

DEPARTMENT OF THE NAVY
FISCAL YEAR (FY) 2010
BUDGET ESTIMATES



JUSTIFICATION OF ESTIMATES
MAY 2009

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

PAGE INTENTIONALLY BLANK

Department of Defense Appropriations Act, 2010

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, \$19,378,112,000, to remain available for obligation until September 30, 2011.

PAGE INTENTIONALLY BLANK

UNCLASSIFIED

Department of the Navy
 FY 2010/2011 President's Budget
 Exhibit R-1 FY 2010 Base and Overseas Contingency Operations (OCO) Request
 Summary
 (Dollars in Thousands)

05 MAY 2009

Summary Recap of Budget Activities -----	FY 2008 Base&OCO Actuals	FY 2009 Base&OCO SupReq 4/9/09	FY 2010 Base	FY 2010 OCO	FY 2010 Total
RDT&E Management Support	1,209,249	970,398	982,509		982,509
Total Research, Development, Test & Eval, Navy	1,209,249	970,398	982,509		982,509
 Summary Recap of FYDP Programs -----					
Intelligence and Communications	1,498	1,993	2,464		2,464
Research and Development	1,200,224	963,271	975,848		975,848
Training Medical and Other	4,932	5,134	4,197		4,197
Administration and Associated Activities	2,595				
Classified Programs					
Total Research, Development, Test & Eval, Navy	1,209,249	970,398	982,509		982,509

Exhibit R-1Q: FY 2010 Base and Overseas Contingency Operations (OCO) Request, as of May 5, 2009 at 14:15:28

PAGE N-1

UNCLASSIFIED

* Reflects \$30.510 million of a proposed \$2.9 billion cancellation from the Department's base budget (the Consolidated Security, Disaster Assistance, and Continuing Appropriations, Act 2009, (Public Law 110-329), for fuel savings to offset a portion of the additional Emergency Requests in FY 2009 Overseas Contingency Operations Supplemental Request (Acceleration/Grow the Force, Family Support, and National Capital Region Acceleration). Also reflects a \$5.0 million cancellation for certain classified programs that are now excess to requirements.

UNCLASSIFIED

Department of the Navy
 FY 2010/2011 President's Budget Exhibit R-1 FY 2010 Base and Overseas Contingency Operations (OCO) Request

Line No	Program Element Number	Item	Act	FY 2008 Base&OCO Actuals	FY 2009 Base&OCO SupReq 4/9/09	FY 2010 Base	FY 2010 OCO	FY 2010 Total	S E C
137	0604256N	Threat Simulator Development	06	23,526	24,891	25,534		25,534	U
138	0604258N	Target Systems Development	06	31,545	80,119	79,603		79,603	U
139	0604759N	Major T&E Investment	06	41,328	52,050	44,844		44,844	U
140	0605152N	Studies and Analysis Support - Navy	06	15,782	8,062	11,422		11,422	U
141	0605154N	Center for Naval Analyses	06	47,368	47,500	49,821		49,821	U
142	0605502N	Small Business Innovative Research	06	326,650	399				U
143	0605804N	Technical Information Services	06	20,944	15,571	735		735	U
144	0605853N	Management, Technical & International Support	06	46,865	51,264	60,590		60,590	U
145	0605856N	Strategic Technical Support	06	3,359	3,586	3,633		3,633	U
146	0605861N	RDT&E Science and Technology Management	06	68,212	69,724	70,942		70,942	U
147	0605862N	RDT&E Instrumentation Modernization	06	1,382					U
148	0605863N	RDT&E Ship and Aircraft Support	06	178,653	194,489	193,353		193,353	U
149	0605864N	Test and Evaluation Support	06	334,124	345,317	380,733		380,733	U
150	0605865N	Operational Test and Evaluation Capability	06	12,092	12,162	12,010		12,010	U
151	0605866N	Navy Space and Electronic Warfare (SEW) Support	06	2,366	2,700	2,703		2,703	U
152	0605867N	SEW Surveillance/Reconnaissance Support	06	23,915	25,270	20,921		20,921	U
153	0605873M	Marine Corps Program Wide Support	06	22,113	30,167	19,004		19,004	U
154	0305885N	Tactical Cryptologic Activities	06	1,498	1,993	2,464		2,464	U

Exhibit R-1Q: FY 2010 Base and Overseas Contingency Operations (OCO) Request, as of May 5, 2009 at 14:15:28

PAGE N-2 UNCLASSIFIED

* Reflects \$30.510 million of a proposed \$2.9 billion cancellation from the Department's base budget (the Consolidated Security, Disaster Assistance, and Continuing Appropriations, Act 2009, (Public Law 110-329), for fuel savings to offset a portion of the additional Emergency Requests in FY 2009 Overseas Contingency Operations Supplemental Request (Acceleration/Grow the Force, Family Support, and National Capital Region Acceleration). Also reflects a \$5.0 million cancellation for certain classified programs that are now excess to requirements.

UNCLASSIFIED

Department of the Navy
 FY 2010/2011 President's Budget
 Exhibit R-1 FY 2010 Base and Overseas Contingency Operations (OCO) Request
 (Dollars in Thousands)

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

Date: 05 MAY 2009

Line No	Program Element Number	Item	Act	FY 2008 Base&OCO Actuals	FY 2009 Base&OCO SupReq 4/9/09	FY 2010 Base	FY 2010 OCO	FY 2010 Total	S E C
155	0804758N	Service Support to JFCOM, JNTC	06	4,932	5,134	4,197		4,197	U
156	0909999N	Financing for Cancelled Account Adjustments	06	2,595					U
		RDT&E Management Support		1,209,249	970,398	982,509		982,509	
		Total Research, Development, Test & Eval, Navy		1,209,249	970,398	982,509		982,509	

Exhibit R-1Q: FY 2010 Base and Overseas Contingency Operations (OCO) Request, as of May 5, 2009 at 14:15:28

UNCLASSIFIED

* Reflects \$30.510 million of a proposed \$2.9 billion cancellation from the Department's base budget (the Consolidated Security, Disaster Assistance, and Continuing Appropriations, Act 2009, (Public Law 110-329), for fuel savings to offset a portion of the additional Emergency Requests in FY 2009 Overseas Contingency Operations Supplemental Request (Acceleration/Grow the Force, Family Support, and National Capital Region Acceleration). Also reflects a \$5.0 million cancellation for certain classified programs that are now excess to requirements.

PAGE INTENTIONALLY BLANK

UNCLASSIFIED

Department of the Navy
 FY 2010 President's Budget
 (Dollars in Thousands)
 FY 2009 Proposed Fuel Cancellations

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

Line	Program				S
No	Element	Item	Act	FY 2009	C
137	0604256N	Threat Simulator Development	06	-177	U
138	0604258N	Target Systems Development	06	-261	U
139	0604759N	Major T&E Investment	06	-525	U
140	0605152N	Studies & Analysis Supt - Navy	06	-18	U
144	0605853N	Management, Technical & Intl Supt	06	-51	U
145	0605856N	Strategic Technical Support	06	-1	U
148	0605863N	RDT&E Ship & Aircraft Support	06	-455	U
149	0605864N	Test & Evaluation Support	06	-4427	U
151	0605866N	Navy Space & Electr Warfare Supt	06	-2	U
	Total Research, Development, Test & Eval, Navy (BA 06)			-5917	

PAGE INTENTIONALLY BLANK

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

COST: (Dollars in Millions)

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
Total PE	23.526	24.714	25.534
0602 ELETRONICS W/F ENV SIMULATION (ECHO)			
	11.562	12.029	12.531
0672 EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSEMS (ENEWS)			
	11.964	12.685	13.003

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, Joint and Allied Threat Awareness System (JATAS), 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.

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

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 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.

UNCLASSIFIED

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

B. PROGRAM CHANGE SUMMARY:

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
President's Budget 2009	23.505	24.959	25.831
Congressional Program Reductions	0.000	-0.068	0.000
Program Adjustments	0.000	0.000	-0.376
Rate/Misc Adjustments	0.000	-0.177	0.079
SBIR/STTR Transfer	0.021	0.000	0.000
President's Budget 2010	23.526	24.714	25.534

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).

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06
PROGRAM ELEMENT: 0604256N PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT
PROJECT NUMBER: 0602 PROJECT TITLE: ELETRONICS W/F ENV SIMULATION (ECHO)

COST: (Dollars in Millions)

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
0602 ELETRONICS W/F ENV SIMULATION (ECHO)	11.562	12.029	12.531

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 because 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, Joint and Allied Threat Awareness System (JATAS), 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.

