efforts of FY08, less those noted as complete above.

#### **C. OTHER PROGRAM FUNDING SUMMARY - NAVY RELATED RDT&E:**

Not applicable.

#### **OTHER PROGRAM FUNDING SUMMARY - NON-NAVY RELATED RDT&E:**

Not applicable.

#### **D. ACQUISITION STRATEGY:**

Not applicable.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605861N  
PROGRAM ELEMENT TITLE: RDT&E SCIENCE AND TECHNOLOGY MANAGEMENT

COST: (Dollars in Thousands)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
<b>Total PE</b>	70,396	67,747	69,913	71,311	72,654	74,231	75,850
0135 ONR SCIENCE AND TECHNOLOGY MANAGEMENT	67,596	64,358	66,530	67,806	69,278	70,822	72,409
2353 R&D DFAS BILLINGS	2,800	3,389	3,383	3,505	3,376	3,409	3,441

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This program element (PE) covers Office of Naval Research (ONR) corporate expenses including salaries, utilities, printing, supplies, materials, Information Technology (IT), general support equipment and other day-to-day logistical costs. The vast majority of these items represent fixed costs associated with Scientists and Engineers supporting the Navy's Science and Technology (S&T) Programs.

The Defense Finance and Accounting Service (DFAS) Billings project (2353) funds accounting services provided to ONR and Navy Research and Development (R&D) activities.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605861N  
PROGRAM ELEMENT TITLE: RDT&E SCIENCE AND TECHNOLOGY MANAGEMENT

## B. PROGRAM CHANGE SUMMARY:

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY 2008/FY 2009 President's Budget Submission	66,731	68,180	69,539
Congressional Undistributed Reductions/Rescissions	0	-433	0
Execution Adjustments	3,665	0	0
Non-Pay Inflation Adjustments	0	0	-101
Pay Raise Adjustments	0	0	475
FY 2009 President's Budget Submission	70,396	67,747	69,913

## PROGRAM CHANGE SUMMARY EXPLANATION:

Technical: FY 2007 execution adjustments fund implementation and transition to Navy/Marine Corps Intranet (NMCI).

Schedule: Not applicable.

## C. OTHER PROGRAM FUNDING SUMMARY:

Not applicable.

## D. ACQUISITION STRATEGY:

Not applicable.

## E. PERFORMANCE METRICS:

This PE funds operating costs for ONR's mission. Program performance is measured by attaining financial benchmarks for planned obligations vs. actual obligations and planned expenditures vs. actual expenditures.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605861N

PROJECT NUMBER: 0135

PROGRAM ELEMENT TITLE: RDT&E SCIENCE AND TECHNOLOGY MANAGEMENT

PROJECT TITLE: ONR SCIENCE AND TECHNOLOGY MANAGEMENT

COST: (Dollars in Thousands)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
0135 ONR SCIENCE AND TECHNOLOGY MANAGEMENT	67,596	64,358	66,530	67,806	69,278	70,822	72,409

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This project supports ONR leadership, management and direction for the Naval S&T program. This project funds ONR Corporate salaries, utilities, supplies, and other fixed costs at ONR Headquarters and field offices. ONR sponsors scientific advances, which lead to Future Naval Capabilities (FNC's), supporting the Fleet's ability to operate from a position of technological superiority. Functions performed include (1) scientific and technical direction of the nationwide 6.1 basic research program with colleges, universities, non-profit organizations and Naval Laboratories and Warfare Centers; (2) scientific and technical direction of the 6.2 applied research program through the Naval R&D laboratories and Warfare Centers and industry; (3) scientific and technical direction of the Naval 6.3 advanced technology development program through the Navy's R&D laboratories, Warfare Centers and industry; (4) management, resource formulation, program assessment, and contract negotiation/administration of the Navy basic research, applied research and advanced technology development program; and (5) coordination of the Navy's Technology Base program within the context of total DoD/Government (e.g., National Science Foundation, National Academy of Sciences) R&D initiatives in order to maximize scientific advances. This project also supports ONR management and direction for the following Navy-wide programs: Small Business Innovation Research, Naval Research Advisory Committee, Navy Patent Program, Historically Black Colleges and Universities/Minority Institutions Program, Navy Manufacturing Technology Program and the Ballistic Missile Submarine Nuclear (SSBN) Security Technology Program. In addition, this project supports ONR's Navy-wide responsibilities in the negotiation and establishment of indirect cost rates for DoD-assigned universities and performance of contract administration for all DoD contracts/grants at all colleges and universities.



# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605861N

PROJECT NUMBER: 0135

PROGRAM ELEMENT TITLE: RDT&E SCIENCE AND TECHNOLOGY MANAGEMENT

PROJECT TITLE: ONR SCIENCE AND TECHNOLOGY MANAGEMENT

## B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2007	FY 2008	FY 2009
<b>S&amp;T MANAGEMENT SUPPORT</b>	67,596	64,358	66,530

This project provides for all basic costs and support of ONR Headquarters and its field activities in support of the entire Navy S&T program. Almost all the funds in this project are fixed costs, such as salaries, and communications. Specifically, it pays the salaries of Scientific and Engineering and corporate business personnel who direct the execution of the Navy's basic research, applied research, and advanced technology development programs at the nation's universities/colleges, Navy laboratories, Warfare Centers, and private industry.

FY 2007 execution adjustments fund implementation and transition to the Navy/Marine Corps Intranet (NMCI).

## C. OTHER PROGRAM FUNDING SUMMARY - NAVY RELATED RDT&E::

Not applicable.

## OTHER PROGRAM FUNDING SUMMARY - NON-NAVY RELATED RDT&E::

Not applicable.

## D. ACQUISITION STRATEGY:

Not applicable.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605861N

PROJECT NUMBER: 2353

PROGRAM ELEMENT TITLE: RDT&E SCIENCE AND TECHNOLOGY MANAGEMENT

PROJECT TITLE: R&D DFAS BILLINGS

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
2353 R&D DFAS BILLINGS	2,800	3,389	3,383	3,505	3,376	3,409	3,441

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This project provides funding for accounting services provided to the Office of Naval Research and other Navy research and development activities by the Defense Finance and Accounting Service (DFAS).

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 2007	FY 2008	FY 2009
TRANSACTIONS PROCESSED IN SUPPORT OF DON R&D	2,800	3,389	3,383

This project funds the DFAS bill for transactions processed in support of Department of the Navy R&D activities. Specific services include payroll, transportation, commercial invoices, travel, maintenance of trial balances, associated accounting and reporting.

**C. OTHER PROGRAM FUNDING SUMMARY - NAVY RELATED RDT&E:**

Not applicable.

**OTHER PROGRAM FUNDING SUMMARY - NON-NAVY RELATED RDT&E:**

Not applicable.

**D. ACQUISITION STRATEGY:**

Not applicable.

**Exhibit R-2, RDT&E,N Budget Item Justification**

Date: February 2008

Appropriation/Budget Activity RDT&E,N BA 6			R-1 Item Nomenclature: RDT&E,N Instrumentation Modernization 0605862N				
Cost (\$ in millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	\$1,206	\$1,393	\$0	\$0	\$0	\$0	\$0
Medical Force Protection/3047	\$1,206	\$1,393	\$0	\$0	\$0	\$0	\$0

**A. Mission Description and Budget Item Justification:**

This program element includes RDT&E,N funds for force protection requirements, equipment, minor construction and other investment and materiel support costs not directly chargeable to RDT&E,N projects. Excludes military manpower and related costs, non-RDT&E,N base operating costs, and military construction costs, which are included in other appropriate programs.

**B. Program Change Summary:**

	FY 2007	FY 2008	FY 2009	FY 2010
FY 2008 President's Budget	\$1,238	\$1,423	\$1,483	\$1,530
FY 2009 President's Budget Submission	\$1,206	\$1,393	\$0	\$0
Total Adjustments	<u>-\$32</u>	<u>-\$30</u>	<u>-\$1,483</u>	<u>-\$1,530</u>
Program Adjustments:				
Program Termination	\$0	\$0	-\$1,483	-\$1,530
Small Business Innovation	-\$32	-\$21	\$0	\$0
Contractor Efficiencies	\$0	-\$2	\$0	\$0
Revised Economic Assumptions	\$0	-\$7	\$0	\$0
Total Adjustments	<u>-\$32</u>	<u>-\$30</u>	<u>-\$1,483</u>	<u>-\$1,530</u>

**Exhibit R-2a, RDT&E,N Project Justification**

Date: February 2008

Appropriation/Budget Activity RDT&E,N BA 6			RDT&E,N Instrumentation Modernization 0605862N				
Cost (\$ in millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Medical Force Protection/3047	\$1,206	\$1,393	\$0	\$0	\$0	\$0	\$0
RDT&E,N Articles Quantity							

**A. Mission Description and Budget Item Justification:**

This program provides for protection of Navy Installations against terrorist activities by developing and deploying advanced technologies for force protection+A9 capabilities that are cost effective. The Force Protection Ashore PE/Project provides for maintenance, operation and other support costs of laboratories, warfare centers, ranges and supporting activities engaged in shore side force protection. Included is support for advanced test equipment, construction, data acquisition devices/ systems, and software at research activities and supporting installations. The project will conduct studies and analysis of threat, vulnerability and technology (science, technology and systems) tradeoffs over the full range of force protection ashore issues for the purpose of formulating optimum RDT&E investment strategies for the earliest attainment of anti-terrorism/force protection (ATFP) capabilities. Included are funds for force protection requirements at our OCONUS medical research laboratories for the protection of military and civilian employees, facilities, and equipments. This is accomplished through a planned and integrated application of antiterrorism measures, security equipment, facility site improvements and personnel protective services.

**B. Accomplishments/Planned Program**

	FY 2007	FY 2008	FY 2009
Accomplishment/Effort/Subtotal Cost	\$1,206	\$1,393	\$0
RDT&E,N Articles Quantity			

**FY 2007 Accomplishments**

Provided funds for the following Force Protection Requirements at BUMED OCONUS Medical Research Laboratories; Security Specialist; Security Guards; Security Driver Training and Overtime; Maintenance of Non-Tactical Armored Vehicles; Perimeter Upgrades (barriers); Alarm Systems; Perimeter Lighting Upgrade; Replacement of Exterior doors (steel); Personal Protective Equipment; Upgrade and Maintenance of Communications Systems/Equipment (radios, cell phones for emergency recall, satellite phones for deployed personnel, and Closed Circuit TV equipment).

**FY 2008 Plan**

Program Terminated

C. **Other Program Funding Summary:** Not Applicable

D. **Acquisition Strategy:** Not Applicable

E. **Performance Metrics:** Not Applicable

**CLASSIFICATION:** UNCLASSIFIED

**EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION**

**DATE**  
February 2008

APPROPRIATION/BUDGET ACTIVITY <b>RDTEN/BA 6</b>			R-1 ITEM NOMENCLATURE <b>0605863N/RDT&amp;E SHIP AND AIRCRAFT SUPPORT</b>				
COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	74.562	180.589	195.017	204.795	116.326	209.258	158.010
0354 / RDT&E Ships Supt	0.465	0.000	0.000	0.000	0.000	0.000	0.000
0568 / A/C FLT Hours	30.023	31.938	34.191	35.098	36.257	36.874	37.407
0569 / A/C Support	35.872	35.641	45.661	37.108	38.435	38.982	39.560
2924 / SDTS	8.202	8.889	9.494	9.783	10.054	10.238	10.427
3186 / Air and Missile Defense Radar	0.000	104.121	0.000	0.000	0.000	0.000	0.000
3206 / T&E Enterprise	0.000	0.000	105.671	122.806	31.580	123.164	70.616

**A. MISSION DESCRIPTION:**

This continuing program provides support for ships and aircraft required to accommodate Research, Development, Test and Evaluation (RDT&E) of new systems. The RDT&E ship and aircraft inventory is required to adequately test new and improved weapon systems, stay current with threats, and increase warfighting capability of the fleet. The program provides integrated logistics support for aircraft at selected field activities; provides depot-level rework of aircraft, engines, and components for the Navy inventory of RDT&E aircraft; and provides support for ships and aircraft bailed to contractors for Navy RDT&E projects. Costs covered under this element include aircrew training and proficiency, fuel, supplies, equipment, repair, Aviation Depot Level Repairables (AVDLR), overhaul of ships and aircraft, as well as organizational, intermediate, and depot maintenance of ships and aircraft in the Navy RDT&E inventory.

**FY 2008 funding totals do not include \$1.768 in pending request for current FY2008 GWOT requirements.**

**B. PROGRAM CHANGE SUMMARY:**

Funding:	FY 2007	FY 2008	FY 2009
Previous President's Budget:	82.825	184.541	196.719
FY09 President's budget:	74.562	180.589	195.017
Total Adjustment:	-8.263	-3.952	-1.702
Summary of Adjustments			
SBIR/STTR Transfer	- 0.735		
Program realignment	- 7.440	-2.768	
Program adjustment	0.000	-0.285	-1834
Economic Assumptions	-0.088	-0.899	132
Total Adjustment	- 8.263	-3.952	-1.702

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>						
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>					DATE February 2008			
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RD TEN/BA 6</b>		<b>PROGRAM ELEMENT NUMBER AND NAME</b> <b>0605863N/RDT&amp;E SHIP AND AIRCRAFT SUPPORT</b>				<b>PROJECT NUMBER AND NAME</b> <b>0354/RDT&amp;E Ships Supt</b>		
COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	
Project Cost	0.465	0.000	0.000	0.000	0.000	0.000	0.000	
RDT&E Articles Qty	0	0	0	0	0	0	0	
<p><b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b>  S0354, RDT&amp;E Ships Support. This project provides for operation and maintenance of a platform used as Sea Based Test Site in support of the Navy Research, Development, Test and Evaluation (RDT&amp;E) program. This project is for the USS DOLPHIN (AGSS-555). Testing aboard this platform reduces the number of fleet units required to support RDT&amp;E efforts. A major cost of this project is regularly scheduled ship maintenance. The remainder of the funds are used for purchase of supplies and equipment, fuel and petroleum products, repairs, and supporting modifications. Most costs are fixed and are associated with simply having these platforms in the inventory. A lesser portion of the costs varies with the tempo and type of ship operations and provides for systems improvements and replacement planning. The nature of the operations determined by the overall Navy/DoD R&amp;D testing program.</p> <p>This budget reflects the decision after FY07 President's Budget to deactivate the USS DOLPHIN. The FY07 funds will be used for continued operations, then a transition to deactivation.</p>								

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>		
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>				DATE February 2008
APPROPRIATION/BUDGET ACTIVITY <b>RD TEN/BA 6</b>	PROGRAM ELEMENT NUMBER AND NAME <b>0605863N/RDT&amp;E SHIP AND AIRCRAFT SUPPORT</b>	PROJECT NUMBER AND NAME <b>0354/RDT&amp;E Ships Supt</b>		
<b>B. ACCOMPLISHMENTS/PLANNED PROGRAM:</b>				
		FY 2007	FY 2008	FY 2009
<b>Accomplishments/Effort/Subtotal Cost</b>		0.465	0.000	0.000
RDT&E Articles Quantity		0	0	0
FY 2006 Plans: Plan on conducting periodic maintenance and to support continued operations. FY2007 Plans: Funds used to deactivate the USS DOLPHIN.				
<b>C. OTHER PROGRAM FUNDING SUMMARY:</b>				
N/A				
<b>D. ACQUISITION STRATEGY:</b>				
N/A				
<b>E. MAJOR PERFORMERS:</b>				
N/A				

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>						
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>					<b>DATE</b> February 2008			
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDTEN/BA 6</b>		<b>PROGRAM ELEMENT NUMBER AND NAME</b> <b>0605863N/RDT&amp;E SHIP AND AIRCRAFT SUPPORT</b>				<b>PROJECT NUMBER AND NAME</b> <b>0568/A/C FLT Hours</b>		
<b>COST (In Millions)</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>	
Project Cost	30.023	31.938	34.191	35.098	36.257	36.874	37.407	
RDT&E Articles Qty	0	0	0	0	0	0	0	

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

RDT&E Aircraft Flight Hours. This non-acquisition project supports direct flight hour costs, including organizational and intermediate level maintenance, as well as associated consumables, including petroleum, oil, and lubricants (POL). These flight hours are used for post-maintenance test flights, aircrew training, and the accomplishment of pilot proficiency requirements (approximately 3 hours per pilot per month), in support of Research and Development programs at four Naval Air Systems Command/Naval Surface Warfare Center/Office of Naval Research (NAVAIR/NSWC/ONR) flight activities.



<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>		
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>				DATE February 2008
APPROPRIATION/BUDGET ACTIVITY <b>RDTEN/BA 6</b>	PROGRAM ELEMENT NUMBER AND NAME <b>0605863N/RDT&amp;E SHIP AND AIRCRAFT SUPPORT</b>	PROJECT NUMBER AND NAME <b>0568/A/C FLT Hours</b>		
<b>B. ACCOMPLISHMENTS/PLANNED PROGRAM:</b>				
		FY 2007	FY 2008	FY 2009
<b>Accomplishments/Effort/Subtotal Cost</b>		30.023	31.938	34.191
RDT&E Articles Quantity		0	0	0
Providing organizational and intermediate-level maintenance, supply and Petroleum, Oil and Lubricants (POL) in support of RDT&E aircraft operations.				
<b>C. OTHER PROGRAM FUNDING SUMMARY:</b>				
Not Applicable				
<b>D. ACQUISITION STRATEGY:</b>				
Not Applicable				
<b>E. MAJOR PERFORMERS:</b>				
NAWCAD - Patuxent River, MD:Support of direct flight hour costs in support of R&D programs at NAWCAD. Award Date in FY07 is Oct-06; in FY08 is Oct-07; and in FY09 is Oct-08.				
NAWCWD - Point Mugu, CA:Support of direct flight hour costs in support of R&D programs at NAWCWD. Award Date in FY07 is Oct-06; in FY08 is Oct-07; and in FY09 is Oct-08.				

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>					
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>					<b>DATE</b> February 2008		
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDTEN/BA 6</b>		<b>PROGRAM ELEMENT NUMBER AND NAME</b> <b>0605863N/RDT&amp;E SHIP AND AIRCRAFT SUPPORT</b>			<b>PROJECT NUMBER AND NAME</b> <b>0569/A/C Support</b>		
<b>COST (In Millions)</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
Project Cost	35.872	35.641	45.661	37.108	38.435	38.982	39.560
RDT&E Articles Qty	0	0	0	0	0	0	0

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

RDT&E Aircraft Support. This continuing project funds costs associated with Research, Development, Test and Evaluation (RDT&E) fixed and rotary wing aircraft which accommodate test and evaluation of aircraft/weapon systems. Testing aboard these platforms reduces the number of fleet units required to support RDT&E efforts. Included in these costs are Aviation Depot-Level Repairables (AVDLRs), which are spare and replacement aircraft parts and components to support overhead maintenance related flight operations, aircrew training, and proficiency flight hours. This project also funds airframe Standard Depot Level Maintenance (SDLM), the Integrated Maintenance Concept (IMC) and Phased Depot Maintenance (PDM), in-service repairs, emergency repairs, and engine repair, as well as aircraft material condition and field inspections. Additionally, it funds Individual Material Readiness List (IMRL) tools and support equipment, and other systems for application to and compatibility with RDT&E requirements.