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06
PROGRAM ELEMENT: 0604256N PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT
PROJECT NUMBER: 0602 PROJECT TITLE: ELETRONICS W/F ENV SIMULATION (ECHO)

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2008	FY 2009	FY 2010
ELECTRO-OPTICAL/INFRA-RED (EO/IR) THREAT CAPABILITIES	3.250	2.395	0.950

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 (ICAS) which provides spectral, power, and temporal systems to test and evaluate Missile Warning Systems (MWS) and measure the end-game effectiveness of Infrared (IR) expendables and Directed Infrared Countermeasures (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). Develop the Reactive Plume Simulator (RPS) by upgrading 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. Develop Advanced Imaging Infra-Red (IIR) Seeker which integrates prelaunch tracking and simulated fly-out capability with missile plume simulation system to provide open air test capability for airborne passive and active EO/IR systems.

Funding decreases from FY 2008 to FY 2009, and FY 2010 based on the priority of the test shortfall. Funding for the EO/IR effort decreases due to the completion of the MvM portions of the ICAS and Reactive Plume Simulator (RPS) in FY 2009. These systems will support testing for the Joint and Allied Threat Awareness System (JATAS), Assault DIRCM and other Navy programs.

	FY 2008	FY 2009	FY 2010
RADIO FREQUENCY (RF) THREAT CAPABILITIES	6.429	7.570	9.685

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 threat simulator to provide a new generation, high fidelity double digit threat I-34 (Advanced Threat Simulator).

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0604256N

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT NUMBER: 0602

PROJECT TITLE: ELETRONICS W/F ENV SIMULATION (ECHO)

Procure and integrate an advanced threat system through Foreign Materials Acquisition channels. Continue intel updates to missile, radar, and gun simulations. Upgrade the I-32 open air simulator by replacing the aging transmitter; provide the I-32 simulator at the Electronic Combat Range (ECR) with a second frequency for multiple-missile launch, side lobe canceling, and 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). Develop multi-band RF threat simulators to stimulate airborne systems. Upgrade the J-32B Advanced Threat System at ECR to replicate the newer variant of the threat system. Develop an Advanced Early Warning and Acquisition (EW/ACQ) radar hybrid laboratory simulator that operates with the I-34 laboratory simulators.

Funding increases from FY 2008 to FY 2009 and FY 2010 based on the priority of the test shortfall. Funding for the RF effort increases from FY 2008 to FY 2009 and FY 2010 due to the need to address double digit threat systems (I-32 Transmitter, I-34, and J-32B), and to start development of another high priority long range threat system, and an advanced EW/ACQ system. These systems are required to test the Joint Strike Fighter, EA-18G, and other Navy platforms.

	FY 2008	FY 2009	FY 2010
REQUIREMENTS AND VALIDATION	1.883	2.064	1.896

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.

Funding increases from FY 2008 to 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 Requirements and Validation effort increases from FY 2008 to FY 2009 due to the need to validate the open air range double digit threat system I-34 and several newly integrated Threat Model and Analysis Program (TMAP) missile fly-out models. These systems are required to test the Joint Strike Fighter, EA-18G, and other Navy platforms.

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0604256N

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT NUMBER: 0602

PROJECT TITLE: ELETRONICS W/F ENV SIMULATION (ECHO)

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

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

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
0672 EFFECTIVENESS OF NAVY ELECTRONIC WARFARE SYSEMS (ENEWS)	11.964	12.685	13.003

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

UNCLASSIFIED

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

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

regularly employed to test the effectiveness of North Atlantic Treaty Organization ships' EW systems in joint allied exercises. ENEWS assets also support Joint EW exercises that are conducted with Rim of the Pacific (RIMPAC) nations.

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2008	FY 2009	FY 2010
CLASSIFIED PROGRAM	7.592	7.774	8.200

Details about this program are classified.

FY 2008 Accomplishments:

- Details are of a higher classification.

FY 2009 Plans:

- Details are of a higher classification.

FY 2010 Plans:

- Details are of a higher classification.

	FY 2008	FY 2009	FY 2010
HARDWARE SIMULATION SYSTEMS	1.586	1.822	1.775

Maintain and perform Hardware and Software Upgrades to the inventory of ENEWS flyable and shore based Anti-Ship Capable Missile (ASCM) Electro-Optic/Infrared, Visible and Radio Frequency (RF) Simulators. Perform characterization of IR and RF simulators as part of periodic evaluation of simulation performance and collect

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0604256N

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

PROJECT NUMBER: 0672

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

performance data for comparison with previously recorded data. Development and maintenance of all simulator control panels.

Two new simulators are planned to be introduced into the ENEWS inventory in FY 2010; one of these simulators is being produced under contract which is reflected in the increase in the FY 2009 budget.

FY 2008 Accomplishments:

- Continued annual maintenance on ENEWS simulators to support flight/shore based tests.
- Continued annual maintenance on ENEWS simulators to support flight/shore based tests.
- Completed hardware intelligence upgrades to FOXTROT 3 and MIKE 4 Standard Instrumentation Pods (SIPs).
- Completed software intelligence upgrades to FOXTROT 3 and MIKE 4 (SIPs).
- Initiated intelligence upgrades to FOXTROT 2 and VICTOR 2 SIPs.
- Initiated software intelligence upgrades to FOXTROT 2 and VICTOR 2 SIPs.
- Initiated and completed characterization of KILO, QUEBEC AND TANGO.
- Initiated and completed transition of the ROMEO simulator into the Naval Research Laboratory Learjet Electronics Pod (NRL LEP).
- Initiated QUEBEC control panel.

FY 2009 Plans:

- Continue all efforts of FY 2008, less those noted as completed above.
- Complete intelligence upgrades to FOXTROT 2 and VICTOR 2 SIPs.
- Complete software intelligence upgrades to FOXTROT 2 and VICTOR 2 SIPs.
- Complete QUEBEC control panel.
- Initiate and complete characterization of INDIA III and PAPA.
- Initiate and complete transition of the INDIA III into the NRL LEP.
- Initiate and complete VICTOR 1 SIP control panel.

FY 2010 Plans:

- Continue all efforts of FY 2009, less those noted as completed above.
- Initiate intelligence upgrades to MEIR 2-2, MEIR 3, SUMMIT simulators and the MIKE 2 & 3, and VICTOR 1 SIPs.

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0672

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

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

- Initiate software intelligence upgrades to VICTOR 1 SIP and SUMMIT simulators.
- Initiate and complete characterization of the TANGO simulator modified for the NRL LEP.
- Initiate transition of the TANGO simulator into the NRL LEP
- Initiate and complete the INDIA I control panel.

	FY 2008	FY 2009	FY 2010
SIMULATION VALIDATION AND REQUIREMENTS	0.849	1.047	0.946

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 threats parametric data. Provide technical management functions in support of the ENEWS project; engineering and technical support requirements for the overall efforts of ASCM simulator and digital model 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.

The increase between FY 2008 and FY 2009 is due to the completion and presentation to the Simulator Validation Working Group (SVWG) of two hardware validation reports in FY 2009.

FY 2008 Accomplishments:

- Continued TANGO and NOVEMBER Vb hardware validation reports.
- Continued management of the SVWG.
- Completed NOVEMBER Va validation report and submit report to the SVWG.
- Initiated INDIA I, PAPA and KILO hardware validation reports.
- Initiated and completed update of FY 2008 Program Management Plan.
- Initiated and completed FY 2008 quarterly reports, earned value management analysis, progress tracking and analysis.

FY 2009 Plans:

- Continue all efforts of FY 2008, less those noted as completed above.

R1 Line Item 137

Page 11 of 13

UNCLASSIFIED

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0672

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

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

- Complete NOVEMBER Vb and TANGO hardware validation reports and submit to the SVWG.
- 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 2010 Plans:

- Continue all efforts of FY 2009, less those noted as completed above.
- Initiate MEIR 3 hardware validation report.
- Initiate and complete update of FY 2010 Program Management Plan.
- Initiate and complete FY 2010 quarterly reports, earned value management analysis, progress tracking and analysis.

	FY 2008	FY 2009	FY 2010
SUPPORT AND COMPUTERS SIMULATION SYSTEMS	1.937	2.042	2.082

Perform maintenance and intelligence upgrades to EO/IR, Digital, and RF Laboratory Simulation testing facilities and flight support equipment based on existing and emerging complex threat systems. Development of test and evaluation (T&E) scenarios and environmental modeling to support electronic support (ES) and electronic attack (EA) testing; modify ASCM Digital Models based on the latest intelligence data obtained from threat databases.

FY 2008 Accomplishments:

- Continued 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 Electronic Warfare (EW) programs.
- 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.
- Continued new digital models of Anti-ship Cruise Missile (ASCM) threats as they became available.
- Continued upgrades and maintenance of flight support systems as necessary to support the IR/RF ENEWS simulators.

R1 Line Item 137

Page 12 of 13

UNCLASSIFIED

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0604256N

PROJECT NUMBER: 0672

PROGRAM ELEMENT TITLE: THREAT SIMULATOR DEVELOPMENT

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

- 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).

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 2010 Plans:

- Continue all efforts of FY 2009, less those noted as completed above.
- Initiate improvements and intelligence upgrades to the COHERENT and FASM digital models.
- Initiate intelligence updates and simulation productization for the Long Range High Altitude (LRHA) digital model.

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

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

D. ACQUISITION STRATEGY:

Not applicable.

UNCLASSIFIED

EXHIBIT R-2, RDT&E Budget Item Justification						DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-6					R-1 ITEM NOMENCLATURE 0604258N, TARGET SYSTEMS DEVELOPMENT			
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010					
Total PE Cost	31.545	79.858	79.603					
0609 AERIAL TARGET SYSTEMS DEV	12.909	50.671	55.621					
0610 WPN SYS T&E TRG DEV/PRC	17.429	26.880	22.765					
0612 SURFACE TARGETS DEVELOPMENT	1.207	2.307	1.217					

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

This program element funds the development and procurement of aerial targets, surface targets, control systems, and associated target augmentation & auxiliary systems needed to represent real world threat systems. These capabilities are key enablers to the successful execution of the developmental & operational test and evaluation of naval combat weapons systems and satisfy advanced fleet training requirements.

B. PROGRAM CHANGE SUMMARY

Funding:	FY 2008	FY 2009	FY 2010
Previous President's Budget	31.684	80.337	80.758
Current BES Budget	31.545	79.858	79.603
Total Adjustments	-0.139	-0.479	-1.155

Summary of Adjustments

Congressional Rescissions			
Congressional Adjustments		-0.261	
SBIR/STTR/FTT Assessments	-0.139		
Program Adjustments			-1.148
Rate/Misc Adjustments		-0.218	-0.007
Subtotal	-0.139	-0.479	-1.155

Schedule:N/A

Technical:N/A

EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009		
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 2008	FY 2009	FY 2010				
0609 AERIAL TARGET SYSTEMS DEV			12.909	50.671	55.621				
RDT&E Articles Qty n/a									

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Aerial target systems, target control, and associated target augmentation and auxiliary systems are developed to support test & evaluation and advanced fleet training for Joint Strike and Littoral Warfare Systems required to defend fleet surface and air units in a hostile environment. This project includes:

- Subsonic Targets. Subsonic Aerial Target (SSAT) development. The SSAT primarily represents subsonic anti-ship cruise missile threats in direct support of the test & evaluation of major combat weapons systems programs and fleet training.
- Supersonic Targets. Supersonic Sea Skimming Target (SSST), Multi-Stage Supersonic Target (MSST) and supersonic high-diver capability development. The family of supersonic target capabilities represent supersonic anti-ship cruise missile threats in direct support of developmental & operational test and evaluation of major combat weapons systems programs in development.
- Target Control (TC) and Target Augmentation & Auxiliary Systems (TA/AS) development. TC provides command and control of targets to enable the execution of threat representative mission profiles. TA/AS enables each target to be uniquely configured for specific mission profiles.

TA/AS 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. TA/AS scoring capabilities include both surface and airborne scalar and vector scoring systems.

B. ACCOMPLISHMENTS / PLANNED PROGRAM:

Supersonic Aerial Targets	FY 2008	FY 2009	FY 2010
Accomplishments / Effort / Sub-total Cost	5.695	32.723	44.417
RDT&E Articles Qty			

SUPERSONIC AERIAL TARGETS
 Continue GQM-163A SSST upgrades/evolutionary development to keep pace with evolving threat characteristics. Efforts include: continue to establish operational capability at Pacific Missile Range Facility; integrate ECM capability in the GQM-163A; research and develop performance envelope enhancements to satisfy emerging requirements to include improved flight termination performance; develop Front End Section payload enhancements and continue development of GQM-163A high-diver capability. Continue efforts to meet Threat D Target CDD requirements during the MSST Systems Development and Demonstration (SDD) phase.

Subsonic Aerial Targets	FY 2008	FY 2009	FY 2010
Accomplishments / Effort / Sub-total Cost	1.300	11.668	4.816
RDT&E Articles Qty			

SUBSONIC AERIAL TARGETS
 Continue Subsonic Aerial Target development and upgrades to keep pace with evolving threat requirements. Efforts include: Continue product improvements to the existing SSAT to achieve performance and payload requirements. Continue evaluation of alternate subsonic subscale aerial targets to meet evolving subsonic threat representation requirements. Prepare and conduct a competitive contract award and Milestone B for a target to be developed to achieve approved SSAT requirements. Enter SDD phase for the follow-on SSAT.

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
---	---	--

B. ACCOMPLISHMENTS / PLANNED PROGRAM (CONTINUED):

TC/TAAS	FY 2008	FY 2009	FY 2010	
Accomplishments / Effort / Sub-tota	5.914	6.280	6.388	
RDT&E Articles Qty				

TC/TAAS

Continue Target Control (TC) and TA/AS to development and support to T&E and fleet training activities. TC includes the improved command and control systems capable of controlling multiple targets simultaneously while delivering adequate fidelity of T&E telemetry data.

C. OTHER PROGRAM FUNDING SUMMARY:	FY 2008	FY 2009	FY 2010
228000 Aerial Target System	66.856	78.581	47.003
612020 Spares and Repair Parts	1.153	0.981	0.823

D. ACQUISITION STRATEGY:

Not Applicable

EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009																	
APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6			PROGRAM ELEMENT NUMBER AND NAME 0604258N, TARGET SYSTEMS DEVELOPMENT			PROJECT NUMBER AND NAME 0610, WPN SYS T&E TRG DEV/PRC																		
COST (\$ in Millions)			FY 2008	FY 2009	FY 2010																			
0610 WPN SYS T&E TRG DEV/PRC			17.429	26.880	22.765																			
RDT&E Articles Qty n/a																								
<p>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides for the development and procurement of aerial targets and associated systems used exclusively for test and evaluation of naval weapons systems which closely represent current and projected threats to fleet units in the Joint Strike and the Littoral Warfare environments. These representations must include characteristics related to size, performance envelope, and electromagnetic and infrared signatures. As threats change, changes must be made to keep the targets threat representative in response to changes in the test requirements of the developers of naval weapons systems.</p>																								
<p>B. ACCOMPLISHMENTS / PLANNED PROGRAM:</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">Air Superiority Target</td> <td style="width:10%;">FY 2008</td> <td style="width:10%;">FY 2009</td> <td style="width:10%;">FY 2010</td> <td style="width:10%;"></td> </tr> <tr> <td>Accomplishments / Effort / Sub-total Cost</td> <td>1.500</td> <td>8.242</td> <td>6.500</td> <td></td> </tr> <tr> <td>RDT&E Articles Qty</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>										Air Superiority Target	FY 2008	FY 2009	FY 2010		Accomplishments / Effort / Sub-total Cost	1.500	8.242	6.500		RDT&E Articles Qty				
Air Superiority Target	FY 2008	FY 2009	FY 2010																					
Accomplishments / Effort / Sub-total Cost	1.500	8.242	6.500																					
RDT&E Articles Qty																								
<p>AIR SUPERIORITY TARGET The Air Superiority Target (AST) is being developed as the follow-on to the current Full Scale Aerial Target (FAST). The AST will be a supersonic, high altitude, remote-controlled aerial target. This target will have full command and control capability through normal flight maneuvers. Planned efforts continue support for the follow-on FSAT development.</p>																								
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">QF-4 Full Scale Aerial Target</td> <td style="width:10%;">FY 2008</td> <td style="width:10%;">FY 2009</td> <td style="width:10%;">FY 2010</td> <td style="width:10%;"></td> </tr> <tr> <td>Accomplishments / Effort / Sub-total Cost</td> <td>14.809</td> <td>17.593</td> <td>15.225</td> <td></td> </tr> <tr> <td>RDT&E Articles Qty</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>										QF-4 Full Scale Aerial Target	FY 2008	FY 2009	FY 2010		Accomplishments / Effort / Sub-total Cost	14.809	17.593	15.225		RDT&E Articles Qty				
QF-4 Full Scale Aerial Target	FY 2008	FY 2009	FY 2010																					
Accomplishments / Effort / Sub-total Cost	14.809	17.593	15.225																					
RDT&E Articles Qty																								
<p>QF-4 FULL SCALE AERIAL TARGET The FSAT 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 FSAT, including Aviation Depot Level Repairables (AVDLR), procurement of kit material and conversion of F-4 aircraft into FSAT targets. QF-4 procurements support aircraft and weapons systems including JSF, AIM-9X, AMRAAM and SM-6.</p>																								
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">TC/ TAAS & Scoring Systems</td> <td style="width:10%;">FY 2008</td> <td style="width:10%;">FY 2009</td> <td style="width:10%;">FY 2010</td> <td style="width:10%;"></td> </tr> <tr> <td>Accomplishments / Effort / Sub-total Cost</td> <td>1.120</td> <td>1.045</td> <td>1.040</td> <td></td> </tr> <tr> <td>RDT&E Articles Qty</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>										TC/ TAAS & Scoring Systems	FY 2008	FY 2009	FY 2010		Accomplishments / Effort / Sub-total Cost	1.120	1.045	1.040		RDT&E Articles Qty				
TC/ TAAS & Scoring Systems	FY 2008	FY 2009	FY 2010																					
Accomplishments / Effort / Sub-total Cost	1.120	1.045	1.040																					
RDT&E Articles Qty																								
<p>TC/TAAS & SCORING SYSTEMS</p> <p>Continue to support Target Control (TC) and Target Auxiliary & Augmentation Systems (TA/AS) capable of supporting T&E activities. TC involves the improved command and control systems capable of controlling multiple targets simultaneously while delivering adequate fidelity of T&E telemetry data. Augmentation and Auxiliary systems must be capable of augmenting targets in support of 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 training. Scoring systems include both surface and airborne scalar and vector scoring.</p>																								