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>		
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>				DATE February 2008
APPROPRIATION/BUDGET ACTIVITY <b>RDTEN/BA 6</b>	PROGRAM ELEMENT NUMBER AND NAME <b>0605863N/RDT&amp;E SHIP AND AIRCRAFT SUPPORT</b>	PROJECT NUMBER AND NAME <b>0569/A/C Support</b>		
<b>B. ACCOMPLISHMENTS/PLANNED PROGRAM:</b>				
		FY 2007	FY 2008	FY 2009
<b>Accomplishments/Effort/Subtotal Cost</b>		34.349	34.259	43.975
RDT&E Articles Quantity		0	0	0
Continuing the transition from ASPA/SDLM/MCAPP to the IMC/PDM program for depot maintenance requirements, while sustaining the following programs: AVDLR/IMRL, engine repairs, support of aircraft in the RDT&E inventory. Continuing operation and implementation of maintenance and material management programs at Naval Air Warfare Center activities.				
		FY 2007	FY 2008	FY 2009
<b>Accomplishments/Effort/Subtotal Cost</b>		1.523	1.382	1.686
RDT&E Articles Quantity		0	0	0
Providing In-Service Repair (ISR) funds for emergent repair requirements to aircraft performing mission critical test and evaluation projects.				
<b>C. OTHER PROGRAM FUNDING SUMMARY:</b>				
Not Applicable				
<b>D. ACQUISITION STRATEGY:</b>				
Not Applicable				
<b>E. MAJOR PERFORMERS:</b>				
NAWCAD - Patuxent River, MD: Support of aircraft in the RDT&E inventory; AVDLR/IMRL support; Operation and implementation of maintenance and material management programs. Award Date in FY07 is Oct-06; in FY08 is Oct-07; and in FY09 is Oct-08.				
NAWCWD - Point Mugu, CA: Support of aircraft in the RDT&E inventory; AVDLR/IMRL support; Operation and implementation of maintenance and material management programs. Award Date in FY07 is Oct-06; in FY08 is Oct-07; and in FY09 is Oct-08.				
NADEP - Jacksonville, FL: Provide aircraft depot maintenance and engine repairs on RDT&E aircraft, as well as support for in-service repairs. Award Date in FY07 is Oct-06; in FY08 is Oct-07; and in FY09 is Oct-08.				
NADEP - North Island, CA: Provide aircraft depot maintenance on RDT&E aircraft, as well as support for in-service repairs. Award Date in FY07 is Oct-06; in FY08 is Oct-07; and in FY09 is Oct-08.				

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION (CONTINUATION)</b>		<b>DATE</b> February 2008
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDTEN/BA 6</b>	<b>PROGRAM ELEMENT NUMBER AND NAME</b> <b>0605863N/RDT&amp;E SHIP AND AIRCRAFT SUPPORT</b>	<b>PROJECT NUMBER AND NAME</b> <b>0569/A/C Support</b>
Hill Air Force Base - Hill AFB, UT: Provide aircraft depot maintenance on RDT&E aircraft. Award Date in FY08 is Oct-07.		

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>					
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>					<b>DATE</b> February 2008		
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RD TEN/BA 6</b>		<b>PROGRAM ELEMENT NUMBER AND NAME</b> <b>0605863N/RDT&amp;E SHIP AND AIRCRAFT SUPPORT</b>			<b>PROJECT NUMBER AND NAME</b> <b>2924/SDTS</b>		
<b>COST (In Millions)</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
Project Cost	8.202	8.889	9.494	9.783	10.054	10.238	10.427
RDT&E Articles Qty	0	0	0	0	0	0	0

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

This project provides for the maintenance of Hull Mechanical and Electrical (HM&E) and installed Combat Systems of the Self-Defense Test Ship (SDTS) in support of the Navy Research, Development, Test and Evaluation (RDT&E) of ship self-defense systems. Testing aboard this ship reduces the number of fleet units required to support RDT&E efforts.

SDTS provides the capability to safely test self-defense weapon systems within their minimum range. A major cost of this project is regularly scheduled ship, combat system and remote control maintenance. The remainder of the funds are used for purchase of expendable supplies and routine equipment, fuel and petroleum products, repairs and supporting services. Most costs are fixed and are associated with simply having this platform in the inventory.

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>	
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>			<b>DATE</b> February 2008
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDTEN/BA 6</b>	<b>PROGRAM ELEMENT NUMBER AND NAME</b> <b>0605863N/RDT&amp;E SHIP AND AIRCRAFT SUPPORT</b>	<b>PROJECT NUMBER AND NAME</b> <b>2924/SDTS</b>	
<b>B. ACCOMPLISHMENTS/PLANNED PROGRAM:</b>			
	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>
<b>Accomplishments/Effort/Subtotal Cost</b>	8.202	9.083	9.543
<b>RDT&amp;E Articles Quantity</b>	0	0	0
<p>2006: NAVSURFWARCENDIV Port Hueneme, CA completed a two year conversion and installation of LPD 17 equipment.DDG 1000 Multi-Function Radarand element level programs were planned and scheduled.Testing was completedalong with the HM&amp;E and Combat System maintenance onboard SDTS.</p> <p>2007: NAVSURFWARCENDIV Port Hueneme, CA will plan, schedule and perform HM&amp;E and CS maintenance onboard SDTS in support of check out and installation and work ups for the testing of LPD 17, MFR and element programs. SDTS will support Probability of Raid Annihilation (Pra) and end to end test efforts for LPD 17 combat system.</p> <p>2008: SDTS pritority consists of installing multiple configurations, deinstalling unused equipment, modifying top side and below deck equipment to coincide with appropriate elements and Combat Systems, testing of all systems listed in the Air Warfare Ship Self Defense T&amp;E Enterprise TEMP, and executing according to the Enterprise TEMP. SDTS will also plan, schedule, and perform maintenance onboard EDD 964 for HME, CS and remote control elements in support of such activities.</p> <p>2009: NAVSURFWARCENDIV Port Hueneme, CA will plan, schedule, and perform maintenance on board EDD 964 and continue to supportinstallation of Enterprise Equipment for multiple ship classes (LHDs/CVNs,DDG 1000, and 2 versions of LCS) PHD will also determine the feasibility of multiple configurations in support of the Navy AAW SSD Enterprise Strategy.</p>			
<b>C. OTHER PROGRAM FUNDING SUMMARY:</b>			
Not Applicable			
<b>D. ACQUISITION STRATEGY:</b>			
This line of accounting is for recurring ship maintenance.			
<b>E. MAJOR PERFORMERS:</b>			
NSWC PHD			
Northrop Grumman			

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>					
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>					<b>DATE</b> February 2008		
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDTEN/BA 6</b>		<b>PROGRAM ELEMENT NUMBER AND NAME</b> <b>0605863N/RDT&amp;E SHIP AND AIRCRAFT SUPPORT</b>			<b>PROJECT NUMBER AND NAME</b> <b>3186/Air and Missile Defense Radar</b>		
<b>COST (In Millions)</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
Project Cost	0.000	104.121	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Qty	0	0	0	0	0	0	0

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

This project provides Test and Evaluation Enterprise efforts for DDG 1000, LHA 6, CVN 78, and LCS programs. The T&E Enterprise solution integrates Self Defense Test Ship, Probability of Raid Annihilation Test Bed, and lead and operational ship at-sea test events across combat system variants to eliminate duplication and minimize combat system testing across ship classes.

Title of the PU (Air and Missile Defense Radar) is misleading. When funding PU was established, it was mislabeled in the database. Establishment of a new PU name (T&E Enterprise) , with a new title was established as PU 3206 and FY09 and out funding was moved to that line.

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>	
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>			DATE February 2008
APPROPRIATION/BUDGET ACTIVITY <b>RDTEN/BA 6</b>	PROGRAM ELEMENT NUMBER AND NAME <b>0605863N/RDT&amp;E SHIP AND AIRCRAFT SUPPORT</b>	PROJECT NUMBER AND NAME <b>3186/Air and Missile Defense Radar</b>	
<b>B. ACCOMPLISHMENTS/PLANNED PROGRAM:</b>			
	FY 2007	FY 2008	FY 2009
<b>Accomplishments/Effort/Subtotal Cost</b>	0.000	106.393	0.000
RDT&E Articles Quantity	0	0	0
<p>2008: This effort will initiate Enterprise Acquisition &amp; Installatiion, Probability of Raid Annihilation Testbed, and Lead and Operational Ship test and evaluation for the Air Warfare, Ship Self Defense Test and Evaluation Enterprise Strategy.</p> <p><b>C. OTHER PROGRAM FUNDING SUMMARY:</b> Not Applicable</p> <p><b>D. ACQUISITION STRATEGY:</b> Begin acquisition of DDG1000 and LCS equipment set in FY08.</p> <p>Acquisition of LHA 6 begins in FY09.</p> <p>Acquisition of CVN 21 begins in FY12/13.</p> <p>Acquisition of systems is tailored to each ship class.</p> <p>DDG 1000 equipment will be acquired through a direct contract. LHA 6 components will be acquired through the applicable PEO MPM. LCS equipment will have some acquisition through the PMS 501 and direct on contract.</p> <p><b>E. MAJOR PERFORMERS:</b> NSWC PHD</p> <p>Northrop Grumman</p> <p>LHA 6, CVN 78, DDG 1000, LCS</p> <p>PEO IWS MPM's</p>			



<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>					
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>					<b>DATE</b> February 2008		
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RDTEN/BA 6</b>		<b>PROGRAM ELEMENT NUMBER AND NAME</b> <b>0605863N/RDT&amp;E SHIP AND AIRCRAFT SUPPORT</b>			<b>PROJECT NUMBER AND NAME</b> <b>3206/T&amp;E Enterprise</b>		
<b>COST (In Millions)</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>
Project Cost	0.000	0.000	105.671	122.806	31.580	123.164	70.616
RDT&E Articles Qty	0	0	0	0	0	0	0

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

This project provides Self Defense Test Ship Test and Evaluation Enterprise efforts for DDG 1000, LHA 6, CVN 78, and LCS programs. The T&E Enterprise solution integrates Self Defense Test Ship, Probability of Raid Annihilation Test Bed, and lead and operational ship at-sea test events across combat system variants to eliminate duplication and minimize combat system testing across ship classes.

Title of the PU (Air and Missile Defense Radar) is misleading. When funding PU was established, it was mislabeled in the database. Establishment of a new PU name (T&E Enterprise), with a new title was established as PU 3206 and FY09 and out funding was moved to that line.

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>		
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>				DATE February 2008
APPROPRIATION/BUDGET ACTIVITY <b>RDTEN/BA 6</b>	PROGRAM ELEMENT NUMBER AND NAME <b>0605863N/RDT&amp;E SHIP AND AIRCRAFT SUPPORT</b>	PROJECT NUMBER AND NAME <b>3206/T&amp;E Enterprise</b>		
<b>B. ACCOMPLISHMENTS/PLANNED PROGRAM:</b>				
		FY 2007	FY 2008	FY 2009
<b>Accomplishments/Effort/Subtotal Cost</b>		0.000	0.000	105.671
RDT&E Articles Quantity		0	0	0
2009: Acquisition and Installation of Enterprise Test Equipment on the Self Defense Test Ship.				
<b>C. OTHER PROGRAM FUNDING SUMMARY:</b> Not Applicable.				
<b>D. ACQUISITION STRATEGY:</b> Begin acquisition of DDG 1000 and LCS equipment set in FY08.  Acquisition of LHA 6 begins in FY09.  Acquisition of CVN 21 begins in FY12/13.  Acquisition of systems is tailored to each ship class.  DDG 1000 equipment will be acquired through a direct contract. LHA 6 components will be acquired through the applicable PEO MPM. LCS equipment will have some acquisition through the PMS 501 and direct on contract.				
<b>E. MAJOR PERFORMERS:</b> NSWC PHD Cutlass Systems Engineering Northrop Grumman NRL AVW Visitech Point Mugu				

EXHIBIT R-2, RDT&E Budget Item Justification						DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-6						R-1 ITEM NOMENCLATURE 0605864N, TEST AND EVALUATION SUPPORT		
COST (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	
Total PE Cost	327.886	329.026	356.254	356.930	363.315	370.525	377.772	
0541 AUTECH	52.834	53.088	55.429	57.327	58.715	59.819	60.965	
0566 NAVAIR ENVIRONMENTAL COMPL	3.591	3.623	3.890	4.065	4.173	4.249	4.325	
0653 NAWC WEAPONS	138.651	140.557	153.493	153.246	156.435	159.730	162.775	
0654 NAWC AIRCRAFT	100.735	100.308	110.174	107.777	108.729	110.847	113.174	
2921 PACIFIC MISSILE RANGE FACILITY	5.202	4.914	5.017	5.140	5.228	5.330	5.438	
2922 MRTFB MAINT AND REPAIR	14.608	14.658	15.804	16.532	16.963	17.259	17.572	
3029 T&E POLICY SUPPORT	.651	.661	.703	.753	.778	.784	.791	
3154 NANOOSE AND DABOB	11.614	11.217	11.744	12.090	12.294	12.507	12.732	

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program provides institutional maintenance and operations support for: the Naval Undersea Warfare Center Detachment Atlantic Undersea Test and Evaluation Center (NAVUNSEAWARDCEN DET AUTECH), Andros Island, Bahamas; the Environmental Compliance Program; Naval Air Warfare Center Weapons Division (NAVAIRWARDCENMPNDIV), Point Mugu and China Lake, CA; Naval Air Warfare Center Aircraft Division (NAVAIRWARDCENACDIV), Patuxent River, MD; T&E related capabilities at the Pacific Missile Range Facility, Barking Sands, HI; Maintenance and Repair at NAVAIRWARDCENMPNDIV and NAVAIRWARDCENACDIV; and the Naval Undersea Warfare Center Keyport (NAVUNSEAWARDCEN KEYPORT) Nanoose and Dabob Bay Ranges. The Test and Evaluation (T&E) activities make up the Navy portion of the Department of Defense's Major Range and Test Facility Base (MRTFB). These activities are chartered to perform T&E for the development and acquisition of technology advanced weapons systems. Core T&E capabilities and capacity are operated to obtain weapons system performance documentation for acquisition program milestone decisions to provide operational forces with effective weapons systems. This program provides Navy Acquisition Program Managers required test capabilities; lowers cost of T&E; removes cost and scheduling impact of providing their own T&E resources; and retains the physical airspace, land space and sea space needed to conduct testing.

B. PROGRAM CHANGE SUMMARY

Funding:	FY 2007	FY 2008	FY 2009
Previous President's Budget:	327.038	336.130	351.430
Current BES Budget:	327.886	329.026	356.254
Total Adjustments	0.848	-7.104	4.824

Summary of Adjustments			
Congressional Reductions			
Congressional Rescissions			
Congressional Undistributed Reductions	-0.402	-2.136	
Congressional Increases			
Economic Assumptions			-2.050
Miscellaneous Adjustments	1.250	-4.968	6.874
Subtotal	0.848	-7.104	4.824

Schedule:

Project Unit 0541. Not Applicable.  
 Project Unit 0566. Not Applicable.  
 Project Unit 0653. Not Applicable.  
 Project Unit 0654. Not Applicable.  
 Project Unit 2921. Not Applicable.  
 Project Unit 2922. Not Applicable.  
 Project Unit 3029. Not Applicable.  
 Project Unit 3154. Not Applicable.

Technical:

Project Unit 0541. Not Applicable.  
 Project Unit 0566. Not Applicable.  
 Project Unit 0653. Not Applicable.  
 Project Unit 0654. Not Applicable.  
 Project Unit 2921. Not Applicable.  
 Project Unit 2922. Not Applicable.  
 Project Unit 3029. Not Applicable.  
 Project Unit 3154. Not Applicable.

EXHIBIT R-2a, RDT&E Project Justification						DATE:						
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6						PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT			PROJECT NUMBER AND NAME 0541, AUTECH			
COST (\$ in Millions)						FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0541 AUTECH						52.834	53.088	55.429	57.327	58.715	59.819	60.965
RDT&E Articles Qty NOT APPLICABLE												

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: As a detachment of Naval Undersea Warfare Center (NUWC), Division Newport, the mission of the Atlantic Undersea Test and Evaluation Center (AUTECH) is to provide the US Navy an underwater range facility for full-spectrum test and evaluation of Undersea Warfare (USW) systems and for Fleet training and readiness assessment.

The AUTECH Program Office is headquartered at Newport, RI. AUTECH's administrative offices are located at West Palm Beach, Florida. Test facilities are located at Andros Island, Sites 1 through 4, and the Berry Islands in the Bahamas. AUTECH aircraft make scheduled daily flights between West Palm Beach and Andros Town Airport.

AUTECH manages and, under service contract, maintains and operates a 500 square nautical miles deep-water and a 100 square nautical miles shallow-water acoustic tracking range; air-target tracking capabilities; sonobuoy simulation systems; electronic warfare threat simulation systems; fixed and rotary wing aircraft; aircraft ground support facilities; acoustic targets; torpedo retrieval and flushing capabilities; open-ocean range craft; marine support facilities; and, data processing and analysis capabilities.

Major test facilities on Andros Island are located at Site 1. The Command Control Building houses the range tracking displays and replay centers, the computer center, operations support functions, communications center, and the central timing system. The Range Support Facility houses a torpedo post-run workshop, Mark 46 /Mark 50 lightweight torpedo Intermediate Maintenance Activity (IMA), a Mark 30 undersea target IMA, a Mark 48 heavyweight torpedo R&D Turnaround facility and related technical facilities. The complex includes electrical and physical calibration labs, a complete electronics maintenance shop, a dive locker, a precision machine shop, and logistics support areas.

AUTECH has a 285-foot concrete pier with a controlling depth of 17 feet (5.2 meters) at mean low tide. An adjacent wharf is approximately 240 feet in length (72 meters) with a controlling depth of 15 feet at mean low tide. Power is available at both locations. Facilities at the pier/marine area include fully equipped machine /fabrication and marine overhaul shops.

Also at Site 1, six Range User Buildings (RUBs) are maintained for assembling test equipment and equipment check-out during test mobilization or dockside periods. These staging areas are equipped with a variety of power sources, gantry cranes, compressed air and security features. A fully equipped range user hanger for ground maintenance and storage of helicopters is located at the AUTECH helicopter airstrip. Sites 2, 3, and 4 are small instrumented areas located south of Site 1 used to extend tracking of sonobuoys, communications, and air target track.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Atlantic Undersea Test and Eval Ctr Facility	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	41.834	42.038	44.379
RDT&E Articles Qty			

AUTECH is a Test and Evaluation (T&E) facility for collecting selected underwater, surface and air tracking data on test participants. This project funds the overhead/institutional costs required to sustain the MRTFB capabilities at AUTECH in accordance with Department of Defense Directive 3200.11. Funds are used to maintain and operate mission essential/core test support resources, instrumentation systems and marine craft required to meet customer test workload. Funds civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain MRTFB operations. Reimburses the Command for General and Administrative support services.

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2008
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT	PROJECT NUMBER AND NAME 0541, AUTEK

Bahamian Lease	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	11.000	11.050	11.050
RDT&E Articles Qty			

Provide rental payments to the Bahamian government for use of land and ocean in the Bahamas.

C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.

<u>List Item No. &amp; Name</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>To Complete</u>	<u>Total Cost</u>
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D. ACQUISITION STRATEGY: Not Applicable.

EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6		PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT			PROJECT NUMBER AND NAME 0566, NAVAIR ENVIRONMENTAL COMPL			
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0566 NAVAIR ENVIRONMENTAL COMPL		3.591	3.623	3.890	4.065	4.173	4.249	4.325
RDT&E Articles Qty NOT APPLICABLE								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This continuing project supports environmental compliance, conservation and pollution prevention related efforts at the Navy Major Test Facility Bases (MRTFB) located at Patuxent River, MD, China Lake, CA, Point Mugu, CA, and Atlantic Undersea Test and Evaluation Center (AUTEC), Bahamas. The Navy MRTFB environmental projects include ongoing efforts to comply with Federal, State, and local environmental requirements.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Environmental Compliance	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	3.591	3.623	3.890
RDT&E Articles Qty			

Continues hazardous waste disposal, solid waste disposal, natural & cultural resources programs, environmental permits, and environmental monitoring at AUTEC, Patuxent River, China Lake and San Nicolas Island. Continue the removal and disposal of Polychlorinated Biphenyls (PCBs) contaminated items at China Lake. Continued comprehensive air pollution meteorology studies at Point Mugu. Continue range contamination assessments at impact areas and lay down yards at China Lake.

C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.

List Item No. & Name	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost

D. ACQUISITION STRATEGY: Not Applicable.

EXHIBIT R-2a, RDT&E Project Justification						DATE:						
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6						PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT			PROJECT NUMBER AND NAME 0653, NAWC WEAPONS			
COST (\$ in Millions)						FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0653 NAWC WEAPONS						138.651	140.557	153.493	153.246	156.435	159.730	162.775
RDT&E Articles Qty						NOT APPLICABLE						

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: Project provides continuing maintenance and operational support for the Naval Air Warfare Center Weapons Division (NAVAIRWARCENWPNDIV) Test and Evaluation (T&E) capabilities. These capabilities include the Pacific Ranges and Facilities, consisting of China Lake Ranges and the Point Mugu Sea Range, aerial and surface targets, test instrumentation, and T&E aircraft. The Pacific Ranges use China Lake's 1.1 million acres of land and 17,000 square miles of military restricted (R-2508) airspace together with Point Mugu's 125,000 square miles of instrumented sea range and 36,000 square miles of controlled overlying airspace, and airfield and test instrumentation at San Nicolas Island to perform its T&E mission. Included in the China Lake ranges is the Electronic Combat Range (ECR), which provides outdoor free space development and operational testing of airborne electronic warfare (EW) systems and tactics against shipboard and land based air defense systems. These ranges perform metric radar, multilateration and optical tracking of test objects; command, control, and destruct for range safety purposes; communications; frequency interference control and analysis; collection processing and display of telemetered data; real-time data processing and display; and the operation of a sub scale aerial target launch capability. Other test capabilities include an outdoor High Power Microwave (HPM) measurement facility; propulsion, warhead, environmental, rocket motor, and other missile component test facilities; and gun ranges. This project funds costs that are not chargeable to customers.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Pacific Ranges	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	66.890	65.335	67.400
RDT&E Articles Qty			

In accordance with (IAW) Department of Defense Directive (DoDD) 3200.11., this project funds the overhead/institutional costs required to sustain the Major Range Test Facility Base (MRTFB) capabilities at the Pacific Ranges and Facilities located at China Lake and Point Mugu CA. These facilities provide safe, instrumented, controlled open air testing utilizing the Land Range, Sea Range, Electronic Combat Range, Air Vehicle Modification and Instrumentation, and San Nicholas Island. Funds are used to maintain and operate mission essential/core test support resources. These resources include test article instrumentation and/or modification for Flight Test Aircraft, Weapons Under Test and Aircraft Engines Undergoing Un-installed test, as well as, scheduling and control of air, land, sea and associated range operating areas required to meet customer test workload. Funds civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain MRTFB operations.

Navy Test Wing Pacific	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	18.855	23.714	25.234
RDT&E Articles Qty			

IAW with DoDD 3200.11., this project funds the overhead/institutional costs required to sustain the MRTFB capabilities of the Naval Test Wing Pacific located at China Lake and Point Mugu CA. These facilities provide the Navy's principal Pacific test activity for Naval Aviation Systems Team aircraft, engaged in or supporting T&E of aircraft, weapons and weapons systems. Funds are used to maintain and operate mission essential/core test support resources associated with aircraft and related systems and flight test safety required to meet customer test workload. Funds civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain MRTFB operations.

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2008
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT	PROJECT NUMBER AND NAME 0653, NAWC WEAPONS

Threat/Target Systems	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	12.221	11.280	11.998
RDT&E Articles Qty			

This project funds the overhead/institutional costs required to sustain the MRTFB capabilities of the Threat/Target Systems facilities IAW DoDD 3200.11. These facilities provide the airborne and seaborne threats for test and evaluation. Funds are used to maintain and operate mission essential/core test support resources associated with airborne and seaborne targets required to meet customer test workload. Funds civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain MRTFB operations.

Test and Evaluation Ordnance	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	3.305	3.271	3.342
RDT&E Articles Qty			

This project funds the overhead/institutional costs required to sustain the MRTFB capabilities of the Test and Evaluation Ordnance facilities IAW DoDD 3200.11. These facilities provide test and evaluation of All-Up live ordnance and components. Funds are used to maintain and operate mission essential/core test support resources associated propulsion, warhead, environmental, rocket motor, and other missile component test facilities required to meet customer test workload. Funds civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain MRTFB operations.

Staff	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	37.380	36.957	45.519
RDT&E Articles Qty			

This project funds the overhead/institutional costs required to sustain the Naval Air Warfare Center Weapons Division (NAWCWD) MRTFB Test and Evaluation capabilities IAW DoDD 3200.11. Reimburses the Command for General and Administrative Support services. Funds civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain MRTFB operations.

C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.

<u>List Item No. &amp; Name</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>To Complete</u>	<u>Total Cost</u>

D. ACQUISITION STRATEGY: Not Applicable.



UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6		PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT			PROJECT NUMBER AND NAME 0654, NAWC AIRCRAFT			
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
0654 NAWC AIRCRAFT		100.735	100.308	110.174	107.777	108.729	110.847	113.174
RDT&E Articles Qty NOT APPLICABLE								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides funds for the maintenance and operations of the Naval Air Warfare Center Aircraft Division's (NAVAIRWARCENACDIV's) Major Range Test Facility Base (MRTFB) capabilities used to conduct test and evaluation for air platforms. NAVAIRWARCENACDIV has extensive airfield, flight test ranges, aircraft systems test facilities and simulation laboratories to support aircraft Research Development Test and Evaluation (RDT&E). This includes 50,000 square miles of airspace, 39,375 square miles of sea space, and 7,950 acres of land space. Product areas include aircraft systems flight test and evaluation, carrier suitability certification, test article preparation, installed system test and evaluation, and modeling and simulation support of the acquisition process. The Test and Evaluation (T&E) Group, Patuxent River, performs development and operational test and evaluation of manned and unmanned air vehicle systems, including mission systems, equipment, subsystems, components, and support systems. This project also provides test and evaluation facilities for air-breathing propulsion systems and extensive facilities for conducting both installed and uninstalled aircraft engine development and test and evaluation. This project funds costs that are not chargeable to customers.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Atlantic Ranges		FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost		24.433	23.709	24.230
RDT&E Articles Qty				

In accordance with (IAW) Department of Defense Directive (DoDD) 3200.11., this project funds the overhead/institutional costs required to sustain the MRTFB capabilities associated with the Atlantic Ranges and Facilities and Air Vehicle Modification and Instrumentation . These facilities provide safe, instrumented, controlled flight testing and training in air, sea, and land arenas. Funds are used to maintain and operate mission essential/core test support resources. These resources include test article instrumentation and/or modification for Flight Test Aircraft and Weapons Under Test as well as, ground and flight test instrumentation systems, range instrumentation systems and data processing and communication systems required to meet customer test workload. Funds civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain MRTFB operations.

Electromagnetic Environmental Effects (E-Cubed) and Air Combat Environment Test and Evaluation Facility (ACETEF)

		FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost		20.737	21.439	21.910
RDT&E Articles Qty				

In accordance with DoDD 3200.11., this project funds the overhead/institutional costs required to sustain the MRTFB capabilities associated with Electromagnetic Environmental Effects (E-Cubed) and Air Combat Environment Test and Evaluation Facility . These facilities provide T&E support with integrated, interactive, and repeatable synthetic environments and reduce the risk and cost for programs with the use of installed systems tests to include simulation and stimulation tools, techniques and technologies. Funds are used to maintain and operate mission essential/core test support resources required to meet customer test workload. Funds civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain MRTFB operations.

Propulsion Systems Test Facility		FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost		4.183	4.500	4.599
RDT&E Articles Qty				

This project funds the overhead/institutional costs required to sustain the MRTFB capabilities of the Propulsion System Evaluation facility IAW DoDD 3200.11. These facilities perform T&E of propulsion systems in the laboratories, engine test chambers and component test rigs of the Propulsion Systems Test Facility and the Aircraft T&E Facility. Propulsion Systems consists of engines, engine components and accessories. Funds are used to maintain and operate mission essential/core test support resources required to meet customer test workload. Funds civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain MRTFB operations.

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2008
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT	PROJECT NUMBER AND NAME 0654, NAWC AIRCRAFT

Threat/Target Systems	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	1.712	1.441	1.472
RDT&E Articles Qty			

This project funds the overhead/institutional costs required to sustain the MRTFB capabilities of the Threat/Target Systems facilities IAW DoDD 3200.11. These facilities provide the airborne and seaborne threats for test and evaluation. Funds are used to maintain and operate mission essential/core test support resources associated with airborne and seaborne targets required to meet customer test workload. Funds civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain MRTFB operations.

Naval Test Wing Atlantic	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	20.949	22.685	24.952
RDT&E Articles Qty			

IAW with DoDD 3200.11., this project funds the overhead/institutional costs required to sustain the MRTFB capabilities of the Naval Test Wing Atlantic. These facilities provide support for Naval Aviation Systems Team aircraft, engaged in or supporting T&E of aircraft and aircraft systems. Funds are used to maintain and operate mission essential/core test support resources associated with aircraft and related systems and flight test safety required to meet customer test workload. Funds civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain MRTFB operations.

Staff	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	28.721	26.534	33.011
RDT&E Articles Qty			

This project funds the overhead/institutional costs required to sustain the Naval Air Warfare Center Aircraft Division (NAWCAD) MRTFB Test and Evaluation capabilities IAW DoDD 3200.11. Reimburses the Command for General and Administrative Support services. Funds civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain MRTFB operations.

C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.

List Item No. & Name	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost

D. ACQUISITION STRATEGY: Not Applicable.

EXHIBIT R-2a, RDT&E Project Justification						DATE:						
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6						PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT		PROJECT NUMBER AND NAME 2921, PACIFIC MISSILIE RANGE FACILITY				
COST (\$ in Millions)						FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
2921 PACIFIC MISSILIE RANGE FACILITY						5.202	4.914	5.017	5.140	5.228	5.330	5.438
RDT&E Articles Qty NOT APPLICABLE												

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program provides continuing maintenance and operations support for Test & Evaluation (T&E) related capabilities at the Pacific Missile Range Facility (PMRF) located at Barking Sands on Kauai, HI. PMRF's T&E capabilities include precision radar and telemetry assets, the Mobile Aerial Target Support System (MATSS), and optical tracking systems. These assets support Navy, DOD, and Army Missile Defense Test & Evaluation. This project funds costs not chargeable to customers.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

PMRF Test and Evaluation Assets	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	5.202	4.914	5.017
RDT&E Articles Qty			

This project funds the overhead/institutional costs required to sustain the recognized Major Range Test Facility Base (MRTFB) capabilities at PMRF in accordance with Department of Defense Directive 3200.11. Funds are used to maintain and operate mission essential/core test support resources including the precision radar and telemetry assets, the Mobile Aerial Target Support System (MATSS), the Stabilized High-accuracy Optical Tracking System (SHOTS), and the Telemetry Systems required to meet customer test workload. Funds civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain MRTFB operations. Reimburses the Command for General and Administrative support services.

C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.

List Item No. & Name	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost

D. ACQUISITION STRATEGY: Not Applicable.

EXHIBIT R-2a, RDT&E Project Justification					DATE: February 2008			
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME			
RDT&E,N / BA-6		0605864N, TEST AND EVALUATION SUPPORT			2922, MRTFB MAINT AND REPAIR			
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
2922 MRTFB MAINT AND REPAIR		14.608	14.658	15.804	16.532	16.963	17.259	17.572
RDT&E Articles Qty		NOT APPLICABLE						

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides funding for the maintenance and repair of the Major Range Test Facility Base (MRTFB) Real Property Maintenance Activities (RPMA) at the Naval Air Warfare Center Weapons Division (W0653) and the Naval Air Warfare Center Aircraft Division (0654). Funds mission critical emergency services, recurring maintenance and repair, and major repair projects. In addition it addresses priority items on the Backlog of Maintenance and Repair (BMAR) list.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Facility Maintenance and Repair	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	14.608	14.658	15.804
RDT&E Articles Qty			

Support mission critical emergency services, recurring maintenance and repair, and minor and major repair efforts at the Naval Air Warfare Center Weapons Division and Naval Air Warfare Center Aircraft Division.

C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.

<u>List Item No. &amp; Name</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>To Complete</u>	<u>Total Cost</u>

D. ACQUISITION STRATEGY: Not Applicable.

EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2008		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME			
RDT&E,N / BA-6		0605864N, TEST AND EVALUATION SUPPORT			3029, T&E POLICY SUPPORT			
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
3029 T&E POLICY SUPPORT		.651	.661	.703	.753	.778	.784	.791
RDT&E Articles Qty		NOT APPLICABLE						

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides funds to support Test and Evaluation (T&E) policy, transformation, programming, requirements validation, and T&E dispute arbitration and resolution in an evolutionary acquisition environment. This expertise is also used as required to support the completion of the Navy T&E mission including oversight of T&E plans for Navy and Joint acquisition programs, liaison with other agencies on T&E matters, development of T&E strategic plans, conduct of T&E studies and assessments, formulation and validation of T&E capability needs, assessment and support of future testing of formal acquisition programs, and identification of Science and Technologies required to support T&E of future acquisition programs.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

T&E Policy & Requirements Validation Support	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	.651	.661	.703
RDT&E Articles Qty			

Provides funding for labor, material, and travel in support of the Test and Evaluation (T&E) policy and requirements validation.

C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.

List Item No. & Name	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost

D. ACQUISITION STRATEGY: Not Applicable.

EXHIBIT R-2a, RDT&E Project Justification						DATE:						
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6						PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT			PROJECT NUMBER AND NAME 3154, NANOOSE AND DABOB			
COST (\$ in Millions)						FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
3154 NANOOSE AND DABOB						11.614	11.217	11.744	12.090	12.294	12.507	12.732
RDT&E Articles Qty NOT APPLICABLE												

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides maintenance and operations support for the Nanoose and Dabob Bay Ranges along with associated support systems to provide Test and Evaluation (T&E) and readiness assessment services for acquisition programs and the Fleet. Operates ocean-based environment, measurement and support systems. Maintains and repairs systems that measure warfare system performance. Oversees test, training, and measurement facilities, equipment, operations and maintenance processes. Satisfies customer exercise and measurement requirements through the operation of ocean based test and measurement systems. Assures the readiness of systems through the implementation of calibration, maintenance, repair and life cycle processes. Performs exercise planning, exercise interpretation and development of surrogate environments, measurement and support systems. Assists in the design, fabrication and testing of systems for Undersea Warfare (USW) warfare environment simulation and performance measurement. Oversees the manning and maintenance of Naval Undersea Warfare Center (NUWC) Division Keyport range craft and range craft systems.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Undersea Ranges	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	10.223	9.675	10.155
RDT&E Articles Qty			

This project funds the overhead/institutional costs required to sustain the Major Range Test Facility Base (MRTFB) capabilities at the Nanoose and Dabob Bay undersea tracking ranges. Funds are used to maintain and operate mission essential/core test support resources associated with the unique test environments for test and evaluation of undersea weapons, sensors, submarines and other undersea systems required to meet customer test workload. Funds civilian labor, travel, transportation, equipment, supplies, communication, equipment maintenance, purchased service contracts, annual utilities and any costs necessary to manage and sustain MRTFB operations. Reimburses the Command for General and Administrative support services.

Canadian Memorandum of Understanding (MOU)	FY 2007	FY 2008	FY 2009
Accomplishments / Effort / Sub-total Cost	1.391	1.542	1.589
RDT&E Articles Qty			

Covers the cost of the Memorandum of Understanding (MOU) between NUWC Division Keyport and Canadian Forces Maritime Experimental Test Range (CFMETR). Costs include United States, Navy (USN) funded personnel, jointly shared Operations and Maintenance (O&M) costs, personnel overtime at USN request, fuel, second range vessel, and helicopter usage.

C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.

List Item No. & Name	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost

D. ACQUISITION STRATEGY: Not Applicable.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605865N  
PROGRAM ELEMENT TITLE: OPERATIONAL TEST AND EVALUATION CAPABILITY

COST: (Dollars in Thousands)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
<b>Total PE</b>	11,761	12,094	12,195	12,626	12,174	12,939	13,058
0831 OPERATIONAL TEST & EVALUATION FORCE (OPTEVFOR) SUPPORT	11,301	11,621	11,706	12,125	11,690	12,424	12,539
2923 NAVY JT&E SUPPORT	460	473	489	501	484	515	519

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This program element (PE) provides Commander, Operational Test and Evaluation Force (COMOPTEVFOR) general support funding for headquarters annual operating costs and ensures COMOPTEVFOR compliance with Secretary of Defense (SECDEF) and Secretary of the Navy (SECNAV) directives to conduct independent operational testing and evaluation. Funding supports planning, conducting, and reporting on the operational effectiveness and suitability of new and improved systems and recommending fleet usage to the Chief of Naval Operations (CNO). Funding is also used to support ongoing development and implementation of new requirements relative to integrated testing. The CNO, as well as acquisition executives and managers at all levels, have a continuing need for expeditious and efficient conduct of Operational Test and Evaluation (OT&E) by COMOPTEVFOR in support of training and equipping fleet forces. OT&E issues have direct long-term Navy-wide implications on the Fleet's readiness and war fighting capability. Rapid advances in technology, changes in fleet tactics, and increased complexity of weapons systems and platforms, combined with reductions in manpower, force structure, and budgets have created an increased need for technical and operational analyses that are sophisticated and timely in order to ensure an optimal return on investment of Navy resources. Funding is also provided for Navy support of the Office of the Secretary of Defense (OSD) sponsored Joint Test and Evaluation (JT&E) program.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605865N  
PROGRAM ELEMENT TITLE: OPERATIONAL TEST AND EVALUATION CAPABILITY

**B. PROGRAM CHANGE SUMMARY:**

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY 2008/FY 2009 President's Budget Submission	11,831	12,176	12,206
Congressional Undistributed Reductions/Rescissions	0	-77	0
Non-Pay Inflation Adjustments	0	0	-82
Pay Raise Adjustments	0	0	67
Program Adjustments	-65	0	0
Rate Adjustments	0	0	4
SBIR Assessment	-5	-5	0
FY 2009 President's Budget Submission	11,761	12,094	12,195

**PROGRAM CHANGE SUMMARY EXPLANATION:**

Technical: Not applicable.