APPROPRIATION/BUDGET ACTIVITY RDT&E,N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0604258N, TARGET SYSTEMS DEVELOPMENT	PROJECT NUMBER AND NAME 0610, WPN SYS T&E TRG DEV/PRC
---	---	--

C. OTHER PROGRAM FUNDING SUMMARY:	FY 2008	FY 2009	FY 2010
228000 Aerial Target System	66.856	78.581	47.003
612020 Spares and Repair Parts (WPN B.A. 6)	1.153	0.981	0.823

D. ACQUISITION STRATEGY:
Not Applicable

UNCLASSIFIED

CLASSIFICATION:		UNCLASSIFIED						
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION						DATE		
						May 2009		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NUMBER AND NAME				PROJECT NUMBER AND NAME		
RD TEN/BA 6		0604258N/TARGET SYSTEMS DEVELOPMENT				0612/SURFACE TARGETS DEV		
COST (In Millions)	FY 2008	FY 2009	FY 2010					
Project Cost	1.207	2.307	1.217					
RDT&E Articles Qty	0	0	0					

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:
 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.

UNCLASSIFIED

CLASSIFICATION:		UNCLASSIFIED		
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION				DATE May 2009
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME		
RD TEN/BA 6	0604258N/TARGET SYSTEMS DEVELOPMENT	0612/SURFACE TARGETS DEV		
B. ACCOMPLISHMENTS/PLANNED PROGRAM:				
	FY 2008	FY 2009	FY 2010	
Accomplishments/Effort/Subtotal Cost	1.207	2.307	1.217	
RDT&E Articles Quantity	0	0	0	0
<ul style="list-style-type: none"> - 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. - Refine performance spec based on prototype FACT results prior to follow-on FY08 procurement. - Finalize reports and prepare procurement recommendations to sponsors. - Conduct testing of improved EO/IR augmentation on powered platforms. - Adapt augmentation for use on tow platforms to enhance powered vessel survivability. - Development of performance platforms for advanced sea-state testing. 				

UNCLASSIFIED

CLASSIFICATION:		UNCLASSIFIED						
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION							DATE May 2009	
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 6		PROGRAM ELEMENT NUMBER AND NAME 0604258N/TARGET SYSTEMS DEVELOPMENT			PROJECT NUMBER AND NAME 0612/SURFACE TARGETS DEV			
COST (In Millions)		FY 2008	FY 2009	FY 2010				
Project Cost		1.207	2.307	1.217				
RDT&E Articles Qty								
C. OTHER PROGRAM FUNDING SUMMARY:								
	FY2008	FY2009	FY2010					
OPN Line 5455 ASW Rang SE	8.861	17.148	7.256					
D. ACQUISITION STRATEGY: Not applicable								

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-6					R-1 ITEM NOMENCLATURE 0604759N MAJOR T&E INVESTMENT			
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010					
Total PE Cost	41.328	51.525	44.844					
2195 T&E INVESTMENT	37.375	41.751	44.844					
9999 CONGRESSIONAL ADDS	3.953	9.774						
<p>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 AUTEC), 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 (NAVAIRWARCENWPN DIV), 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.</p>								

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: May 2009
--	-----------------------

APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-6	R-1 ITEM NOMENCLATURE 0604759N MAJOR T&E INVESTMENT
---	--

B. PROGRAM CHANGE SUMMARY:

Funding:	FY08	FY09	FY10
President's Budget 2009:	40.885	42.391	46.239
President's Budget 2010:	41.328	51.525	44.844
Total Adjustments	0.443	9.134	-1.395

Summary of Adjustments

Congressional Rescissions			
Congressional Adjustments		9.275	
SBIR/STTR/FTT Assessments	0.443		
Program Adjustments			-1.300
Rate/Misc Adjustments		-0.141	-0.095
Subtotal	0.443	9.134	-1.395

Schedule:

Not Applicable

Technical:

Not Applicable

R-1 SHOPPING LIST - Item No. 139

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
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			
COST (\$ in Millions)		FY 2008	FY 2009	FY 2010				
Project Cost		37.375	41.751	44.844				
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.

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
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

B. Accomplishments/Planned Program

Undersea Range Investments	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	9.019	9.883	9.989	
RDT&E Articles Quantity Not Applicable.				

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 AUTEC), Andros Island, Bahamas; the Nanoose and Dabob ranges of the Naval Undersea Warfare Center Division Keyport (NAVUNSEAWARCENDIV Keyport), Keyport, WA.

AUTEC - The modernization of the deep water hydrophone acoustic signal processors; the modernization of communication links from AUTEC'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, the refurbishment and service life extension of the range vessel, upgrade the aircraft sonobuoy simulation and stimulation capability, upgrade and enhance the electronic warfare (EW) simulator capability.

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, the overhaul of range craft, the upgrade of the optical tracking and surveillance system.

Naval Surface Warfare Center Port Hueneme (NSWC PHD) - The dry-dock and refurbishment of the self defense test ship.

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
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

B. Accomplishments/Planned Program

Open Air Range Investments	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	24.018	25.804	20.782	
RDT&E Articles Quantity Not Applicable.				

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 upgrade of telemetry instrumentation recorders; the modernization of Global Positional System (GPS) tracking systems; the development of a Range Capabilities Master Plan (RCMP); the replacement of fiber terminal equipment to upgrade communications links from San Nicolas Island (SNI) to the mainland; the procurement of a doppler radar system; the modernization of sea surface surveillance radars; the modernize crypto equipment: and the upgrade SNI telemetry equipment to allow remote control.

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 upgrade of telemetry instrumentation recorders; the modernization of Global Positional System (GPS) tracking systems; the development of a Range Capabilities Master Plan (RCMP); the development of an Operational Range Clearance Plan (ORCP); the clean up of expended depleted uranium, and the modernization of the Kineto Tracking Mounts (KTM).

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 two Time Space Position Information (TSPi) tracking radars; the replacement and upgrade of telemetry instrumentation recorders; the modernization of Global Positional System (GPS) tracking systems; the development of a Range Capabilities Master Plan (RCMP); the modernization of the communication and fiber infrastructure; the development of an Operational Range Clearance Plan (ORCP); the clean up of expended depleted uranium; and the modernize crypto equipment.