Schedule: Not applicable.

**C. OTHER PROGRAM FUNDING SUMMARY:**

Not applicable.

**D. ACQUISITION STRATEGY:**

Not applicable.

**E. PERFORMANCE METRICS:**

As indicated in section A above, funding within this PE provides for core headquarters operations and support (O&S) costs related to required operational testing and evaluation (T&E) conducted in support of Navy acquisition programs. The preponderance of funding, specifically Project 0831, provides for the annual O&S for, and the day to day operations of, the staff/headquarters of COMOPTEVFOR, located in Norfolk, Virginia. (Pursuant to DoD Financial Management Regulations and Navy financial policy guidance, as a T&E activity, COMOPTEVFOR's annual support costs are funded via RDT&E,N vice OM,N; hence, and unlike most RDT&E,N programs, these funds provide for O&S costs typical of military field commands/activities). Within the 0831 Project,



# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2

DATE: February 2008

BUDGET ACTIVITY: 06  
PROGRAM ELEMENT: 0605865N  
PROGRAM ELEMENT TITLE: OPERATIONAL TEST AND EVALUATION CAPABILITY

over half of the funding supports salaries of assigned civilian personnel. The remaining funds provide for other routine support costs such as travel, IT support, supplies, and other overhead/administrative support costs. The second line item within the PE, Project 2923, supports testing and evaluation of various Joint/multi-service programs in which the Navy shares responsibilities in support of the acquisition community. The primary metric used within the program involves support for scheduled Navy acquisition program testing and subsequent analysis and reporting of results of testing to appropriate senior Navy acquisition officials and to the Navy chain of command directly to the CNO and various OPNAV/SECNAV staff offices. The performance goal is met when all assigned/scheduled testing and reporting is supported each year. Specific test program success is measured through analytic results of testing conducted throughout the year and constant interaction with program offices, acquisition decision makers, OPNAV staff resource sponsor offices, OSD and other service T&E offices/activities, and miscellaneous other customer/stakeholders. The following metrics relate directly to the funding provided and are applicable to current operations.

	FY07	FY08	FY09
Civpers End Strength	74	77	77
Civpers Work Years	70	73	73
Number of Tests Conducted	122	134	143
Number of Programs Supported	604	604	604

UNCLASSIFIED

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605865N

PROJECT NUMBER: 0831

PROGRAM ELEMENT TITLE: OPERATIONAL TEST AND EVALUATION CAPABILITY

PROJECT TITLE: OPERATIONAL TEST & EVALUATION FORCE (OPTEVFOR) SUPPORT

COST: (Dollars in Thousands)

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
0831 OPERATIONAL TEST & EVALUATION FORCE (OPTEVFOR) SUPPORT	11,301	11,621	11,706	12,125	11,690	12,424	12,539

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This PE provides COMOPTEVFOR general support funding for headquarters annual operating costs and ensures COMOPTEVFOR compliance with Secretary of Defense (SECDEF) and Secretary of the Navy (SECNAV) directives to conduct independent operational testing and evaluation. Funding supports planning, conducting, and reporting on the operational effectiveness and suitability of new and improved systems and recommending fleet usage to the Chief of Naval Operations (CNO). Funding is also used to support ongoing development and implementation of new requirements relative to integrated testing. The CNO has a continuing need for expeditious and efficient conduct of OT&E by COMOPTEVFOR in support of training and equipping fleet forces. OT&E issues have direct long-term Navy-wide implications on the Fleet's readiness and war fighting capability. Rapid advances in technology, changes in fleet tactics, and increased complexity of weapons systems and platforms, combined with reductions in manpower, force structure, and budgets have created an increased need for technical and operational analyses that are sophisticated and timely to ensure an optimal return on investment of Navy resources.

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 2007	FY 2008	FY 2009
OPTEVFOR SUPPORT	11,301	11,621	11,706

**FY 2007 Accomplishments:**

- Continued to operationally test and evaluate CNO projects commensurate with authorized funding level.
- Continued to maintain level of effort associated with the DoD 5000-acquisition guidance, which requires increased COMOPTEVFOR involvement in early operational assessments, developmental testing, advanced concept technology demonstrations, and advanced technology demonstrations.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605865N

PROJECT NUMBER: 0831

PROGRAM ELEMENT TITLE: OPERATIONAL TEST AND EVALUATION CAPABILITY

PROJECT TITLE: OPERATIONAL TEST & EVALUATION FORCE (OPTEVFOR) SUPPORT

- Continued to support the CNO's Sea Power 21 initiatives through continuous participation in Sea Trial and Sea Enterprise efforts.

**FY 2008 Plans:**

- Continue all efforts of FY07.

**FY 2009 Plans:**

- Continue all efforts of FY08.

**C. OTHER PROGRAM FUNDING SUMMARY - NAVY RELATED RDT&E:**

Not applicable.

**OTHER PROGRAM FUNDING SUMMARY - NON-NAVY RELATED RDT&E:**

Not applicable.

**D. ACQUISITION STRATEGY:**

Not applicable.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06  
 PROGRAM ELEMENT: 0605865N      PROGRAM ELEMENT TITLE: OPERATIONAL TEST AND EVALUATION CAPABILITY  
 PROJECT NUMBER: 2923              PROJECT TITLE: NAVY JT&E SUPPORT

Project Number & Title	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate
2923 NAVY JT&E SUPPORT	460	473	489	501	484	515	519

**A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:** This project provides funding for Navy support of the OSD-sponsored JT&E program. This funding covers cost associated with facilities, personnel, and administrative support for T&E-focused Navy-led Joint Feasibility Studies and Joint Tests to ensure Navy compliance with requirements established by directive from the SECDEF to carry out the JT&E program. The funding is used for planning, conducting, and reporting the results of T&E-focused JT&E projects to assess the interoperability of recommendations on improvements in joint technical and operational concepts, to evaluate and validate testing methodologies having multi-service application, to assess technical or operational performance of interrelated and/or interacting systems under realistic joint operational conditions, and to provide data from joint field tests and exercises with which to validate models, simulations, and test beds. This funding is essential for Navy participation with the other services in these critical joint areas.

**B. ACCOMPLISHMENTS/PLANNED PROGRAM:**

	FY 2007	FY 2008	FY 2009
JOINT TEST & EVALUATION	460	473	489

**FY 2007 Accomplishments:**

- Continued to support JT&E projects as directed by the JT&E Senior Advisory Council.

**FY 2008 Plans:**

- Continue all efforts of FY07.

# UNCLASSIFIED

FY 2009 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET  
Exhibit R-2a

DATE: February 2008

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605865N

PROJECT NUMBER: 2923

PROGRAM ELEMENT TITLE: OPERATIONAL TEST AND EVALUATION CAPABILITY

PROJECT TITLE: NAVY JT&E SUPPORT

## **FY 2009 Plans:**

- Continue all efforts of FY08.

## **C. OTHER PROGRAM FUNDING SUMMARY - NAVY RELATED RDT&E:**

Not applicable.

## **OTHER PROGRAM FUNDING SUMMARY - NON-NAVY RELATED RDT&E:**

Not applicable.

## **D. ACQUISITION STRATEGY:**

Not applicable.

**CLASSIFICATION:****UNCLASSIFIED****EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION**

DATE

February 2008

APPROPRIATION/BUDGET ACTIVITY

**RD TEN/BA 6**

R-1 ITEM NOMENCLATURE

0605866N/Space and Electronic Warfare (SEW) Support

COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	4.051	2.386	2.708	2.862	2.799	3.355	3.393
0706 / EMC & RF Mgmt	3.084	1.633	2.025	2.246	2.084	2.286	2.304
0739 / NAVY C4 TOP LEVEL RQMTS	0.967	0.753	0.683	0.616	0.715	1.069	1.089

**A. MISSION DESCRIPTION:**

Project 0706, Electromagnetic Interference (EMI) Reduction and Radio Frequency (RF) Management - Develops advanced technology to identify and reduce EMI sources from Navy systems and platforms. FY2007 includes a transfer from the Spectrum Relocation Fund.

Project 0739, Navy C4I Top Level Requirements -This project provides analysis of both Fleet requirements and research and development technology, to develop top-level plans and space systems in the Space and Electronic Warfare (SEW) mission area. The Space and Electronic Warfare Studies and Analysis (SEWSAP) program supports analyses of Fleet requirements and research and development technology to develop top-level plans for operating Navy Command, Control, Communications, Intelligence, Surveillance and Reconnaissance (C4ISR) and space systems in the SEW mission area.

## JUSTIFICATION FOR BUDGET ACTIVITY:

This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations and installations required for general research and development use.

**CLASSIFICATION:****UNCLASSIFIED****EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION (CONTINUATION)**

DATE

February 2008

APPROPRIATION/BUDGET ACTIVITY

**RD TEN/BA 6**

R-1 ITEM NOMENCLATURE

0605866N/Space and Electronic Warfare (SEW) Support

**B. PROGRAM CHANGE SUMMARY:**

Funding:	FY 2007	FY 2008	FY 2009
FY 2008 PB08 Baseline	4.127	2.439	3.978
FY 2009 Presidents Budget Submission	4.051	2.386	2.708
<b>TOTAL ADJUSTMENT:</b>	<b>-0.076</b>	<b>-0.053</b>	<b>-1.270</b>
<u>Summary of Adjustments:</u>			
EMI/EMP Program Reductions	0.000	0.000	-1.149
Miscellaneous Adjustment	0.000	0.000	-0.121
Small Business Innovation Research (SBIR tax)	-0.074	0.000	0.000
Execution Realignments	0.000	-0.034	0.000
Cancelled Accounts	-0.002	0.000	0.000
Congressional Action - Contractor Efficiencies	0.000	-0.004	0.000
Congressional Action - Revised Economic Assumptions	0.000	-0.012	0.000
FPRDC Reductions	0.000	-0.003	0.000
<b>Subtotal:</b>	<b>-0.076</b>	<b>-0.053</b>	<b>-1.270</b>

**CLASSIFICATION:****UNCLASSIFIED****EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION**

DATE

February 2008

APPROPRIATION/BUDGET ACTIVITY

PROGRAM ELEMENT NUMBER AND NAME

PROJECT NUMBER AND NAME

**RDTEN/BA 6****0605866N/Space and Electronic Warfare (SEW) Support****0706/EMC & RF Mgmt**

COST (In Millions)

FY 2007

FY 2008

FY 2009

FY 2010

FY 2011

FY 2012

FY 2013

Project Cost

3.084

1.633

2.025

2.246

2.084

2.286

2.304

RDT&amp;E Articles Qty

0

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0

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

Electromagnetic Interference (EMI) Reduction and Radio Frequency (RF) Management. This project develops tools, processes, and algorithms to identify and reduce EMI sources for Navy systems and platforms. There are several efforts under development to identify and reduce EMI through proper use of the electromagnetic spectrum. Automated capabilities will be developed that reflect research into new operational fleet battle group frequency management processes. They reflect current fleet needs for a communications planning and frequency management tool used to plan communication links and analyze, allocate, and assign communication and radar frequencies for fleet operations.



<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>	
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>			DATE February 2008
APPROPRIATION/BUDGET ACTIVITY <b>RDTEN/BA 6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605866N/Space and Electronic Warfare (SEW) Support	PROJECT NUMBER AND NAME <b>0706/EMC &amp; RF Mgmt</b>	
<b>B. ACCOMPLISHMENTS/PLANNED PROGRAM:</b>			
	FY 2007	FY 2008	FY 2009
<b>AESOP (Integrated CPM and EMCAP)</b>	1.162	0.940	1.325
RDT&E Articles Quantity	0	0	0
FY 2007 Accomplishments - Developed interfaces for AESOP (Afloat Electromagnetic Spectrum Operations Program), and other automated tools to interface with evolving network protocols and to ensure currency for web based applications. Developed new algorithms for automated tools for new Navy C4ISR systems for both government and commercial communication systems being used by the Navy.			
FY 2008 - FY2009 - Develop interfaces for AESOP, and other automated tools to interface with evolving network protocols and to ensure currency for web based applications. Develop new algorithms for automated tools for new Navy C4ISR systems for both government and commercial communication systems being used by the Navy. Implement a set of web-based capabilities utilizing latest technologies (XML) and other data standards to optimize information exchange/usability. Institutionalize frequency management process for operational fleet by developing procedures that can be utilized by all Navy Strike Groups. National and international regulations on legal spectrum use are continuously changing to accommodate the growing number of civilian and commercial devices that rely on the spectrum. To address spectrum relocations that affect U.S. Navy ships and systems in operating areas worldwide, determined via models, analysis, research, and testing the appropriate frequency spectrum restrictions, system modes, and stand-off distances to ensure U.S. Navy compliance with national and international laws and treaties that govern spectrum use. Make recommendations to update existing combatant commands' and numbered fleets' directives regarding spectrum use in their Areas of Responsibility. Coordinate with ranges regarding impacts of spectrum reallocations for systems used during tests, such as telemetry and data collection. Update the AESOP software with the new radiation restrictions that reflect current legal requirements that result from spectrum relocations worldwide.			
	FY 2007	FY 2008	FY 2009
<b>Spectrum Relocation</b>	1.235	0.000	0.000
RDT&E Articles Quantity	0	0	0
FY 2008 - FY2009 Plans (Funds released August 2007; issued for execution October 2007) - All DOD Systems in the 1710-1755 MHz range are required to re-locate (replace) their systems. Will conduct a HERO survey/analysis, Ashore EMI/RADHAZ survey/analysis, and Spectrum Management efforts.			
	FY 2007	FY 2008	FY 2009
<b>Automated Tools</b>	0.687	0.693	0.700
RDT&E Articles Quantity	0	0	0
FY 2007 - Accomplishments: Developed a multi band approach for current probe technology for multiple frequencies (HF, VHF, and UHF) that eliminates many of those legacy antennas and has the potential to drastically reduce shipboard interference effects.			

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>																	
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION (CONTINUATION)</b>			DATE February 2008																
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RD TEN/BA 6</b>	<b>PROGRAM ELEMENT NUMBER AND NAME</b> 0605866N/Space and Electronic Warfare (SEW) Support	<b>PROJECT NUMBER AND NAME</b> <b>0706/EMC &amp; RF Mgmt</b>																	
<p>FY 2008 - FY2009 - Conduct research, development, testing, evaluation (RDTE), verification, validation, and assessment (VV&amp;A) of afloat spectrum management software and automated tools for all U.S. Navy surface ships and shore commands. This includes the capability to provide commanders with increased common picture of spectrum situational awareness of friendly and hostile forces and transparently deconflict competing mission requirements for spectrum use. This capability will support transformation from the current preplanned and static assignment strategy into autonomous and adaptive spectrum operations and will support the integration of sensors, weapons systems, and software communications architecture for the U. S. Navy.</p> <p><b>C. OTHER PROGRAM FUNDING SUMMARY:</b> Not Applicable</p> <p><b>D. ACQUISITION STRATEGY:</b> Not Applicable</p> <p><b>E. MAJOR PERFORMERS:</b></p> <table border="1"> <thead> <tr> <th>PERFORMER/RECIPIENT</th> <th>CITY &amp; STATE</th> <th>BRIEF DESCRIPTION OF WORK</th> <th>AWARD DATE</th> </tr> </thead> <tbody> <tr> <td>NSWC Dahlgren</td> <td>Dahlgren, VA</td> <td>Joint E3 Analysis Tool, EMCAP Validation, AESOP Support</td> <td>Various</td> </tr> <tr> <td>Sentel</td> <td>Alexandria, VA</td> <td>Automated Tools Development</td> <td>Various</td> </tr> <tr> <td>SSC San Diego</td> <td>San Diego, CA</td> <td>Electromagnetic Compatibility (EMC) Support</td> <td>Various</td> </tr> </tbody> </table>				PERFORMER/RECIPIENT	CITY & STATE	BRIEF DESCRIPTION OF WORK	AWARD DATE	NSWC Dahlgren	Dahlgren, VA	Joint E3 Analysis Tool, EMCAP Validation, AESOP Support	Various	Sentel	Alexandria, VA	Automated Tools Development	Various	SSC San Diego	San Diego, CA	Electromagnetic Compatibility (EMC) Support	Various
PERFORMER/RECIPIENT	CITY & STATE	BRIEF DESCRIPTION OF WORK	AWARD DATE																
NSWC Dahlgren	Dahlgren, VA	Joint E3 Analysis Tool, EMCAP Validation, AESOP Support	Various																
Sentel	Alexandria, VA	Automated Tools Development	Various																
SSC San Diego	San Diego, CA	Electromagnetic Compatibility (EMC) Support	Various																

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>					
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>					DATE February 2008		
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RD TEN/BA 6</b>		<b>PROGRAM ELEMENT NUMBER AND NAME</b> <b>0605866N/Space and Electronic Warfare (SEW) Support</b>			<b>PROJECT NUMBER AND NAME</b> <b>0739/NAVY C4 TOP LEVEL RQMTS</b>		
COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost	0.967	0.753	0.683	0.616	0.715	1.069	1.089
RDT&E Articles Qty	0	0	0	0	0	0	0
<b>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b>							
<p>This project provides analysis of both Fleet requirements and research and development technology, to develop top-level plans and space systems in the Space and Electronic Warfare (SEW) mission area. The Space and Electronic Warfare Studies and Analysis (SEWSAP) program supports analyses of Fleet requirements and research and development technology to develop top-level plans for operating Navy Command, Control, Communications, Intelligence, Surveillance and Reconnaissance (C4ISR) and space systems in the SEW mission area.</p> <p>Performance Metrics: Conduct and report upon studies, plans and analysis of Fleet requirements for operating Navy C4ISR and space systems in the SEW mission area.</p>							

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>	
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION</b>			DATE February 2008
APPROPRIATION/BUDGET ACTIVITY <b>RD TEN/BA 6</b>	PROGRAM ELEMENT NUMBER AND NAME 0605866N/Space and Electronic Warfare (SEW) Support	PROJECT NUMBER AND NAME <b>0739/NAVY C4 TOP LEVEL RQMTS</b>	
<b>B. ACCOMPLISHMENTS/PLANNED PROGRAM:</b>			
	FY 2007	FY 2008	FY 2009
<b>Accomplishments/Effort/Subtotal Cost</b>	0.967	0.753	0.683
RDT&E Articles Quantity	0	0	0
FY 2007 ACCOMPLISHMENTS:			
<p>Initiated and completed the following studies: (1) Infrastructure and Information Dependency Analyses, (2) Maritime Domain Awareness (MDA) Information Sharing Analysis, (3) MDA Connectivity Analysis, and (4) Analysis to identify areas of Highest Sensitivity to MDA.</p> <p>These studies supported resource and requirement decisions in the Planning, Programming, and Budgeting Executing (PPBE) System; FORCENet Fleet experiments; FORCENet Architecture selection; evaluation of Tactics, Techniques, and Procedures (TTP); alignment of Science and Technology (S&amp;T) and Research, Development, Test, and Evaluation (RDT&amp;E) efforts with FORCENet requirements; evaluation and selection of Modeling and Simulation (M&amp;S) tools and scenarios.</p> <p>SEWSAP (1) applied previously-developed models and analytical methods to identify areas of highest sensitivity in Command, Control, Communications (C3) performance, (2) extended previous architectural work on Naval operational functions and networks to detailed analyses of C3 and network requirements and, (3) extended previous system engineering results to newly emerging implementation issues.</p>			
FY 2008 PLANS:			
<p>Initiate and complete studies supporting FORCENet Fleet experiments; FORCENet Architecture selection; evaluation of Tactics, Techniques, and Procedures (TTP); alignment of Science and Technology (S&amp;T) and Research, Development, Test, and Evaluation (RDT&amp;E) efforts with FORCENet requirements; evaluation and selection of Modeling and Simulation (M&amp;S) tools and scenarios.</p> <p>SEWSAP (1) applied previously-develop models and analytical methods to identify areas of highest sensitivity in Command, Control, Communications (C3) performance, (2) extend previous architectural work on Naval operational functions and networks to detailed analyses of C3 and network requirements and, (3) extend previous system engineering results to newly emerging implementation issues.</p>			
FY 2009 PLANS: Initiate and complete studies supporting FORCENet Fleet experiments; FORCENet Architecture selection; evaluation of Tactics, Techniques, and development, Test, and Evaluation (RDT&E) efforts with FORCENet requirements; evaluation and selection of Modeling and Simulation (M&S) tools and scenarios.			

<b>CLASSIFICATION:</b>		<b>UNCLASSIFIED</b>	
<b>EXHIBIT R-2a, RDT&amp;E PROJECT JUSTIFICATION (CONTINUATION)</b>			DATE February 2008
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>RD TEN/BA 6</b>	<b>PROGRAM ELEMENT NUMBER AND NAME</b> 0605866N/Space and Electronic Warfare (SEW) Support	<b>PROJECT NUMBER AND NAME</b> <b>0739/NAVY C4 TOP LEVEL RQMTS</b>	
<p>SEWSAP (1) applied previously-develop models and analytical methods to identify areas of highest sensitivity in Command, Control, Communications (C3) performance, (2) extend previous architectural work on Naval operational functions and networks to detailed analyses of C3 and network requirements and, (3) extend previous system engineering results to newly emerging implementation issues.</p> <p><b>C. OTHER PROGRAM FUNDING SUMMARY:</b> Not Applicable</p> <p><b>D. ACQUISITION STRATEGY:</b> Not Applicable</p> <p><b>E. MAJOR PERFORMERS:</b> Not Applicable</p>			

Exhibit R-2, RDT&E Budget Item Justification								Date: February 2008	
APPROPRIATION/BUDGET ACTIVITY RDT&E,N/6				R-1 ITEM NOMENCLATURE 0605867N Link Crimson		Space and Electronic Warfare Surveillance/ Reconnaissance Support			
COST (\$ in Millions)	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	Cost to Complete	Total Cost
Link Crimson/Z1034	18.098	23.915	25.358	24.224	21.194	21.671	22.151	CONT	CONT
Quantity of RDT&E Articles	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-----	-----

A. (U) MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Link Crimson program was congressionally chartered in 1977 (updated in 1980) to oversee the tactical use of reconnaissance satellites. The program rapidly develops (1-2 years) prototype systems, sensors, and software that exploit space systems to support tactical Fleet problems. Additionally, Link Crimson focuses on elements of National ISR systems and National-Tactical Integration operations to rapidly fill tactical capability gaps via improved, fused, all-source products at multiple security levels. Link Crimson also supports and participates in fleet exercises, which provide the venue for testing and demonstrating new prototype capabilities and enhancements to existing programs into which R&D efforts transition.

(U) The current baseline will be used to conduct an analysis of alternative options to improve MDA through development of auto-correlation, auto-tracking and data mining tools, to fuse multi-INT data for both the timely creation of tracks and the predictive analysis of merchant vessel behavior. Additional detailed information is available at a higher level of classification.

(U) Z1034: Established to exploit all National and Service sensor systems to improve tactical support to fleet operational commanders. Project also supports fleet exercises, which provide the venue for testing modifications to existing programs and being made aware of new requirements.

**PROGRAM ACCOMPLISHMENTS AND PLANS:**

1. (U) FY 2007 PLAN:
  - (U) (\$0.8) Joint Exercises/Training
  - (U) (\$0.9) Precision Strike/Mission Training
  - (U) (\$1.4) ASW/USW Support
  - (U) (\$1.4) Improved Information Management (Data Dissemination/Exploitation/Analysis)
  - (U) (\$11.9) Battlespace and Maritime Domain Awareness (ASuW)
  - (U) (\$0.7) Assured Navigation and support to Mine/Littoral/Expeditionary Warfare
  - (U) (\$1.0) Information Operations/GWOT
2. (U) FY 2008 PLAN:
  - (U) (\$1.5) Joint Exercises/Training
  - (U) (\$0.9) Precision Strike/Mission Training
  - (U) (\$4.8) ASW/USW Support
  - (U) (\$3.6) Improved Information Management (Data Dissemination/Exploitation/Analysis)
  - (U) (\$10.3) Battlespace and Maritime Domain Awareness (ASuW)
  - (U) (\$0.8) Assured Navigation and support to Mine/Littoral/Expeditionary Warfare
  - (U) (\$2.0) Information Operations/GWOT

## 3. (U) FY 2009 PLAN:

- (U) (\$1.0) Joint Exercises/Training
- (U) (\$0.8) Precision Strike/Mission Training
- (U) (\$4.0) ASW/USW Support
- (U) (\$6.0) Improved Information Management (Data Dissemination/Exploitation/Analysis)
- (U) (\$10.3) Battlespace and Maritime Domain Awareness (ASuW)
- (U) (\$1.3) Assured Navigation and support to Mine/Littoral/Expeditionary Warfare
- (U) (\$2.0) Information Operations/GWOT

## B. PROGRAM CHANGE SUMMARY:

	<u>FY07</u>	<u>FY08</u>	<u>FY09</u>
PB08	18.098	29.071	27.531
FY09 BES	18.098	23.915	25.358
Delta	0	-5.156	-2.173

C. PROGRAM CHANGE EXPLANATION: FY 2008 adjustment reflects a decrease due to Congressional action and realignment to fund MDA efforts. FY 2009 adjustment reflects realignments to fund MDA efforts.

## D. OTHER PROGRAM FUNDING SUMMARY:

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
O&M,N	.404	.383	.224	.232	.235	.242	.247	.252

**EXHIBIT R-2, RDT&E Project Justification**

Date: **February 2008**

<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>PROGRAM ELEMENT NUMBER AND NAME</b>							
<b>RDT&amp;E, N /BA-6 Management Support</b>	<b>0605873M Marine Corps Program Wide Support</b>							
<b>COST (\$ in Millions)</b>		<b>FY07</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>FY12</b>	<b>FY13</b>
Total PE Cost		33.454	27.039	24.687	25.417	24.814	33.323	37.518
C0030 Marine Corps Studies and Analyses		5.546	6.284	6.649	6.814	6.936	7.088	7.286
C0033 Marine Corps Operational Testing & Evaluation Activity		3.323	3.775	3.929	4.012	4.085	4.376	4.716
C2330 Family of Incident Response Systems (FIRS)		2.849	1.833	4.039	4.312	3.204	11.016	14.248
C2930 Phase A Activities		15.909	7.894	10.07	10.279	10.589	10.843	11.268
C9999 Congressional Adds		5.827	7.253	0.000	0.000	0.000	0.000	0.000

Quantity of RDT&E Articles

**(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

This program element (PE) provides the analytical foundation for the Marine Corps Studies System (MCSS), including mandated Mission Area Analyses and Cost and Operational Effectiveness Analyses. The MCSS is the front end of the Marine Corps' acquisition

This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations and installation required for general research and development use.

1. Received \$2M in FY07 GWOT.
2. Received \$0 in FY08 from the 2008 Consolidated Appropriation.
3. FY08 funding totals do not include \$0 previously requested for current FY08 GWOT requirements.

**B. PROGRAM CHANGE SUMMARY**

	FY2007	FY2008	FY2009
<b>(U) FY 2008 President's Budget:</b>	<b>31.182</b>	<b>20.166</b>	<b>23.028</b>
(U) Adjustments from the President's Budget:			
(U) Congressional Program Reductions			
(U) Congressional Rescissions			
(U) Congressional Undistributed Rescissions/Reductions		-0.225	
(U) Congressional Increases		7.253	
(U) PR09 Program Adjustment by ASN (RDA)			1.662
(U) FY07 Emergency Supplemental	2.000		
(U) Reprogrammings	1.043		
(U) SBIR/STTR Transfer	-0.771	-0.202	
(U) Minor Affordability Adjustment			-0.003
<b>(U) FY 2009 President's Budget:</b>	<b>33.454</b>	<b>26.992</b>	<b>24.687</b>

**CHANGE SUMMARY EXPLANATION:**

- (U) Funding: See Above.
- (U) Schedule: Not Applicable.
- (U) Technical: Not Applicable.



EXHIBIT R-2a, RDT&E Project Justification				DATE: February 2008				
APPROPRIATION/BUDGET ACTIVITY: RDT&E, N/BA-6 Management Support		PROGRAM ELEMENT NUMBER AND NAME 0605873M Marine Corps Program Wide Support		PROJECT NUMBER C0030 Marine Corps Studies and Analyses				
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost		5.546	6.284	6.649	6.814	6.936	7.088	7.286
RDT&E Articles Qty								
<b>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b>								
<p>This project funds the general studies and analysis portion of the Marine Corps Studies System (MCSS) and provides the analytical underpinnings and foundation for the MCSS. The project funds a variety of studies and analyses approved for execution in the annual Marine Corps Studies System Master Plan (MCSSMP) including mandated Mission Area Analyses (MAAs), Milestone A, and Pre-Milestone A (Conceptual) Analysis of Alternatives (AoAs), technology assessments, force structure analysis, weapons systems analysis, concept development and analysis, cost benefit analysis, training assessments, feasibility analysis, scenario development, and other analyses in support of the Program Objective Memorandum (POM) initiatives and the Marine Corps, as a whole.</p> <p>The MCSS also supports the Marine Corps' acquisition system, the Expeditionary Force Development System (EFDS), and the Combat Development Process (CDP). The MAA process provides quantitative and qualitative information to decision makers for basing decision makers for basing decisions effecting improvements in operational concepts, doctrine, force structure, education, training, and procurement. In addition, the MCSS provides analytical support to decision makers for the resolution of current problems and issues identified by the operating forces. The MCSS also makes use of the Marine Corps Research University to conduct studies and analysis projects in the areas of basic and applied research and Advanced Technology Development.</p> <p>In FY07, funds were provided to NAVSEA to provide direct support, technical, analyses, and liaison services that will assure a sound bridge between the Marine Corps' role in defining EXW/Seabasing requirements and the SEA 05 role in executing Future Concepts and Ships Designs for amphibious ships/aircraft. Maritime Prepositioning Force (Future), (MPF (F)), High Speed Connectors, Sea based operations and related systems.</p>								
<b>(U) B. ACCOMPLISHMENTS/PLANNED PROGRAM:</b>								
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009				
Accomplishment/Effort Subtotal Cost		5.546	6.284	6.649				
RDT&E Articles Qty								
<p>In FY 07, continue and complete the following FY06 efforts: Distributed Operations Accessions , Shallow Water, Very Shallow Water Planning and Reconnaissance Required for Ship to Objective Maneuver, (STOM); Marine Corps Expeditionary Fighting Vehicle, (EFV), Analysis of Alternatives, (AoA) Update; Marine Enhanced Rifle Squad, (MERS); Joint Light Tactical Vehicle Analytical Support, Post Independent Analysis (PIA,) Analysis of Alternatives (AoA) Marine Corps Aviation Lift Capability Optimization Model (MALCOM); Marine Air Ground Task Force (MAGTF) Command and Control (C2) Nodes; Marine Air Ground Task Force (MAGTF) Fires; Irregular Warfare Population Dynamics, Phase I; Strategies for Reducing Resources in Joint Terminal Attack Controller, (JTAC), Training; Marine Expeditionary Force, (MEF), Intelligence, Surveillance and Reconnaissance, (ISR), Gap Analysis; Seabasing Capabilities Wargame; and Joint Strike Fighter Variant Mix studies</p> <p>In FY-2007, initiate the following efforts: Echelons of Maintenance; Pythagoras Counterinsurgency Applications to Support Irregular Warfare; Joint Strikefighter; Verification, Validation, and Accreditation; Marine Air Ground Task Force, Data Development; Fires Support; Marine Advanced Unit Infantry; Marine Expeditionary Unit and Marine Special Operations Company Interoperability; Marine Air Ground Task Force Electronic Warfare Study; Career Path for Special Operations Marines; Support to the Operating Forces; Wounded Warrior Tracking; Marine Aviation Logistics Squadron; Verification of Agent Based Simulation, Marine Corps' role in Expeditionary Warfare Seabasing requirements and Future Concepts and Ships Design for amphibious ships/craft. Irregular Warfare, Population Dynamics Phase II ; Analysis of Combat Logistics Capabilities (ACE), Phase II, Ground Ammunition Requirements Development.</p> <p>Initiate the high priority studies and analyses projects approved in the FY2008 - FY2014 Marine Corps Studies System Master Plan (MCSSMP).</p>								
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009				
Accomplishment/Effort Subtotal Cost		0.061	0.000	0.000				
RDT&E Articles Qty								
In FY-07, sub-project D was reprogrammed and consolidated with sub-project J above to make program management and execution more efficient.								
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009				
Accomplishment/Effort Subtotal Cost		0.000	0.000	0.000				
RDT&E Articles Qty								
Provide Corrosion Control Program Support.								
(U) Total \$		5.607	6.284	6.649				

<b>(U) PROJECT CHANGE SUMMARY</b>	<b>FY 2007</b>	<b>FY 2008</b>	<b>FY 2009</b>
<b>(U) FY 2008 President's Budget:</b>	<b>6.115</b>	<b>6.431</b>	<b>6.605</b>
(U) Adjustments from the President's Budget:			
(U) Congressional Program Reductions			
(U) Congressional Rescissions			
(U) Congressional Increases			
(U) Congressional Undistributed Rescissions/Reductions		-0.052	
(U) Reprogrammings	-0.416		0.044
(U) SBIR/STTR Transfer	-0.153	-0.095	
(U) Minor Affordability Adjustment			
<b>(U) FY 2009 President's Budget:</b>	<b>5.546</b>	<b>6.284</b>	<b>6.649</b>
(U) CHANGE SUMMARY EXPLANATION:			
(U) Funding: See Above.			
(U) Schedule: Not Applicable.			
(U) Technical: Not Applicable.			
<b>(U) C. OTHER PROGRAM FUNDING SUMMARY:</b> Not Applicable.			
<b>(U) Related RDT&amp;E:</b> PE 0605154N (Center for Naval Analyses (CNA), Project C0031 (Marine Corps Operations Analyses Group)			
<b>(U) D. ACQUISITION STRATEGY:</b> Not Required.			
<b>(U) E. MAJOR PERFORMERS:</b> Indefinite Delivery Indefinite Quantity contracts as follows:			
<b>FY05 - FY09</b> Academia Analytical Support Services Contract. Sep 05.			
<b>FY06 - FY10</b> Northrop Grumman Mission Systems (NGMS), Fairfax, VA for Military Modeling, Simulation, Analytical, and Support Services. May 06.			
<b>FY06 - FY10</b> New Logistics Modeling, Simulation, Analytical, and Support Services Contract to be Awarded. Sep 06			
<b>FY06 - FY10</b> New Professional Services Support Contract to be Awarded. Sep 06			
<b>(U) SCHEDULE PROFILE:</b> Not Applicable			

EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2008			
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME			
RDT&E, N /BA-6 Management Support			0605873M Marine Corps Program Wide Support			C0033 Marine Corps OT&E Activity			
COST (\$ in Millions)									
			FY 2007	FY 2008	FY 2009	FY2010	FY2011	FY2012	FY2013
<b>Project Cost</b>			3.323	3.775	3.929	4.012	4.085	4.376	4.716
RDT&E Articles Qty									
(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:									
<p>The Marine Corps Operational Test and Evaluation Activity (MCOTEA) supports the material acquisition process by managing the Marine Corps Operational Test (OT) programs for Acquisition Categories (ACAT) I through ACAT IV (less OT of manned aircraft) and performs other functions that may be directed by the Commandant of the Marine Corps. The primary purpose of Operational Test and Evaluation (OT&amp;E) is to provide information to the Milestone Decision Authority (MDA) regarding the Operational Effectiveness (OE) and Operational Suitability (OS) of the system addressed at a decision point. MCOTEA must ensure that the Marines in the Operating Forces receive the very best possible equipment and support. MCOTEA must also ensure each system proposed for acquisition is tested adequately, evaluated objectively and reported independently.</p>									
(U) B. ACCOMPLISHMENTS/PLANNED PROGRAM:									
COST (\$ in Millions)				FY 2007	FY 2008	FY 2009			
Accomplishment/Effort Subtotal Cost				<b>0.484</b>	<b>0.540</b>	<b>0.564</b>			
RDT&E Articles Qty									
MCOTEA: Provide for Organizational Support and Utilities.									
COST (\$ in Millions)				FY 2007	FY 2008	FY 2009			
Accomplishment/Effort Subtotal Cost				<b>2.654</b>	<b>3.081</b>	<b>3.296</b>			
RDT&E Articles Qty									
MCOTEA: Provide for organizational salaries.									
COST (\$ in Millions)				FY 2007	FY 2008	FY 2009			
Accomplishment/Effort Subtotal Cost				<b>0.185</b>	<b>0.000</b>	<b>0.000</b>			
RDT&E Articles Qty									
MCOTEA: Provide organizational support, utilities, and salaries for the new Automation Information Systems (AIS) test branch.									
COST (\$ in Millions)				FY 2007	FY 2008	FY 2009			
Accomplishment/Effort Subtotal Cost				<b>0.000</b>	<b>0.154</b>	<b>0.069</b>			
RDT&E Articles Qty									
MCOTEA: Organizational Support, Administration, Logistics, and Executive Travel									
(U) Total \$									

EXHIBIT R-2a, RDT&E Project Justification		DATE:							
APPROPRIATION/BUDGET ACTIVITY		February 2008							
RDT&E, N /BA-6 Management Support	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME							
	0605873M Marine Corps Program Wide Support	C0033 Marine Corps OT&E Activity							
(U) PROJECT CHANGE SUMMARY:	FY 2007	FY 2008	FY 2009						
(U) <b>FY 2008 President's Budget:</b>	<b>3.659</b>	<b>3.814</b>	<b>3.903</b>						
(U) Adjustments from the President's Budget:									
(U) Congressional Program Reductions									
(U) Congressional Rescissions									
(U) Congressional Increases									
(U) Congressional Undistributed Rescissions/Reductions		-0.033							
(U) Reprogrammings	-0.244		0.026						
(U) SBIR/STTR Transfer	-0.092	-0.006							
(U) Minor Affordability Adjustments									
(U) <b>FY 2009 President's Budget:</b>	<b>3.323</b>	<b>3.775</b>	<b>3.929</b>						
CHANGE SUMMARY EXPLANATION:									
(U) Funding: See Above.									
(U) Schedule:									
(U) Technical:									
(U) C. OTHER PROGRAM FUNDING SUMMARY:	Not Applicable								
Line Item No. & Name	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
N/A									
(U) Related RDT&E: Not Applicable.									
(U) D. ACQUISITION STRATEGY: Not Required.									
(U) E. MAJOR PERFORMERS: Not Applicable.									