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

Atlantic Test Range - 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 Capabilities Master Plan (RCMP); the modernization of the Multiple Target Instrumented Radar (MIR); and the replacement of communication and data fiber between locations around the bay.

Pacific Missile Range Facility - The modernization of optical and radar tracking equipment, telemetry systems and the Mobile Aerial Target Support System (MATSS).

R-1 SHOPPING LIST - Item No. 139

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
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

B. Accomplishments/Planned Program

Test Facilities Investments	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	4.338	6.064	14.073	
RDT&E Articles Quantity Not Applicable.				

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), Propulsion Systems Evaluation Facility (PSEF), Ordnance T&E Facility).

ACETEF - The modernization of manned flight simulator computer systems and software; the development of a simulation environment visualization and debriefing system and software; the development of High Power Radio Frequency (RF) Carts; the acquisition of a rotating pedestal to turn test articles; upgrade aircraft and test instrumentation capability; develop a Joint Precision Approach and Landing System (JPALS) test capability; and develop a common data link test capability.

E3 - The modernization of Electromagnetic Environmental Effects (E3) laboratory test equipment; and the modernization of Electromagnetic Interference (EMI) laboratory test equipment.

PSEF - The upgrade of the Helicopter Transmission Test Facility (HTTF) to support greater horsepower/torque and provide quicker setup time; and modernize and enhance the gas turbine engine rotor spin facility.

Ordnance T&E Facility - The modernization of the Warhead Insensitive Munitions, and Safety Test site; and the replacement of the Non-Destructive Test and Evaluation facility large x-ray machine.

R-1 SHOPPING LIST - Item No. 139

EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
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 08	FY 09	FY 10				
Project Cost		3.953	9.774					
RDT&E Articles Qty		Not Applicable.						
<p>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: Congressional Adds.</p> <p>B. Accomplishments/Planned Program:</p>								
9A61 NETWORK EXPANSION & INTEGRATION OF NAVY/NASA RDT&E RANGES AND FACILITIES					FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost					3.953	4.787		
RDT&E Articles Quantity					Not Applicable.			
This is a continuing project that designs and develops (including environmental permits) fiber optic replacement of some of the existing microwave links between NASA instrumentation and the Atlantic Test Range.								
9E03 AIR COMBAT ENVIRONMENT TEST AND EVALUATION FACILITY UPGRADE					FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost						2.992		
RDT&E Articles Quantity					Not Applicable.			
Funds provided for the upgrade of Air Combat Environment Test and Evaluation Facility. Upgrade WKS2000 workstation at ACETEF to PC-based Linux OS and port existing software to current industry standards. Integrate waveform visualization components and audio components in to EWEnv Graphical User Interface (GUI); develop a preliminary translation capability from EWIR to the EWEnv database format; install EWEnv in the Man Flight Simulator (MFS) lab and integrate with the F-18 simulator. Develop and integrate into MFS F-18 E/F simulation High Level Architecture (HLA) compatible ALR-67(v3) model; APG-73 and APG-79 Active Electronically Scanned Array (AESA) radar model with air-to-air (A/A) and air-to-ground (A/G) modes; ASQ-228(v2) Advanced Tactical Forward Looking Infra-Red (ATFLIR) capability with tracking hardware, avionics integration and atmospheric model.								
9E04 IMPROVED INTEROPERABILITY RESEARCH AND DEVELOPMENT TO SUPPORT NAVAIR AND GWOT					FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost						1.995		
RDT&E Articles Quantity					Not Applicable.			
Funds provided to upgrade for the Ship Self Defense System (SSDS) and Cooperative Engagement Capability (CEC) Sensor Network at the Surface/Aviation Interoperability Laboratory (SAIL).								

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-6					R-1 ITEM NOMENCLATURE 0605152N, STUDIES AND ANALYSIS SUPPORT - NAVY			
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010					
Total PE Cost	15.782	8.044	11.422					
0133 NATIONAL ACAD SCI/STUD BOARD	1.642	1.631	1.704					
2092 NAVAL WARFARE STUDIES	13.799	6.123	8.938					
2097 MANPOWER PERSONNEL & TRAINING	0.341	0.290	0.780					
<p>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>								

R-1 SHOPPING LIST - Item No. 140

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: May 2009																																																												
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-6	R-1 ITEM NOMENCLATURE 0605152N, STUDIES AND ANALYSIS SUPPORT - NAVY																																																												
<p>B. PROGRAM CHANGE SUMMARY:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Funding:</th> <th style="text-align: right;">FY08</th> <th style="text-align: right;">FY09</th> <th style="text-align: right;">FY10</th> </tr> </thead> <tbody> <tr> <td>President's Budget 2009:</td> <td style="text-align: right;">7.338</td> <td style="text-align: right;">8.084</td> <td style="text-align: right;">8.681</td> </tr> <tr> <td>President's Budget 2010:</td> <td style="text-align: right;">15.782</td> <td style="text-align: right;">8.044</td> <td style="text-align: right;">11.422</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right; border-top: 1px solid black;">8.444</td> <td style="text-align: right; border-top: 1px solid black;">-0.040</td> <td style="text-align: right; border-top: 1px solid black;">2.741</td> </tr> <tr> <td colspan="4" style="padding-left: 20px;">Summary of Adjustments</td> </tr> <tr> <td colspan="4" style="padding-left: 40px;">Congressional Rescissions</td> </tr> <tr> <td colspan="4" style="padding-left: 40px;">Congressional Adjustments</td> </tr> <tr> <td></td> <td></td> <td style="text-align: right;">-0.018</td> <td></td> </tr> <tr> <td colspan="4" style="padding-left: 40px;">SBIR/STTR/FTT Assessments</td> </tr> <tr> <td></td> <td style="text-align: right;">-0.053</td> <td></td> <td></td> </tr> <tr> <td colspan="4" style="padding-left: 40px;">Program Adjustments</td> </tr> <tr> <td></td> <td style="text-align: right;">8.508</td> <td></td> <td style="text-align: right;">2.250</td> </tr> <tr> <td colspan="4" style="padding-left: 40px;">Rate/Misc Adjustments</td> </tr> <tr> <td></td> <td style="text-align: right;">-0.011</td> <td style="text-align: right;">-0.022</td> <td style="text-align: right;">0.491</td> </tr> <tr> <td>Subtotal</td> <td style="text-align: right; border-top: 1px solid black;">8.444</td> <td style="text-align: right; border-top: 1px solid black;">-0.040</td> <td style="text-align: right; border-top: 1px solid black;">2.741</td> </tr> </tbody> </table> <p style="margin-top: 20px;">Schedule: Not Applicable</p> <p style="margin-top: 20px;">Technical: Not Applicable.</p>		Funding:	FY08	FY09	FY10	President's Budget 2009:	7.338	8.084	8.681	President's Budget 2010:	15.782	8.044	11.422	Total Adjustments	8.444	-0.040	2.741	Summary of Adjustments				Congressional Rescissions				Congressional Adjustments						-0.018		SBIR/STTR/FTT Assessments					-0.053			Program Adjustments					8.508		2.250	Rate/Misc Adjustments					-0.011	-0.022	0.491	Subtotal	8.444	-0.040	2.741
Funding:	FY08	FY09	FY10																																																										
President's Budget 2009:	7.338	8.084	8.681																																																										
President's Budget 2010:	15.782	8.044	11.422																																																										
Total Adjustments	8.444	-0.040	2.741																																																										
Summary of Adjustments																																																													
Congressional Rescissions																																																													
Congressional Adjustments																																																													
		-0.018																																																											
SBIR/STTR/FTT Assessments																																																													
	-0.053																																																												
Program Adjustments																																																													
	8.508		2.250																																																										
Rate/Misc Adjustments																																																													
	-0.011	-0.022	0.491																																																										
Subtotal	8.444	-0.040	2.741																																																										

R-1 SHOPPING LIST - Item No. 140

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification				DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	0605152N / STUDIES AND ANALYSIS SUPPORT, NAVY		PROJECT NUMBER AND NAME 0133 NATIONAL ACADEMY OF SCIENCES/NAVAL STUDIES BOARD	
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010	
Project Cost	1.642	1.631	1.704	
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 requirements, 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.