<b>EXHIBIT R-2a, RDT&amp;E Project Justification</b>						<b>DATE:</b> <b>February 2008</b>			
<b>APPROPRIATION/BUDGET ACTIVITY</b>			<b>PROGRAM ELEMENT NUMBER AND NAME</b>			<b>PROJECT:</b>			
<b>RDT&amp;E, N /BA-6 Management Support</b>			<b>0605873M Marine Corps Program Wide Support</b>			<b>C2330 Family of Incident Response Systems (FIRS)</b>			
COST (\$ in Millions)			FY07	FY08	FY09	FY10	FY11	FY12	FY13
Project Cost			2.849	1.833	4.039	4.312	3.204	11.016	14.248
<b>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b>									
<p>The Family of Incident Response Systems (FIRS) consists of equipment, systems, and services designed to provide weapons of mass destruction (WMD) incident response forces the capabilities they need to effectively respond to a terrorist attack using Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives (CBRNE) weapons of mass destruction. The Family of Incident Response Systems meets the mission requirements for the detection; mass casualty decontamination; force protection; responder inter-agency interoperability; C4I; urban search and rescue; medical and general support requirements needed by these forces to mitigate the effects of a CBRNE terrorist attack. The Family of Incident Response Systems relies primarily on Commercial Off-The-Shelf/Non-Developmental Items (COTS/NDI) equipment and systems that meet the particular mission requirements of Consequence Management (CM). Nuclear, Biological, and Chemical (NBC) systems are adopted if they meet the CM mission requirements. The Family of Incident Response Systems (FIRS) R&amp;D effort allows the program to keep abreast of emerging technologies in the commercial sector and address operational capability gaps that cannot be met by commercial items.</p>									
<b>(U) B. ACCOMPLISHMENTS/PLANNED PROGRAM:</b>									
COST (\$ in Millions)			FY 2007		FY 2008		FY 2009		
Accomplishment/Effort Subtotal Cost			<b>1.899</b>		<b>0.933</b>		<b>2.127</b>		
RDT&E Articles Qty									
<p>FIRS: Reconnaissance Mission Area. Includes: 1) assessment of emerging technologies for Toxic Industrial Chemical detection and identification in conjunction with the Department of Homeland Security and the Technical Support Working Group 2) design and integration of an Advanced Mobile Lab for Chemical Warfare Agents, Non-traditional Agents, Biological Warfare Agents and Radiological Materials 3) assessment of Hand-Held Biological Detection Systems 4) transition of the Field Chemical Analytical Tool (GC/MS) Small Business Innovative Research (SBIR) Program (N03-001) 5) transition of the Multi-Toxic Industrial Chemical Colormetric Badge SBIR program (N02-117) 6) transition of the Special Operations Remote Agent Detector (SORAD) hand held chemical standoff detector developed by the Special Operations Command (SOCOM) 7) feasibility study for the use of tethered airborne sensors, camera and antennas for consequence management 8) transition of the Individual Chemical Alarm System SBIR program (CBD02-203) 9) transition of hand-held biosensor SBIR program (N02-118) 10) Product Improvement of the Chemical Biological Incident Response Force (CBIRF) Standoff Chemical Agent Detector. Incorporates previous CBIRF RDT&amp;E activities.</p>									
COST (\$ in Millions)			FY 2007		FY 2008		FY 2009		
Accomplishment/Effort Subtotal Cost			<b>0.150</b>		<b>0.100</b>		<b>0.150</b>		
RDT&E Articles Qty									
<p>FIRS: Search and Rescue (SAR) Mission Area. Includes 1) assessment of emerging technologies to locate viable casualties through debris of a collapsed building or through standing structures, such as walls and doors 2) evaluation of Commercial Off the Shelf (COTS) and emerging SAR tools. Incorporates previous CBIRF RDT&amp;E activities.</p>									

<b>EXHIBIT R-2a, RDT&amp;E Project Justification</b>			<b>DATE:</b> <b>February 2008</b>	
<b>APPROPRIATION/BUDGET ACTIVITY</b>	<b>PROGRAM ELEMENT NUMBER AND NAME</b>	<b>PROJECT:</b>		
<b>RDT&amp;E, N /BA-6 Management Support</b>	<b>0605873M Marine Corps Program Wide Support</b>	<b>C2330 Family of Incident Response Systems (FIRS)</b>		
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		<b>0.150</b>	<b>0.100</b>	<b>0.350</b>
RDT&E Articles Qty				
FIRS: Decontamination Mission Area includes 1) assessment of the effectiveness of packetized liquid decon solutions in civilian mass casualty events 2) development and evaluation improved mass casualty decon equipment and procedures. Incorporates previous CBIRF RDT&E activities.				
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		<b>0.150</b>	<b>0.100</b>	<b>0.150</b>
RDT&E Articles Qty				
FIRS: C4I Mission Area includes 1) technology assessments 2) field user evaluations 3) prototypes.				
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		<b>0.200</b>	<b>0.300</b>	<b>0.762</b>
RDT&E Articles Qty				
FIRS: Force Protection Mission Area Includes the 1) transition of the Improved Level A Protective Ensemble developed in concert with Technical Support Working Group (TSWG) 2) development of an automatic filter breakthrough monitor for Powered Air Purifying Respirators 3) radiation hardness survey and assessment of COTS CM equipment 4) commercial filter testing 5) transition of Heat stress calculator (TSWG) program. Incorporates previous CBIRF RDT&E activities.				
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		<b>0.100</b>	<b>0.100</b>	<b>0.100</b>
RDT&E Articles Qty				
FIRS: Medical Mission Area Includes 1) development and testing of mass casualty ventilation systems for nerve agent casualties 2) evaluation of patient tracking systems 3) field user evaluations.				
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		<b>0.200</b>	<b>0.200</b>	<b>0.400</b>
RDT&E Articles Qty				
FIRS: General Support Mission Area Includes 1) Prototyping and testing of modified COTS and GOTS vehicles for the deployment of incident response equipment (EOD, SAR).				
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
RDT&E Articles Qty				
Multi-Sensor Analyzer Detector (MSAD) III: Research and development of a Multi-Sensor/Analyzer Detector (MSAD) and data-fusion architecture for chem-bio agents, toxic industrial chemicals/materials (TIC/TIM) and toxins.				
COST (\$ in Millions)		FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost		<b>0.000</b>	<b>0.000</b>	<b>0.000</b>
RDT&E Articles Qty				
<b>TOTAL</b>		<b>2.849</b>	<b>1.833</b>	<b>4.039</b>

R-1 SHOPPING LIST

Item No. 152

(Exhibit R2a, page 7 of 14)

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2008	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT:	
RDT&E, N /BA-6 Management Support	0605873M Marine Corps Program Wide Support	C2330 Family of Incident Response Systems (FIRS)	
(U) PROJECT CHANGE SUMMARY:	FY07	FY08	FY09
(U) <b>FY 2008 President's Budget:</b>	<b>3.541</b>	<b>1.845</b>	<b>4.012</b>
(U) Adjustments from the President's Budget:			
(U) Congressional/OSD Program Reductions			
(U) Congressional Rescissions			
(U) Congressional Increases			
(U) Congressional Undistributed Rescissions/Reductions		-0.012	
(U) Reprogrammings	-0.603		0.027
(U) SBIR/STTR Transfer	-0.089		
(U) Minor Affordability Adjustment			
(U) <b>FY 2009 President's Budget:</b>	<b>2.849</b>	<b>1.833</b>	<b>4.039</b>
CHANGE SUMMARY EXPLANATION:			
(U) Funding: Change in funding represents reprioritizing of efforts within the USMC.			
(U) Schedule: Not Applicable.			
(U) Technical: Not Applicable.			
(U) C. OTHER PROGRAM FUNDING SUMMARY:			
Line Item No. & Name	FY 2007	FY 2008	FY 2009
(U) PMC Line (BLI# 652200)	10.922	24.616	6.623
Field Combat Equipment			
(U) PMC Line (BLI# 667000)	1.328	14.070	0.000
Items Under \$5 Million			
(U) Related RDT&E: Not Applicable.			
(U) D. ACQUISITION STRATEGY: Not Required.			
(U) D. SCHEDULE PROFILE: Not Applicable.			

EXHIBIT R-2a, RDT&E Project Justification							February 2008							
APPROPRIATION/BUDGET ACTIVITY				PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME							
RDT&E, N /BA-6 Management Support				0605873M Marine Corps Program Wide Support			C2930 Phase 0 Activities							
COST (\$ in Millions)								FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
								15.909	7.894	10.07	10.279	10.589	10.843	11.268
<p>RDT&amp;E Articles Qty (U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>Pre-Phase A Activities include assessments, surveys, and planning activities in support of the requirements generation system to mature, limit, clarify and define requirements before competition for resources in the POM process and transition to acquisition management. This effort will complement the currently funded Marine Corps Systems Command (MCSC) Phase A Activities line to pursue a limited range of items on a priority basis, examining critical issues and alternatives. Examples of activities include but are not limited to (1) development of Operational Mode Summaries, Mission Profiles, Concepts of Employment and Acquisition Objectives, (2) mapping between legacy systems and replacements, (3) examining integration and family of systems architectural issues, (4) performing Doctrine, Organization, Training, Equipment, Support, Facilities (DOTESF) assessments and providing other key support for the Universal Needs Statement (UNS) process, (5) base-lining POM initiatives, (6) planning requirements support of evolutionary acquisition, (7) facilitating user/advocate interaction to better understand what is needed and how it will be used, and (8) supporting the Marine Requirements Oversight Council (MROC)-directed tailoring Authorized Acquisition Objective process.</p> <p>Marine Corps Combat Development Command (MCCDC) averages approximately 62 UNS requests per year addressing new requirements, of which approximately 20% require expedited processing. Quick reaction assessment and planning is likely to support requirements emerging from current real world operations. Clear Facilities, a Command Element (CE) Army Research Laboratory (ARL) item (supported by the Marine Corps Ground Combat Element (GCE)) requiring a continuum of materiel solutions (family of systems) to enable lethal clearing of a broad range of man-made structures in multiple environments/tactical situations typifies a requirement needing pre-Phase A support. Supporting activities have centered around decomposition of the mission into 460 specific tasks accompanied by development of an operational concept, objectives and key performance parameters, and warfighter prioritization. The end product will be a requirements road map. The end state will be a process and product to guide both POM and acquisition activities.</p> <p>These activities do not overlap/conflict with Mission Area Analysis and Analysis of Alternatives funded within the MCCDC Studies and Analysis (S&amp;A) program, MCSC Phase A Activities, Marine Corps Warfighting Lab (MCWL) warfighting experimentation or Science and Technology (S&amp;T) activities. Pre-phase A Activities allow high priority requirements to move ahead in advance of funding decisions for specific programs, provide a better capability to react to emerging requirements and improve the quality of initiatives brought to the POM process. Through front-end assessment, relatively modest funding can be leveraged into significant cost and schedule savings, bringing needed capabilities to the operating forces sooner and cheaper. Each POM cycle provides examples of initiatives that are unfunded or delayed by an immature requirement or understanding of alternatives. In other cases the initiative is funded but the acquisition cycle stretches out until the requirement is better understood. Pre Phase A facilitates a timely and more efficient process.</p> <p>Phase A Activities consist of a series of interrelated activities in Phase A (previously known as Phase 0) of the acquisition process designed to investigate potential material solutions to validate needs, estimate program costs, support sound business decisions, correct inherent disconnects between the Programming, Planning, Budgeting and Execution (PPBE) cycle, the Combat Development and Acquisition Management Systems, and prevent undue delays in pursuing priority requirements. The process supports Commanding General (CG), MCCDC and Commander, Marine Corps Systems Command (COMMARCORSSYSCOM) by providing funding to priority programs, thus allowing for the examination of concepts and alternatives to support an orderly transition from requirements to initiatives and initiatives to funded programs. This will permit the POM process to focus on activities of evaluating, prioritizing and integrating rather than defining and resolving raw, immature requirements. Phase A activities literally “jump start” high priority programs of the acquisition process. Furthermore, since 70% of a program’s life cycle cost is determined during Phase A, this initiative will put resources to work where the return on investment (payoff) is the greatest. Typical studies conducted Phase A activities include, but are not limited to Market Surveys, Business Case Analysis (BCA), Cost as an Independent Variable (CAIV) analysis, Life Cycle Cost Estimates, Cost Comparison Analysis, Acquisition Strategies, Trade-off Analysis in lieu of an Analysis of Alternatives.</p>														

R-1 SHOPPING LIST



MAGTF Expeditionary Family of Fighting Vehicles (MEFFV): JROC Decision Memorandum 038-04 directed the Army and Marine Corps to co-develop the Army's Future Combat Systems (FCS) and the MAGTF (MEFFV) as a joint program. MEFFV is the USMC Combat Vehicle Replacement program to replace the capabilities provided currently by Tanks and Light Armored Vehicles. Per MROC direction, the MEFFV program will: (1) Work to ensure harmonization between the FCS Network and USMC Network; (2) Assess FCS technologies & platforms for applicability to USMC capability requirements; and (3) evaluate the applicability of FCS Manned Ground Vehicles for USMC adoption/use. This program is specifically designed to implement the Marine FCS Engagement Strategy to adopt FCS components suitable for MAGTF use within operational concept of Expeditionary Maneuver Warfare (EMW). The project will support transition/integration of FCS Command and Control components to MAGTF C2 and other USMC C4I initiatives where appropriate, key survivability and mobility components in the near term to enhance manned vehicle where suitable, and support modernization of manned and unmanned vehicles as USMC platforms reach their End of Service (EoS).

To satisfy the emerging requirements, the Deputy Commandant for Combat Development is leading the MEFFV effort to conduct Joint Capability Integration and Development System analysis to establish a capabilities framework specifically tailored to assess technologies for transition to the MAGTF. During the timeframe (2004-2010) MEFFV efforts are directed at capability refinement and integration, analysis of multiple concepts, determining technology objectives, and continued development of Initial Capabilities Documents (ICDs) and Capabilities Development Documents supporting Spin Out technology transitions. This budget item supports combat development activities supporting the three MROC priorities in compliance with JROC and USD AT&L guidance to participate in a Joint Program with the Army's Future Combat Systems Program.

**(U) ACCOMPLISHMENTS/PLANNED PROGRAM:**

COST (\$ in Millions)						FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost						<b>6.955</b>	<b>2.642</b>	<b>4.366</b>
RDT&E Articles Qty								

Initiate, assist and complete Phase A activities of high priority programs during their concept refinement and in some cases their technology development phases in the areas of Business Case Analysis, Trade Studies, Economic Analysis, Life Cycle Cost Estimates and Market Research Studies in support of the following efforts: AAV Modernization, Tactical Light Motor Transport Fleet, Lightweight 155 Howitzer laser fuze ignition capability, Global Command Support System (GCSS) logistics, and Marine Corps Enterprise Information Technology System.

COST (\$ in Millions)						FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost						<b>3.627</b>	<b>4.067</b>	<b>4.243</b>
RDT&E Articles Qty								

Provides for the conduct of high priority Pre-Phase A Activities for Reconnaissance Surveillance Target Acquisition, Joint Tactical Radio System, Assault Breacher Vehicle, Follow-On Shoulder Launcher Weapon System (Analysis of Alternative/Op Mode Summary/Mission Profile) War Reserve Materiel Requirement Development, Tier II UAV concept of employment & Initial Capabilities Document, Force Protection concepts and requirements assessments, establish alternatives for the Joint Light Tactical Vehicle, traceability findings for seabasing capabilities of the future, provide for integration of concepts for the Joint command and control arena, and examine engineering initial capabilities concepts.

Systematically improves the requirements and capabilities determination process by supporting the mechanisms and tools required for initial setup and continuing development of the Joint Capabilities Integration and Development System (JCIDS) process; support tools, collaboration, and mechanisms that continue the refinement and enhancement of both the Expeditionary Maneuver Warfare Capabilities List (ECL) and Expeditionary Forces Development System (EFDS) ensuring the identification and prioritization of clearly defined capability gaps.

COST (\$ in Millions)						FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost						<b>5.327</b>	<b>1.185</b>	<b>1.461</b>
RDT&E Articles Qty								

R-1 SHOPPING LIST

Force Design Trades: Employ the Joint Capability Integration and Development System to derive roles, capability needs and attributes of MAGTF armor units performing in future service and joint operational concepts. Complete Functional Solution Analysis (FSA) and Concept Decision for MAGTF needs potentially addressed by FCS systems, components or Spin Out products. Develop Expeditionary Armored Forces (EAF) mission profiles and operational mode summary. Develop an Operations and Organization documents for FCS Spin Out products potentially meeting MAGTF needs. Conduct an EAF Evaluation Strategy, providing metrics or the needed capabilities. Provide personnel and travel necessary to participate in FCS and Unit of Action IPTs and planning for FCS Spin Out products.

Technology Assessments: To support MCCDC JCIDS assessments of Army FCS capabilities. Technology assessments will be conducted to define technology maturity/readiness and issues for potential USMC adoption. Technology assessments, technology development strategy and consideration of technology issues shall be used to evaluate FCS technologies, including Spin Outs, and platforms (combat vehicles, UAVs, Unmanned Ground Vehicles, unattended sensors, and unattended munitions) of interest, based on developing MCCDC Initial Capabilities Documents (ICD) and Capability Development Documents (CDD). This shall include market research to determine alternate sources of technology. In support of MROC directed C4I integration (now called Systems Engineering, Interoperability Architectures and Technology (SIAT)) with FCS, assess architecture commonality, and assess/resolve technology barriers to C4I interoperability/integration (SIAT). Such technology assessment activities shall be coordinated with the Office of Naval Research, including monitoring Functional Naval Capabilities (FNC) developments for component commonality opportunities and participating in joint ONR/FCS technology initiatives. In support of FCS assessment, explore survivability initiatives through service and joint wargames and experiments and initiate risk studies.

Systems Integration Plan: Develop the architecture based Systems Engineering Plan to support development and integration in preparation for Systems Development and Demonstration tasks. Establish a database compatible with both the Expeditionary Force Development System for DOTMLPF Integration and the Army's FCS Systems Integration methodologies for current and future MAGTF systems design integration. Develop modeling and simulation approach and determine feasibility of FCS components on MAGTF systems. Populate EFDC system integration databases, based on capability options for meeting Expeditionary Maneuver Warfare (EMW) capability needs. Evaluate design excursions. Examine risk mitigation methodologies. Build business technology evaluation plan and strategy for measuring progress.

Office and Acquisition Analysis: Fund capabilities, acquisition and technology team documentation development and coordinate successive integration of activities. Administrative support, (Systems Engineering and Technical Assistance (SETA))/contractor support. Project office travel, training and office materials.

COST (\$ in Millions)						FY 2007	FY 2008	FY 2009
Accomplishment/Effort Subtotal Cost						0.000	0.000	0.000
RDT&E Articles Qty								
(U) Total \$						15.909	7.894	10.070

(U) PROJECT CHANGE SUMMARY:

	FY2007	FY2008	FY2009
<b>(U) FY 2008 President's Budget:</b>	<b>11.890</b>	<b>8.076</b>	<b>8.508</b>
(U) Adjustments from the President's Budget:			
(U) Congressional/OSD Program Reductions			
(U) Congressional Rescissions			
(U) Congressional Increases			
(U) Congressional Undistributed Rescissions/Reductions		-0.081	
(U) PR09 Program Adjustment by ASN (RDA)			
(U) FY07 Emergency Supplemental	2.000		

R-1 SHOPPING LIST

(U) Reprogrammings	2.306		1.500
(U) SBIR/STTR Transfer	-0.287	-0.101	0.065
(U) Minor Affordability Adjustment			-0.003
<b>(U) FY 2009 President's Budget:</b>	<b>15.909</b>	<b>7.894</b>	<b>10.070</b>
CHANGE SUMMARY EXPLANATION:			
(U) Funding: See Above.			
(U) Schedule: Not Applicable.			
(U) Technical: Not Applicable.			
(U) C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable			
(U) Related RDT&E: Not Applicable.			
(U) D. ACQUISITION STRATEGY: Not Required.			
(U) D. SCHEDULE PROFILE: Not Applicable.			

EXHIBIT R-2a, RDT&E Project Justification						DATE: February 2008						
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT NUMBER AND NAME			PROJECT NUMBER AND NAME						
RDT&E, N /BA-6 RDTE Management Support			0605873M MC Program Wide Support			C9999 FY07 Congressional Adds						
COST (\$ in Millions)						FY 2007	FY 2008	FY 2009	FY2010	FY2011	FY2012	FY2013
Project Cost						5.827	7.253	0.000	0.000	0.000	0.000	0.000
RDT&E Articles Qty												
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</p> <p>The Family of Incident Response Systems (FIRS) consists of equipment, systems, and services designed to provide weapons of mass destruction (WMD) incident response forces the capabilities they need to effectively respond to a terrorist attack using Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives (CBRNE) weapons of mass destruction. The Family of Incident Response Systems meets the mission requirements for the detection; mass casualty decontamination; force protection; responder inter-agency interoperability; C4I; urban search and rescue; medical and general support requirements needed by these forces to mitigate the effects of a CBRNE terrorist attack. The Family of Incident Response Systems relies primarily on Commercial Off-The-Shelf/Non-Developmental Items (COTS-NDI) equipment and systems that meet the particular mission requirements of Consequence Management (CM). Nuclear, Biological, and Chemical (NBC) systems are adopted if they meet the CM mission requirements. The Family of Incident Response Systems (FIRS) R&amp;D effort allows the program to keep abreast of emerging technologies in the commercial sector and address operational capability gaps that cannot be met by commercial items.</p> <p>The Marine Corps Corrosion Prevention and Control (CPAC) Program Office determined the Marine Corps maintenance reporting system does not provide sufficient information to determine the condition of assets as related to corrosion, the cost of corrosion or mission readiness related to corrosion. Over the past three years processes have been developed for assessing the degree of corrosion induced degradation of Ground Combat and Combat Support equipment. The development of this process has been funded 100% by Congressional Plus-Ups. This Marine Corps corrosion assessment process and associated data repository is under the cognizance of the CPAC Program Office. To date, this office has conducted corrosion assessments of all Marine Corps Ground Combat and Combat Support equipment except those in-theatre, pre-positioned storage and training commands. Additionally, we are in the process of completing MARFORRES. We now utilize this assessment data to determine the cost of corrosion for Marine assets.</p> <p>USMC Logistics Modernization - The Integrated Logistics Concept (ILC) Analysis provided the foundation for logistics transformation within the Marine Corps and established a compliance response to Defense Reform Initiative Directive (DRID) 54, directing that logistics transformation be accomplished throughout the service components. The ILC Analysis was completed during an 18 week engagement beginning in late October 1998 to early February 1999. This analysis concluded with a high level business Case Analysis (BCA). The BCA concluded conservatively that accomplishing the ILC actions (including re-engineered IT among others) would reduce Marine Corps inventories and reduce support requirements allowing the shifting of (2000) Marines from logistics to the battlefield by 2004 (given the current timelines). ILC action will also result in: lighter, more flexible and easier to move MAGTF; Higher Combat Support System (CSS) responsiveness: reduced stocks and CSS footprint inside the MAGTF; Less equipment for Warfighter to manage; rapidly scalable and deployable CSS units that have worldwide inventory visibility.</p> <p>Individual Chemical Alert System (ICAS). This is a continuing program that is developing a small lightweight individual wearable chemical sensor for chemical warfare agents and toxic industrial chemicals for use by the USMC CBIRF and the Department of Homeland Security.</p> <p>Chameleon Chemical Detection Armband. This program is developing, testing and transitioning to production an instrument that provides an immediate visual indication of the presence of a chemical hazard in the form of a lightweight armband for use by the USMC CBIRF and the Department of Homeland Security. The Chameleon enables war fighters and first responders to visually monitor the presence of up to ten hazardous chemicals simultaneously in real time.</p>												
COST (\$ in Millions)						FY07	FY08	FY09				
Accomplishment/Effort Subtotal Cost						0.971	0.000	0.000				
RDT&E Articles Qty												
<p><b>C9A63 Field Rapid Assay Biological System:</b> Develop man-portable, battery operated, automated biological aerosol point detection, identification, and sampling system to be used by both consequence management and expeditionary forces.</p>												
COST (\$ in Millions)						FY07	FY08	FY09				
Accomplishment/Effort Subtotal Cost						0.971	0.000	0.000				
RDT&E Articles Qty												
<p>C9A64 Individual Chemical Alert System (ICAS): Develop, test and transition to production a individual wearable chemical sensor for chemical warfare agents and toxic industrial chemicals for used by the USMC CBIRF and the Department of Homeland Security</p>												

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2008								
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME								
RDT&E, N/BA-6 RDTE Management Support	0605873M MC Program Wide Support	C9999 FY07 Congressional Adds								
COST (\$ in Millions)		FY07	FY08	FY09						
Accomplishment/Effort Subtotal Cost		2.914	0.000	0.000						
RDT&E Articles Qty										
C9A65 Tactical Air Sentinel (TAS): Develop, test and transition a tactical biological aerosol detection system for use by consequence management and expeditious forces.										
COST (\$ in Millions)		FY07	FY08	FY09						
Accomplishment/Effort Subtotal Cost		0.971	0.000	0.000						
RDT&E Articles Qty										
C9883 Corrosion Service Teams: In FY06 funds were provided to the Corrosion Control Program for test and evaluation of corrosion products and materials for military equipment, storage methods, corrosion training and other Corrosion Prevention and Control (CPAC) tasks within joint service and OSD-ATL-CPAC specifications, standards and policies.										
COST (\$ in Millions)		FY07	FY08	FY09						
Accomplishment/Effort Subtotal Cost		0.000	0.795	0.000						
RDT&E Articles Qty										
C9999 Individual Chemical Alter System (ICAS): Develop, test, and transition to production a small lightweight individual wearable chemical sensor for chemical warfare agent and toxic industrial chemicals to respond to low concentrations of specific classes of chemical compounds. Develop a combination CWA and TIC Monitor capability. Increase detector sensitivity for faster response to lower concentrations of chemicals.										
COST (\$ in Millions)		FY07	FY08	FY09						
Accomplishment/Effort Subtotal Cost		0.000	2.783	0.000						
RDT&E Articles Qty										
C9999 Automated Identification & Data Capture (AIDC) Solutions Center										
COST (\$ in Millions)		FY07	FY08	FY09						
Accomplishment/Effort Subtotal Cost		0.000	1.193	0.000						
RDT&E Articles Qty										
C9999 USMC Logistics Analysis & Optimization										
COST (\$ in Millions)		FY07	FY08	FY09						
Accomplishment/Effort Subtotal Cost		0.000	2.482	0.000						
RDT&E Articles Qty										
C9999 Chameleon Chemical Detection Armband: Develop and test additional disposable cartridge sensors for additional hazard detection to include Chemical Warfare detection. Test the shelf-life of the armband for longer use under extreme environmental conditions.										
(U) Total \$		5.827	7.253	0.000						
(U) PROJECT CHANGE SUMMARY:		FY 2007	FY 2008	FY 2009						
(U) FY 2008 President's Budget:		5.977	0.000	0.000						
(U) Adjustments from the President's Budget:										
(U) Congressional Program Reductions										
(U) Congressional Rescissions										
(U) Congressional Increases			7.300							
(U) Congressional Undistributed Rescissions/Reductions			-0.047							
(U) Reprogrammings										
(U) SBIR/STTR Transfer		-0.150								
(U) Minor Affordability Adjustment										
(U) FY 2009 President's Budget:		5.827	7.253	0.000						
CHANGE SUMMARY EXPLANATION:										
(U) Funding: See above.										
(U) Schedule: Not Applicable.										
(U) Technical: Not Applicable.										
(U) C. OTHER PROGRAM FUNDING SUMMARY:										
Line Item No. & Name		FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Compl	Total Cost
(U) Related RDT&E:										
(U) D. ACQUISITION STRATEGY:										
(U) E. MAJOR PERFORMERS:										

**UNCLASSIFIED  
FY2009 DON BUDGET ESTIMATES**

<b>CLASSIFICATION:</b>							
EXHIBIT R-2, RDT&E Budget Item Justification						DATE: <b>Feb-08</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY /</b>				R-1 ITEM NOMENCLATURE 0305885N - Tactical Cryptologic Activities			
	<b>BA-06</b>						
COST (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	1.000	1.498	1.998	2.500	1.999	2.043	2.088
0037 Tactical Combat Operating System	1.000	1.498	1.998	2.500	1.999	2.043	2.088
Quantity of RDT&E Articles							
<p><b>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:</b>  This is a continuing program that will provide advanced technologies and capabilities to current Electronic Warfare/Electronic Intelligence system programs of record (POR) by developing concepts of data/information exchange within the Global Information Grid (GIG) outlined within the FORCEnet concept. To comply with the intent of the GIG, this program will address compression, transmission, de-compression, re-compression and long term storage of targeted data/information without degradation. This program will become an enabler for future capabilities such as remote operation of surface, subsurface, and air EW/ELINT open architecture PORs. A holistic approach to data/information format, processing, transmission, and storage will require developments in antenna technology, communications capabilities, operational concepts, and software development.</p>							

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FY2009 DON BUDGET ESTIMATES

<b>FY2009 PRESIDENT'S BUDGET ESTIMATES</b>			
<b>BSO: COMMANDER, U. S. FLEET FORCES COMMAND</b>			
CLASSIFICATION:			
EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>Feb-08</b>	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
<b>RDT&amp;E, N / BA-6</b>	0305885N - Tactical Cryptologic Activities	0037 Tactical Combat Oper Sys	
<b>(U) C. PROGRAM CHANGE SUMMARY:</b>			
(U) Funding:	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
FY 08 President's Budget	1.000	1.508	2.011
FY09 President's Budget estimates	1.000	1.498	1.998
Total Adjustments	<u>0.000</u>	<u>0.010</u>	<u>0.013</u>
Summary of Adjustments:			
Congressional Adjustments	0.000	-0.010	0.000
Miscellaneous Adjustments	<u>0.000</u>	<u>-0.010</u>	<u>-0.013</u>
Total	0.000	-0.020	-0.013
(U) Schedule:			
Not Applicable			
(U) Technical:			
Not Applicable			
R-1 SHOPPING LIST - Item No.		153	

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 FY2009 DON BUDGET ESTIMATES

<b>CLASSIFICATION:</b>			
EXHIBIT R-2a, RDT&E Project Justification		DATE: <b>Feb-08</b>	
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-06</b>	PROGRAM ELEMENT NUMBER AND NAME 0305885N - Tactical Cryptologic Activities	PROJECT NUMBER AND NAME 0037 Tactical Combat Oper Sys	
<b>(U) B. Accomplishments/Planned Program</b>			
	FY 07	FY 08	FY 09
JIIOR Management	1.000	1.498	1.998
RDT&E Articles Quantity			
<p><b>FY07 Accomplishments:</b></p> <p>- <u>Electromagnetic Data/Information Compression Techniques</u>: Develop Electromagnetic Data/Information compression techniques that will allow for the compression, transmission, de-compression, re-compression and long-term storage of targeted data/information without degradation. Efficient compression techniques will improve bandwidth utilization and increase the information exchange rate via the GIG. Commercial-off-the-shelf technology will be utilized to the greatest extent possible but due to the unique requirements of certain Electromagnetic data/information analyst/customers it may be necessary to modify commercial technology or develop government technology to meet those requirements.</p> <p>- <u>Remote Specific Emitter Identification/Unintentional Modulation on the Pulse (SEI/UMOP) Processing</u>: Determine the minimum number of pulses required to be digitally forwarded for SEI/UMOP extraction at a remote site that consistently produces accurate SEI/UMOP measurements that are compliant with the national standard.</p>			
<p><b>FY08 PLAN:</b> Continue development as outlined for FY07.</p>			
<p><b>FY09 PLAN:</b> Continue development as outlined for FY07.</p>			
<b>(U) D. Other Program Funding Summary</b>	N/A		
<b>(U) E. Acquisition Strategy</b>	N/A		
<b>(U) F. Major Performers</b>	None		
<b>(U) G. Performance Metrics</b>	None		
R-1 SHOPPING LIST - Item No.		153	



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FY2009 PRESIDENT'S BUDGET ESTIMATES

<b>CLASSIFICATION:</b>							
<b>EXHIBIT R-2, RDT&amp;E Budget Item Justification</b>						DATE: <b>February 2008</b>	
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>Research Development Test &amp; Evaluation, Navy BA 06</b>				<b>R-1 ITEM NOMENCLATURE</b> <b>Service Support To JFCOM, JNTC - 0804758N</b>			
Cost (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost 0804758N	<b>5.049</b>	<b>4.970</b>	<b>5.148</b>	<b>5.258</b>	<b>5.353</b>	<b>5.458</b>	<b>5.567</b>
OBJECT # 3152 Service Support to JFCOM	<b>5.049</b>	<b>4.970</b>	<b>5.148</b>	<b>5.258</b>	<b>5.353</b>	<b>5.458</b>	<b>5.567</b>
<p><b>(U) A. Mission Description and Budget Item Justification:</b></p> <p>In accordance with the FY 2005 National Defense Authorization Act, a portion of the JNTC RDT&amp;E funding that was centrally managed by Joint Forces Command (JFCOM) will transfer from Navy P/E 0804758N to Defense-Wide P/E 0804758D in FY 2008. Related to this, in FY 2007 Fleet Forces Command (FFC) assumed execution control for Navy's Service Support to JFCOM, JNTC. This management change reflects the decentralized execution of JNTC RDT&amp;E from JFCOM to FFC. In FY 2008, these funds will continue to be managed and executed by FFC's Fleet Training and Technology Branch Code N71.</p> <p>The Navy's focus in FY 2008 is on advancing joint training technologies that will play a crucial role in Navy's ability to address current and future joint operational training requirements. Navy program activities for FY 2008 include conducting research, development, test and evaluation and cross-service architecture certification on Navy capable systems, developing architectures and roadmaps to ensure that service instrumentation follows a common standard, and researching and assessing Navy mission rehearsal, Remote Interface Control, Sim Aware Software Router Support, Virtual Communications Multi-Modal Interface, OASES Environmental Support and Coalition / Inter-Agency integration requirements.</p> <p>Continuing in FY 2008 Navy will further develop capabilities that integrate live, virtual, and constructive elements into a seamless joint training environment. Using a scientific and phased approach, Navy will leverage and research new technologies and methods, based upon focused joint operational training requirements, that provide a crucial technology-based foundation supporting all current and "to be Navy joint training capabilities. Available commercial-off-the-shelf (COTS) and government -off-the-shelf (GOTS) networked information technologies and collaborative planning tools will be leveraged to provide improved net-centric joint training capability. Navy will lead the collaboration process to identify, collect and validate the requirements in order to design and develop the modeling and simulation capabilities that address the shortfalls in current abilities to support Joint Task training to standards.</p> <p>The Navy JNTC RDT&amp;E Program efforts directly support the Unified Command Plan (UCP) series and is aligned with the DoD Information Operations (IO) Roadmap</p>							
<b>Exhibit R-2, RD TEN Budget Item Justification</b>							

<b>CLASSIFICATION:</b>				
<b>EXHIBIT R-2, RDT&amp;E Budget Item Justification</b>			<b>DATE:</b> February 2008	
<b>APPROPRIATION/BUDGET ACTIVITY</b>		<b>R-1 ITEM NOMENCLATURE</b>		
<b>Research Development Test &amp; Evaluation, Navy BA 06</b>				
<b>OBJECT # 3152 Service Support to JFCOM</b>	<b>BA# 6</b>	<b>Service Support To JFCOM, JNTC - 0804758N</b>		
 <b>(U) B. Program Change Summary:</b>				
(U) Funding:				
Previous DON Budget	\$ 12.750	\$ 5.078	\$ 5.183	\$ 5.292
Current PREBUD Budget	\$ 5.049	\$ 4.970	\$ 5.148	\$ 5.258
Total Adjustments	<b>\$ (7.701)</b>	<b>\$ (0.108)</b>	<b>\$ (0.035)</b>	<b>\$ (0.034)</b>
Summary of Adjustments				
Sec. 8097 Contractor Efficiency	\$ -	\$ (0.008)	\$ -	\$ -
Sec. 8104 Revised Economic Assum		\$ (0.024)		
PBD 610 Purchase Inflation Adjustment			\$ (0.035)	\$ (0.034)
Reprogramming	<b>\$ (7.571)</b>			
SBIR Tax	<b>\$ (0.130)</b>	<b>\$ (0.076)</b>	<b>\$ -</b>	<b>\$ -</b>
	<b>\$ (7.701)</b>	<b>\$ (0.108)</b>	<b>\$ (0.035)</b>	<b>\$ (0.034)</b>
Schedule: N/A				
Technical: N/A				
 <b>(U) C. Other Program Funding Summary: FY 2007 Congressional Plus Up reprogrammed outside of Navy.</b>				
 <b>(U) D. Acquisition Strategy: N/A</b>				
 <b>(U) E. Performance Metrics:</b>				
1) Provide Joint Semi-Automated Forces (JSAF) software with a focus on stability and robustness improvements to JSAF as well as interfaces to other Live-Virtual- Constructive components. Support Mitigation of Training Program shortfalls through architectural and model development targeting identified enhancements that support training at unit, strike force and staff levels. Support Architecture and Data Standards development through collaborative engineering between Navy, service and joint training activities for common LVC architecture and data standards. Research Multilevel Security (MLS) and Multinational Information Sharing (MNIS) solutions through architectural development to identify cost-effective MLS and MNIS solutions through extending existing NCTE interfaces, including Radiant Mercury Guard. Support Joint Training Environment Network (JTEN) Expansion and Migration through architectural development to the expansion and migration of the NCTE and JTEN by improving the use of wide area networking resources through reductions in bandwidth and throughput required to support simulation interest management.				