R-1 SHOPPING LIST - Item No. 140

Exhibit R-2a, RDTEEN Project Justification
(Exhibit R-2a, page 3 of 10)

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification

DATE:
MAY 2009

PROGRAM ELEMENT NUMBER AND NAME
0605152N / STUDIES AND ANALYSIS SUPPORT, NAVY

PROJECT NUMBER AND NAME
0133 NATIONAL ACADEMY OF SCIENCES/NAVAL STUDIES BOARD

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	1.642	1.631	1.704

FY 2008 ACCOMPLISHMENTS:

- Continued research efforts and investigations in areas of interest to the Navy.
- Completed studies on Global War on Terrorism and Distributed Remote Sensing.
- Initiated a new study on Information Assurance selected by the CNO during FY08.

FY 2009 PLANS:

- Continue research efforts and investigations in areas of interest to the Navy.
- Complete studies initiated in FY08.
- Initiate two new studies to be selected by the CNO during FY09.

FY 2010 PLANS:

- Continue research efforts and investigations in areas of interest to the Navy.
- Complete studies initiated in FY09.
- Initiate new studies to be selected by the CNO during FY10.

R-1 SHOPPING LIST - Item No. 140

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
PROGRAM ELEMENT NUMBER AND NAME 0605152N / STUDIES AND ANALYSIS SUPPORT, NAVY	PROJECT NUMBER AND NAME 0133 NATIONAL ACADEMY OF SCIENCES/NAVAL STUDIES BOARD	
<p>C. OTHER PROGRAM FUNDING SUMMARY:</p> <p>Navy Related RDT&E: Not applicable. Non-Navy Related RDT&E: Not applicable.</p> <p>D. ACQUISITION STRATEGY:</p> <p>Not applicable.</p>		

R-1 SHOPPING LIST - Item No. 140

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification				DATE: May 2009
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 2008	FY 2009	FY 2010	
Project Cost	13.799	6.123	8.938	
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 Mission Capability Packages, Naval Capability Packages, and Integrated Strategic Capability Plans briefs for CNO. This project replaces warfare analysis efforts (other than system-level Analyses of Alternatives) previously funded separately by all sponsors.

R-1 SHOPPING LIST - Item No. 140

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605152N, STUDIES AND ANALYSIS SUPPORT	PROJECT NUMBER AND NAME 2092, NAVAL WARFARE STUDIES

B. Accomplishments/Planned Program

Naval Warfighting Assessments	FY 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	13.324	6.123	6.538
RDT&E Articles Quantity			

This project supports future Naval warfighting capability assessments, including cost-to-capability assessments; mission level Modeling & Simulation; 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 and Future Naval Capability programs to future warfighting capability gaps and integration of Naval warfighting requirements into the Joint Capability Integration and Development System process. This work provides the analytical underpinning for investment recommendations to CNO; serves as the analytics 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 Capability Packages, Naval Capability Packages, Integrated Strategic Capability Plans, and a capabilities-based and balanced Integrated Sponsor's Program Proposals. This project replaces warfare analysis efforts (other than system-level Analyses of Alternatives) previously funded separately by all sponsors.

Portfolio Management Decision Support System	FY 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	.475		2.400
RDT&E Articles Quantity			

Portfolio Management Decision Support System: An analytic Portfolio Management Methodology to aid Navy leadership with investment decision support. This analytic methodology provides an assessment process that fosters informed, understandable, repeatable, investment decisions with consistent, pedigreed, and retrievable information. Programs of Record and their proposed modifications (legacy and future) are assessed on their ability to contribute to future warfighting requirements.

R-1 SHOPPING LIST - Item No. 140

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE:	May 2009
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME		
RDT&E, N / BA-6	0605152N, STUDIES AND ANALYSIS SUPPORT	2092, NAVAL WARFARE STUDIES		
C. OTHER PROGRAM FUNDING SUMMARY:				
<u>Line Item No. & Name</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	
Not applicable				
D. ACQUISITION STRATEGY:				
Not Applicable				

R-1 SHOPPING LIST - Item No. 140

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION: UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification				DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605152N Studie and Analysis Support - Navy			PROJECT NUMBER AND NAME 2097/Manpower, Personnel, and Training	
COST (\$ in Millions)	FY2008	FY2009	FY2010		
Project Cost	0.341	0.290	0.780		
RDT&E Articles Qty					

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Chief of Naval Personnel has a continuing need for studies and analysis of manpower and personnel (M&P) policies and programs and critical M&P issues that have Navy-wide implications. This project provides an essential management tool to: (a) assess the effectiveness of existing M&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&P programs on Navy accession, attrition, retention, and performance; and, to (e) develop, validate and/or refine a broad range of M&P forecasting models. The program permits Navy to more effectively utilize Research and Development expertise to respond to emergent M&P issues on a continuing basis.

(U) JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under RDT&E operational systems development because it encompasses engineering and development of new end-items prior to production approval decision.

R-1 SHOPPING LIST - Item No.140

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification	DATE: May 2009
---	-----------------------

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	
RDT&E, N / BA-6	0605152N Studies and Analysis Support	2097/Manpower, Personnel, and Training

B. Accomplishments/Planned Program

	FY 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	0.341	0.290	0.780
RDT&E Articles Quantity			

(U) FY 2008 ACCOMPLISHMENTS:

- (U) Assessed Military Healthcare outsourcing - Pharmacy Operations
- (U) Evaluated and recommend alternate enlisted and officer bonus programs and schema (monetary and non-monetary)
- (U) Evaluated and provided lessons learned on the Surface Warfare Officer Training Experiment
- (U) Evaluated Attrition Prediction and Screening Methods for recruits

(U) FY 2009 ACCOMPLISHMENTS:

- (U) Conducted a cost-benefit analysis of Naval Post Graduate School (NPS) vs. Civilian Institution School (CIVINS) for graduate degrees
- (U) Assessed effectiveness of Active and Reserve Recruiting merger
- (U) Assessed manpower/personnel growth of DDG-51 and CG-47 mid-life upgrade programs
- (U) Evaluated and assess ROGER model and associated algorithms

(U) FY 2010 PLAN :

- (U) Assess Return on Investment (ROI) for Special and Incentive pays (AIP, SDIP, SRB, CSRB, etc)
- (U) Assess impact of Individual Augmentation and GSA detailing on enlisted and officer retention
- (U) Assess Roadmap implementation and status of obtaining FIT 2016
- (U) Assess the potential use and determine appropriate areas to employ Smart Card/CAC Technology.
- (U) Assess Elasticities of PRO Recruiting Model
- (U) Assess viability and means to achieve Billet Based Distribution
- (U) Assess/propose updates and implementation for replacement of Navy Manpower Requirements System
- (U) Assess Intelligent Workbook and NMPBS
- (U) Assess alternate testing methods for predicting/forecasting Human Performance

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

COST: (Dollars in Millions)

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
Total PE	47.368	47.500	49.821
0031 MCOAG	7.395	7.648	7.791
0148 CENTER FOR NAVAL ANALYSES, NAVY	39.973	39.852	42.030

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 thirteen 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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

B. PROGRAM CHANGE SUMMARY:

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
President's Budget 2009	47.422	49.745	51.438
Congressional Program Reductions	0.000	-2.245	0.000
Program Adjustments	0.000	0.000	-1.617
SBIR/STTR Transfer	-0.054	0.000	0.000
President's Budget 2010	47.368	47.500	49.821

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

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

- 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) DoN Two-Star and Three-Star Flag Officer Review - DoN Two- and Three-Stars 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 Deputy Chief of Naval Operations for Integration of Capabilities and Resources (N8) for 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).

UNCLASSIFIED

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06
PROGRAM ELEMENT: 0605154N PROGRAM ELEMENT TITLE: CENTER FOR NAVAL ANALYSES
PROJECT NUMBER: 0031 PROJECT TITLE: MC0AG

COST: (Dollars in Millions)

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
0031 MC0AG	7.395	7.648	7.791

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 (8) 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 2008	FY 2009	FY 2010
MARINE CORPS OPERATIONS AND ANALYSIS GROUP	7.395	7.648	7.791

FY 2008 Accomplishments:

- Completed the following efforts from the FY 2007 Marine Corps Studies System Master Plan (MCSSMP): Quick Response (QR) - Improving How the Marine Corps Gets to the Fight, QR - USMC Reserve End Strength Model, QR Study - Improving How the Marine Corps Gets to the Fight, QR Study - USMC Reserve End-Strength Model and

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605154N

PROGRAM ELEMENT TITLE: CENTER FOR NAVAL ANALYSES

PROJECT NUMBER: 0031

PROJECT TITLE: MC0AG

Unmanned Aircraft Systems - Tier II and III Sensor Suite Analysis.