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FY2009 PRESIDENT'S BUDGET ESTIMATES

<b>CLASSIFICATION:</b>		
<b>EXHIBIT R-2, RDT&amp;E Budget Item Justification</b>		<b>DATE:</b> <b>February 2008</b>
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>Research Development Test &amp; Evaluation, Navy</b>	<b>BA 06</b>	<b>R-1 ITEM NOMENCLATURE</b> <b>Service Support To JFCOM, JNTC - 0804758N</b>
<p><b>(U) E. Performance Metrics:</b></p> <p>2) Facilitate integration by providing dedicated support to the effort, improving the quality of participation and documentation of Navy efforts in the JNTC. Refine and mature the Navy Training Federation Object Model (NTF), it is improving interoperability and integration with other services and the Joint community. Provides a standardized Federation Object Model (FOM) for integration across the Navy training simulations.</p> <p>3) The multi-tiered technology approach currently implemented in Joint distributed exercises presents challenges to asset control and monitoring. collective system control is sparse at best. Emerging research in the area of global control architectures and mechanisms is advancing the state of the art in communication network/system control. A current advanced research initiative, Remote Interface Control (RIC), has established an architecture capable of controlling the five layers of the communications network infrastructure that must be addressed as Joint and multi-national events continue to expand: (1) live and virtual radio control, (2) Internet Protocol network control, (3) security administration and control, (4) system health, and (5) support services.</p> <p>4) Current Joint Live-Virtual-Constructive (JLVC) and other federation simulation distribution is accomplished by tying simulation data to multicast groups. This is neither a scalable solution nor is it an effective one as federates are not able to publish and subscribe with fine enough precision. The Simulation Aware Software Router will address this shortcoming, and additionally provide a flexible solution for federating heterogeneous networks and on-the-wire protocols without forcing all federates onto a single, uniform, lowest common denominator solution for each training event. Ultimately, a simulation aware router will allow simulation users to optimize the network for both simulation scalable traffic and for voice and Command, Control, Communications, (Computers), Intelligence (C4I) traffic.</p> <p>5) Naval aviation training components will require the ability to transport multi-modal (e.g. secure, non-secure, coalition, etc.) voice communication simultaneously on the Navy Continuous Training Environment (NCTE) and other networks during Joint fleet exercises. As the Navy Aviation Simulation Master Plan (NASMP) integrates within the NCTE and other Joint training environments, multi-modal virtual communication technology is required for Naval aviation components to participate in multi-national, multi-service, and fleet coalition training events.</p> <p>6) Work with the Naval Meteorology and Oceanography Command (NMOC) to integrate real world ocean data into the NCTE. It will operate in a super computer environment and will be integrated into JSAF software to provide an improved environment for anti submarine warfare operations.</p>		
<b>Exhibit R-2, RDTE Budget Item Justification</b>		

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<b>CLASSIFICATION:</b>							
<b>EXHIBIT R-2a, RDT&amp;E Project Justification</b>						<b>DATE:</b> <b>February 2008</b>	
<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>Project Name and Number</b>			
<b>Research Development Test &amp; Evaluation, Navy BA 06</b>				<b>JSAF Improvement Program (JIP) / 00060-07-RD-898</b>			
				<b>OBJECT # 3152 Service Support to JFCOM 0804758N</b>			
Cost (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
<b>JSAF Improvement Program (JIP) / 00060-07-RD-898</b>	\$ 3.084	\$ 3.144	\$ 3.291	\$ 3.368	\$ 3.439	\$ 3.518	\$ 3.598
	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<p><b>(U) A. Mission Description and Budget Item Justification:</b>            Navy Warfare Development Command (NWDC) provided dedicated software development, configuration management, verification and validation and engineering management support to ensure that Fleet and Joint requirements were incorporated into Joint Semi-Automated Forces (JSAF) software through the JSAF configuration management and requirements process managed by the Navy. NWDC managed evolving requirements submitted by Joint and Fleet representatives to develop new capabilities and improve reliability and maintainability of the JSAF software simulation. NWDC defined, developed and chaired the JSAF Users Group to work on technical issues related to JSAF such as identifying root-causes and recommending and applying corrective actions to multiple issues. NWDC managed and performed regression testing for and accomplished the release of Navy JSAF 3.1, Patches 1 through 8. In FY 2007, NWDC supported user acceptance testing and opchecks in four major Navy exercises (ENT FST-J 07-1, Virtual flag 07-11, HST FST-WC and FST-J 07-02).</p> <p>In FY 2008 the Navy focus is to ensure that Fleet and Joint requirements for maintenance and stability are incorporated into JSAF software through the JSAF configuration management and requirements process managed by the Navy. The NWDC team will manage evolving requirements submitted by Joint and Fleet representatives to develop new capabilities and improve reliability and maintainability of the software simulation. Continue in the development, configuration management, and operational support of the JSAF Modeling and Simulation (M&amp;S) application, used for training purposes, which currently servers as the primary modeling and simulation engine for the Naval Continuous Training Environment (NCTE). NWDC NCTE activities for FY 2008 include two JSAF software releases and coordination and facilitation of Navy JSAF Users Group Meetings during the year.</p> <p>FY 2009 Plan: FY 2009 is the beginning of the fruition of efforts from FY 2007 and FY 2008. In this year of effort, the JSAF development effort focus is incorporating changes required within JSAF to begin incorporating the program of records that the JNTC/Navy Training FOM effort below has focused upon. FY 2009 sees major federations efforts, and therefore change, with JSAF and the high level testing required to ensure interoperable systems that yield validated results in a sophisticated and distributed Navy and Joint Training system.</p>							
<b>Exhibit R-2, RDTE Budget Item Justification</b>							

<b>CLASSIFICATION:</b>			
<b>EXHIBIT R-2a, RDT&amp;E Project Justification</b>			<b>DATE:</b> February 2008
<b>APPROPRIATION/BUDGET ACTIVITY</b>		<b>Project Name and Number</b>	
<b>Research Development Test &amp; Evaluation, Navy</b>		<b>JSAF Improvement Program (JIP) / 00060-07-RD-898</b>	
	<b>BA 0 6</b>	<b>0804758N</b>	
<b>(U) B. Accomplishments / Planned Program:</b>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Accomplishment / Effort / Subtotal Cost	\$ 3.084	\$ 3.144	\$ 3.291
RDT&E Articles Quantity - N/A	n/a	n/a	n/a
<p>Accomplishments include the stability and robustness improvements to support Fleet Synthetic Training. Improved capability of Automated Status Boards and Link 16 Information Display for the Tactical Training Group Schoolhouses. Improved capability of Class III and V Logistics, TBMCS mission support interface, and Intel fidelity (ELINT) in support of JNTC and NTF/PACOM requirements. Improved capability in support of virtual and constructive users such as: Manned Flight Systems' H-60R and H-60S trainers, JLVC, and NWDC.</p>			
<b>(U) C. Other Program Funding Summary:</b>			
P1 Procurement Line: N/A			
C-1 MILCON Project Number: N/A			
Related RDT&E: N/A			
<b>(U) D. Acquisition Strategy: N/A</b>			
<b>(U) E. Major Performers:</b>			
<p>1) Alion Science and Technology Corporation, McClean Virginia Description of Work: Provide Joint Semi-Automated Forces (JSAF) Improvement Program (JIP) support via software design &amp; development, requirements analysis, configuration management, integration and test, verification and validation model manager support to Naval Continuous Training Environment (NCTE) and Joint National Training Capability Advanced Technologies Training (JNTC/ATT).</p> <p>2) BMH Associates, Inc., Norfolk, Virginia Description of Work: Provide technical services in completing issue analysis, timeline development, strategic plans, technical roadmap design, and follow-on task planning in support of NWDC, NCTE and as Navy JSAF Program Manager. Execution of the Navy JSAF Requirements Management and Software Engineering Management processes.</p> <p>3) Lockheed Martin Corporation, Bethesda, Maryland Description of Work: Provide JSAF development of Tactical Air Support to expand JSAF capabilities for joint training.</p> <p>4) L3 Titan Group, Reston, Virginia Description of Work: Provide JSAF Improvement software development, documentation, technical training on JSAF implementation. Perform requirements analysis, system design, quality documentation, module design, implementation, unit and system test of JSAF and NCTE.</p>			
<b>Exhibit R-2, RD TEN Budget Item Justification</b>			

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<b>CLASSIFICATION:</b>							
<b>EXHIBIT R-2a, RDT&amp;E Project Justification</b>						DATE: <b>February 2008</b>	
APPROPRIATION/BUDGET ACTIVITY				Project Name and Number			
<b>Research Development Test &amp; Evaluation, Navy</b>				<b>JNTC/JLVC Navy Training FOM Support / 00060-07-RD-900</b>			
<b>BA 0 6 0804758N</b>				OBJECT # 3152 Service Support to JFCOM			
Cost (\$ in Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
<b>JNTC/JLVC Navy Training FOM Support / 00060-07-RD-900</b>	<b>\$ 1.965</b>	<b>\$ 1.826</b>	<b>\$ 1.857</b>	<b>\$ 1.890</b>	<b>\$ 1.914</b>	<b>\$ 1.940</b>	<b>\$ 1.969</b>
RDT&E Articles Quantity - N/A	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<p><b>(U) A. Mission Description and Budget Item Justification:</b></p> <p>Naval Warfare Development Command (NWDC) continued to support the development of standards in networking, simulation federation, and tactical system interfaces for Fleet Synthetic Training interoperability to meet training objectives. NWDC managed collaborative engineering of new and existing Navy Continuous Training Environment (NCTE) federates to meet training objectives and NCTE engineering standards. NWDC drafted and released Navy Training Federation Object Model (NTF) 2.2 releases 8 and 9 and 2.3 in conjunction with Navy Aviation Simulation Master Plan (NASMP), Joint Live Virtual and Constructive (JLVC), and Submarine Multi-Mission Tactical Trainer (SMMTT) inputs. The NCTE Interoperability Guide was published and distributed to the NCTE Integrated Product Team (IPT) members.</p> <p>NWDC conducted several NCTE Interoperability Working Group meetings which focused on immediate interoperability issues as well as long-term architectural standards development and accomplished the enhancements of team training capabilities. These new capabilities included Air Warfare team training between pierside ships, virtual United States Air Force Airborne Warning and Control System (AWACS) trainer, the E-2C Deployable Readiness Trainer, and F/A-18C cockpit trainers, facilitated by simulation role players using tactical system interfaces. Additionally, Anti-Submarine Warfare (ASW) team training capabilities were enhanced by the addition of Mission Readiness Tactical Team Trainer (MRT3) based SH-60B and SH-60F deployable trainers used in concert with pierside ships and simulation role-players. This dedicated support improved the quality of participation and documentation of the Navy efforts in the Joint National Training Capability (JNTC), specifically improving Navy Training integration in the Joint Live-Virtual-Constructive (JLVC).</p> <p>FY 2008 JNTC-JLVC/NAVY Training FOM Plan: NWDC will continue to provide Navy/NCTE software developer and systems engineering, interoperability support and architectural development support of the Navy Training Federation Object Model (FOM) and NCTE specifically focusing on the JNTC LVC Federation. Specific goals for FY 2008 include the addition of team training capabilities in ASW and Undersea Warfare (USW) trainers (MH-60R trainer, P-3C TORT, SH-60B/F WST) and AAW/MI (E-2C WST, EA-6B).</p> <p>FY 2009 JNTC-JLVC/NAVY TRAINING FOM Plan: FY 2009 work continues across the warfighting spectrum of simulator integration into NCTE and JSAF. Naval Aviation assets begin significant integration test and validation efforts as well as the test of significant enhancements to ASW integrated training capabilities as a result of the foundation work accomplished in FY 2007 and FY 2008 and the maturation of the process beginning in '09.</p>							
<b>Exhibit R-2, RDTE Budget Item Justification</b>							

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<b>CLASSIFICATION:</b>			
<b>EXHIBIT R-2a, RDT&amp;E Project Justification</b>			<b>DATE:</b> <p align="right"><b>February 2008</b></p>
<b>APPROPRIATION/BUDGET ACTIVITY</b>		<b>Project Name and Number</b>	
<b>Research Development Test &amp; Evaluation, Navy</b>		<b>JNTC/JLVC Navy Training FOM Support / 00060-07-RD-900</b>	
	<b>BA 0 6 0804758N</b>	<b>OBJECT # 3152 Service Support to JFCOM</b>	
<b>(U) B. Accomplishments / Planned Program:</b>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
Accomplishment / Effort / Subtotal Cost	\$ 1.965	\$ 1.826	\$ 1.857
RDT&E Articles Quantity -	n/a	n/a	n/a
Accomplishments include the management of the Federation Object Model (FOM) to synchronize the following programs such as: JNTC/JLVC, NASMP, and Virtual ASTAC. Maintained and enhanced system and model interoperability with legacy trainers such as: BMD flyouts for USA Patriot (FMS-D), EW support for non-BFTT ships via BEWT/SLQ-32a, new AEGIS baseline 7.1.1.1; UK, German and Australian interfaces; MAST EP-3E, and SQQ-89 OBT interface development (ILAU). Added or enhanced system and model interoperability with the following programs such as: Navy: MRT3 SH-60B/SH-60F, Virtual ASTAC, F/A-18C Distributed Mission Trainer, E-2 Deployable Readiness Trainer, SMMTT and the Joint Arena such as JACTS, AWSIM, NWARGS-NG, JDLM, JLOD, ACE-IOS and TACSIM.			
<b>(U) C. Other Program Funding Summary:</b>			
P1 Procurement Line: N/A			
C-1 MILCON Project Number: N/A			
Related RDT&E: N/A			
<b>(U) D. Acquisition Strategy: N/A</b>			
<b>(U) E. Major Performers:</b>			
1) BMH Associates, Inc., Norfolk, Virginia Description of Work: Provide software developer and systems engineering, interoperability support and architecture development support of the Navy Training Federation Object Model (FOM) and Navy Continuous Training Environment (NCTE) specifically focusing on the Joint National Training Center's Joint Live Virtual Constructive (JLVC) Federation. Provide architecture and standards support essential in supporting integration of the NCTE into the Joint National Training Capability's (JNTC) infrastructure. The work will facilitate integration by providing dedicated support to the effort, improving the quality of participation and documentation of Navy efforts in the JNTC. Perform integration support for NCTE and Navy Aviation Simulation Master Plan (NASMP) to include Run Time Infrastructure (RTI) selection, Navy Training Federation Object Model (NTF) 2.0 compliance, engineering process for comprehensive model interoperability, Link 16 representation compatibility, and FOM representation and simulation interoperability for countermeasures.			

**Exhibit R-2, RD TEN Budget Item Justification**

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<b>CLASSIFICATION:</b>											
<b>EXHIBIT R-3, RDT&amp;E Project Cost Analysis</b>										DATE: <b>February 2008</b>	
<b>APPROPRIATION/BUDGET ACTIVITY</b> <b>Research Development Test &amp; Evaluation, Navy / BA 0 6 0804758N</b>							Project Name and Number <b>OBJECT # 3152 Service Support to JFCOM</b>				
<b>Cost Categories</b> (Taylor to WBS, or System/Item Requirements)	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>FY 2007 Award</b>	<b>FY 2007 Date</b>	<b>FY 2008 Award</b>	<b>FY 2008 Date</b>	<b>FY 2009 Award</b>	<b>FY 2009 Date</b>	<b>Cost to Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Product Development</b>											
Primary Hardware Development			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
Ancillary Hardware Development			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
Systems Engineering *	Various	Various	\$ 5.049	Dec-06	\$ 4.970	Oct-07	\$ 5.148	Oct-08	Continuing	Continuing	Various
Licenses			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
Tooling			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
GFE			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
Award Fees			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
<b>Sub-Total:</b>			<b>\$ 5.049</b>		<b>\$ 4.970</b>		<b>\$ 5.148</b>		<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
Remarks * Training Systems Integration ** Beginning FY 2007 and beyond, Commander Fleet Forces Command manages the execution of Navy JNTC RDT&E funding.											
<b>Support</b>											
Development Support			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Software Development			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Training Development			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Integrated Logistics Support			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Configuration Management			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Technical Data			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
GFE			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
<b>Sub-Total:</b>			<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
Remarks											

**Exhibit R-3, RD TEN Project Cost Analysis**



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<b>CLASSIFICATION:</b>											
EXHIBIT R-3, RDT&E Project Cost Analysis (Page 2)										DATE: <b>February 2008</b>	
APPROPRIATION/BUDGET ACTIVITY <b>Research Development Test &amp; Evaluation, Navy</b>								Project Name and Number <b>OBJECT # 3152 Service Support to JFCOM</b>			
								BA 0 6 0804758N			
<b>Cost Categories</b> (Taylor to WBS, or System/Item Requirements)	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>FY 2007 Award</b>	<b>FY 2007 Date</b>	<b>FY 2008 Award</b>	<b>FY 2008 Date</b>	<b>FY 2009 Award</b>	<b>FY 2009 Date</b>	<b>Cost to Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Test and Evaluation</b>											
Developmental Test & Evaluation			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
Operational Test & Evaluation			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
Tooling			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
GFE			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
<b>Sub-Total:</b>			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
Remarks											
<b>Management Services</b>											
Contractor Engineering Services			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
Government Engineering Services			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
Program Management Support			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
Program Management Personnel			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
Travel			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
Labor (Research Personnel)			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
Overhead			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
<b>Sub-Total:</b>			\$ -		\$ -		\$ -		\$ -	\$ -	\$ -
Remarks											
<b>Total Cost</b>											
<b>Grand Total:</b>			\$ 5.049	Dec-06	\$ 5.078	Oct-07	\$ 5.183	Oct-08	Continuing	Continuing	Various
Remarks											
* Beginning FY 2007 and beyond, Commander Fleet Forces Command manages the execution of Navy JNTC RDT&E funding.											

**Exhibit R-3, RD TEN Project Cost Analysis**