- Initiated the following efforts from the FY08 MCSSMP: MV-22 Aviation Logistics Support, Weapons Tactics and Instructor Training Oct-Nov 07 (WTI08-01), Weapons Tactics and Instructor Training Feb-Apr 08 (WTI08-02), Korean Integrated Training Program (KITP) Combined Amphibious Exercise, Security Cooperation Marine Air Ground Task Force (SC MAGTF), Marine Corps Enterprise Materiel Readiness Study, USMC Strategic Vision Implications Study, Safety of Flight, Marine Corps Forces South (MARFORSOUTH) Headquarters Relocation, The Effect of Naval Post Graduate School (NPS) on the Promotion of Marine Corps Officers.

- Provided ten Scientific Analysts (SA) for direct analytical support to Marine Corps Headquarters staff elements: Deputy Commandant Marine Corps (DCMC) Plans, Policies, and Operations received one SA; DCMC Installations and Logistics received one SA; DCMC Manpower and Reserve Affairs received three SAs; DCMC Aviation received one SA; DCMC Combat Development and Integration received two SAs, and DCMC Programs and Resources received two SAs.

- Provided eight Field Representatives for direct analytical support to the Marine Corps Headquarters staff agencies. One full time representative each to the following: Commander, Marine Forces Pacific (COMMARFORPAC); Commanding General, Marine Forces Command (COMMARFORCOM); Commanding General, Marine Corps Forces Special Operations Command (COMMARSOC); Commanding General, Marine Forces Reserve (COMMARFORRES); Commanding General, I Marine Expeditionary Force (CG I MEF); Commanding General II Marine Corps Expeditionary Force (CG II MEF); Commanding General III Marine Expeditionary Force (CG III MEF); and Commanding Officer, Marine Air Weapons Training Squadron One (MAWTS1).

- Provided analysis support to operating forces exercises, ad hoc support for immediate analytical requirements, and other support functions which included: general concept development, quick response studies, CNA self-initiated analysis efforts, administrative support, liaison, travel, and contract award fee.

- Provided formal study and analysis support to the operating forces and headquarters elements included in the annual MCSSMP.

FY 2009 Plans:

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

- Initiate high priority study and analysis projects approved in FY09 MCSSMP.

- Provide formal study and analysis support to the operating forces and headquarters elements included in the annual MCSSMP.

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605154N

PROJECT NUMBER: 0031

PROGRAM ELEMENT TITLE: CENTER FOR NAVAL ANALYSES

PROJECT TITLE: MC0AG

FY 2010 Plans:

- Continue all efforts of FY09.
- Initiate high priority study and analysis projects approved in FY10 MCSSMP.

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

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 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
0148 CENTER FOR NAVAL ANALYSES, NAVY	39.973	39.852	42.030

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project supports the Navy's portion of the CNA Research Program, which is primarily concentrated along thirteen 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) Quadrennial Defense Review (QDR); 10) Navy Field Program; 11) Navy Scientific Analyst Program; 12) Navy Quick Response Projects; and (13) 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 2008	FY 2009	FY 2010
CENTER FOR NAVAL ANALYSES, NAVY	39.973	39.852	42.030

FY 2008 Accomplishments:

- Continued to address issues of major importance to Navy leadership in the above research areas. CNA's Research Program was 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, continued to comprise approximately 20% of the funding.

FY 2009 Plans:

- Continue all efforts of FY08.

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605154N

PROJECT NUMBER: 0148

PROGRAM ELEMENT TITLE: CENTER FOR NAVAL ANALYSES

PROJECT TITLE: CENTER FOR NAVAL ANALYSES, NAVY

FY 2010 Plans:

- Continue all efforts of FY09.

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

COST: (Dollars in Millions)

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
Total PE	326.650	0.399	0.000
0000 UNDIST			
17.489	17.489	0.000	0.000
1812 NAVAIR SBIR PROGRAM			
103.207	103.207	0.000	0.000
1813 SPAWAR SBIR PROGRAM			
36.329	36.329	0.000	0.000
1814 NAVSEA SBIR PROGRAM			
63.584	63.584	0.000	0.000
1824 CMC SBIR PROGRAM			
12.018	12.018	0.000	0.000
1862 SSPO SBIR PROGRAM			
1.566	1.566	0.000	0.000
1863 NAVSUP SBIR PROGRAM			
0.800	0.800	0.000	0.000
1864 CNR SBIR PROGRAM			
33.270	33.270	0.000	0.000
1865 SBIR ADMINISTRATION			
2.947	2.947	0.000	0.000
2016 NAVFAC SBIR PROGRAM			
0.800	0.800	0.000	0.000
2204 SMALL BUSINESS TECH TRANSFER PROGRAM			
25.366	25.366	0.000	0.000

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

2240	NAVY DUAL USE TECHNOLOGY PROGRAM			
		1.156	0.000	0.000
2241	SBIR ADMIN - SPAWAR			
		2.244	0.000	0.000
2242	SBIR ADMIN - NAVSEA			
		5.279	0.000	0.000
2243	SBIR ADMIN - NAVAIR			
		6.551	0.000	0.000
2244	SBIR ADMIN - NAVFAC			
		0.050	0.000	0.000
2245	SBIR ADMIN - NAVSUP			
		0.050	0.000	0.000
2248	SBIR ADMIN - SSPO			
		0.097	0.000	0.000
2813	SBIR - NSMA			
		4.880	0.000	0.000
2814	SBIR ADMIN - NSMA			
		0.300	0.000	0.000
3201	SBIR CPP - NAVAIR			
		1.032	0.000	0.000
3202	SBIR CPP - SPAWAR			
		0.360	0.000	0.000
3203	SBIR CPP - NAVSEA			
		0.633	0.000	0.000
3204	SBIR CPP - MARINE CORPS			
		0.120	0.000	0.000
3205	SBIR CPP - ONR			
		0.522	0.000	0.000
3213	NAVAIR STTR PROGRAM			

R1 Line Item 142

Page 2 of 5

UNCLASSIFIED

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

6.000	0.000	0.000
9999 CONGRESSIONAL PLUS-UPS		
0.000	0.399	0.000

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)), and reauthorization (S.3026 PL 110-235 dtd 23 May 09), 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.

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

B. PROGRAM CHANGE SUMMARY:

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
President's Budget 2009	201.450	0.000	0.000
Congressional Program Reductions	0.000	-0.001	0.000
SBIR/STTR Transfer	125.200	0.000	0.000
Total Congressional Increases	0.000	0.400	0.000
President's Budget 2010	326.650	0.399	0.000

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605502N

PROJECT NUMBER: 9999

PROGRAM ELEMENT TITLE: SMALL BUSINESS INNOVATIVE RESEARCH

PROJECT TITLE: CONGRESSIONAL PLUS-UPS

CONGRESSIONAL PLUS-UPS:

	FY 2008	FY 2009
AUTONOMOUS POWER MANAGEMENT FOR DISTRIBUTED OPERATION	0.000	0.399

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

COST: (Dollars in Millions)

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
Total PE	20.944	15.571	0.735
0835 TECHNICAL INFORMATION SERVICES	0.689	0.711	0.735
2296 FEDERAL LAB CONSORTIUM	0.392	0.000	0.000
9999 CONGRESSIONAL PLUS-UPS	19.863	14.860	0.000

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

B. PROGRAM CHANGE SUMMARY:

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
President's Budget 2009	21.059	0.713	0.739
Congressional Program Reductions	0.000	-0.042	0.000
FTT Assessment	0.392	0.000	0.000
Program Adjustments	0.000	0.000	-0.005
Rate/Misc Adjustments	0.000	0.000	0.001
SBIR/STTR Transfer	-0.507	0.000	0.000
Total Congressional Increases	0.000	14.900	0.000
President's Budget 2010	20.944	15.571	0.735

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 (CRADA), and reducing transaction/information exchange timeframes by 25%.

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605804N

PROJECT NUMBER: 0835

PROGRAM ELEMENT TITLE: TECHNICAL INFORMATION SERVICES

PROJECT TITLE: TECHNICAL INFORMATION SERVICES

COST: (Dollars in Millions)

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
0835 TECHNICAL INFORMATION SERVICES	0.689	0.711	0.735

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 2008	FY 2009	FY 2010
TECHNICAL INFORMATION SERVICES	0.689	0.711	0.735

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.

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605804N

PROJECT NUMBER: 0835

PROGRAM ELEMENT TITLE: TECHNICAL INFORMATION SERVICES

PROJECT TITLE: TECHNICAL INFORMATION SERVICES

FY 2008 Accomplishments:

- Continued to maintain the network tracking of technology transfer efforts required for Congressional reporting.
- Continued to increase outreach and marketing efforts.
- Continued the pilot program of Leveraging MBA technology commercialization course to perform intellectual property assessments, conduct market studies and find potential licensing partners.
- Completed Major overhaul and update of the online Office of Research and Technology Applications (ORTA)/Technology Transfer training site.
- Completed on-line job performance support and training tools for DoN technology transfer professionals.
- Completed Evaluation of "commercial-off-the-shelf" (COTS) software to enable the ORTA to bundle patents across labs to enhance the Navy licensing program.
- Completed revising NAVY CRADA Handbook.
- Initiated 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 and complete SECNAVINST 5700 revision.
- Initiate two new pilot programs.

FY 2010 Plans:

- Continue all Technical Information Services of FY 2009, less those noted as completed above.
- Complete Leveraging MBA technology commercialization course to perform intellectual property assessments, conduct market studies and find potential licensing partners.
- Initiate effort for Phase II of DTTIS database to include patent licensing tracking.
- Initiate effort for Phase II of ONR technology transfer website to include content management.
- Initiate two new pilot programs.

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06
 PROGRAM ELEMENT: 0605804N PROGRAM ELEMENT TITLE: TECHNICAL INFORMATION SERVICES
 PROJECT NUMBER: 2296 PROJECT TITLE: FEDERAL LAB CONSORTIUM

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
2296 FEDERAL LAB CONSORTIUM	0.392	0.000	0.000

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 2008	FY 2009	FY 2010
FEDERAL LAB CONSORTIUM	0.392	0.000	0.000

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605804N

PROJECT NUMBER: 9999

PROGRAM ELEMENT TITLE: TECHNICAL INFORMATION SERVICES

PROJECT TITLE: CONGRESSIONAL PLUS-UPS

CONGRESSIONAL PLUS-UPS:

	FY 2008	FY 2009
CENTER FOR COMMERCIALIZATION OF ADVANCED TECHNOLOGY (CAT)	2.317	2.493

	FY 2008	FY 2009
HTDV	9.715	9.973

	FY 2008	FY 2009
INTEGRATED MANUFACTURING ENTERPRISE	1.545	2.394

	FY 2008	FY 2009
PACIFIC-BASED JOINT INFO TECH CENTER	6.286	0.000

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification				DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-6				R-1 ITEM NOMENCLATURE 0605853N Management, Technical and International Support				
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY2014	FY2015
Total PE Cost	46.865	51.213	60.590					
0149 International Cooperative RDT&E	3.530	4.827	5.626					
1767 Naval War College/Center for Naval Warfare Studies	3.634	4.125	4.626					
2221 Assessment Program BSO 19 and BSO 39	21.476	22.387	25.401					
3025 Mid-Range Financial Improvement Plans	1.578	1.567	1.594					
3039 CHENG	16.647	18.307	18.907					
3028 Operations Integration Group			4.436					
Quantity of RDT&E Articles	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, and improve coalition interoperability. In addition, it develops coherent approaches in coordination with Combatant Commanders (COCOMs), Chief of Naval Operations (CNO) N3/5, Office of Naval Research (ONR) and appropriate 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.

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.

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.

Exhibit R-2 RDTE Budget Item Justification

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	
RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY /	BA-6	0605853N Management, Technical and International Support
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION (Cont.):</p> <p>Capital Asset Management System: This project supports the Research Development Test & 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 statements for RDT&E,N/ONR.</p> <p>CHENG: funds the Assistant Secretary of the Navy for Research, Development and Acquisition (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, 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.</p> <p>Operations Integration Group: Classified</p>		

CLASSIFICATION:

EXHIBIT R-2 RDT&E Budget Item Justification	DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
RDT&E, N / BA-6	0605853N Management, Technical and International Support

C. PROGRAM CHANGE SUMMARY:

Funding:	FY 2008	FY 2009	FY2010
FY09 President's Budget	48.441	51.568	52.762
FY10 President's Budget	46.865	51.213	60.590
Total Adjustments	-1.576	-0.355	7.828
Summary of Adjustments:			
Congressional Adjustments		-0.304	
Program Adjustments	-1.576		8.693
Rate/Misc Adjustments		-0.051	-0.865
	-1.576	-0.355	7.828

Schedule:

Not Applicable

Technical:

Not Applicable

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification				DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6		PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support			PROJECT NUMBER AND NAME 0149 INTERNATIONAL COOP RDT&E			
COST (\$ in Millions)		FY 2008	FY 2009	FY 2010				
Project Cost		3.530	4.827	5.626				
RDT&E Articles Qty								

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

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, and improve coalition interoperability. In addition, it develops coherent approaches in coordination with Combatant Commanders (COCOMs), Chief of Naval Operations (CNO), Office of Naval Research (ONR) and appropriate 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 was expanded from primarily North Atlantic Treaty Organization (NATO)-centric to include an Overseas Contingency Operations (OCO), and Maritime Domain Awareness (MDA) 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 projects, while preparing to facilitate support for a global network of maritime nations under MDA and increase OCO-related support requirements.

Ongoing cooperative RDT&E programs, projects and exchanges are pursued to identify cooperative acquisition programs, enhance OCO efforts and MDA development, fill capability gaps, improve US/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. Funding of various international RDT&E support databases including Technical Project Officer (TPO), International Agreement Generators, Information/Data Exchange Agreements, and Project Agreements/Memorandums of Understanding;
7. Leading the Engineering and Scientist Exchange Program (ESEP);
8. Overseeing OPNAV input to Foreign Comparative Testing (FCT) Program and OSD Coalition Warfare (CWP) Program.

This project also hosts Navy's contribution to funding requirements directed by the Joint Requirement Oversight Council (JROC) for specific efforts cost shared across the services. Projects supported include Critical Infrastructure Protection – Mission Assurance Assessments (CIP-MAA) and Multiple Unified Simulation Environment (MUSE) requirements.

R-2a RD TEN Project Justification

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 0149 INTERNATIONAL COOP RDT&E
<p>A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION (continued):</p> <p>Performance Metrics: The Navy International Cooperative RDT&E Project 0149 supports the implementation of many international cooperative program activities throughout the Department of the Navy (DoN) RDT&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: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	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 08	FY 09	FY 10	
International Coop	3.530	4.827	5.626	

FY08 Accomplishments:

- 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 support 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).
- Continued 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.
- 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).
- 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.
- 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 09 Plans:

- Continue all efforts of FY 08.

FY 10 Plans:

- Continue all efforts of FY 09
- Initiate Unmanned Aircraft System (UAS) simulation improvements via the Air Force's Multiple Unified Simulation Environment (MUSE) synthetic environment, per the Joint Requirements Oversight Council Memorandum (JROCM) 233-07.
- Initiate Critical Infrastructure Protection – Mission Assurance Assessment (CIP-MAA) recommendations as applicable to the Global War on Terror (GWOt) and responses to the Critical Infrastructure Protection Action Plan, per the Joint Requirements Oversight Council Memorandum (JROCM) 017-07

R-2a RDTEN Project Justification

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6		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 2008	FY 2009	FY 2010				
Project Cost			3.634	4.125	4.626				
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: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	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:

	FY08	FY09	FY10	
Strategic Studies	1.087	1.116	1.133	

Naval War College (NWC) conducts research in strategic studies in response to tasking from the Secretary of the Navy (SECNAV), Chief of Naval Operation (CNO), Fleet Commanders, numbered Fleet Commanders, and Combatant Commanders. NWC also hosts the activities of the 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.

FY08 Accomplishments:

- Continued to conduct research and analysis projects and provided supporting events for Office of the Chief of Naval Operations (OPNAV), the numbered Fleets, Navy Component Commanders, and the Combatant Commanders. Projects directly supported 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.
- Continued to support the OPNAV Staff on the Proliferation Security Initiative (PSI).
- CNO SSG completed tasking from the CNO to SSG XXVI to address "fighting in cyberspace in 2030."

FY09 Plans:

- 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.
- Continue to support the OPNAV Staff on tasked research projects.
- CNO SSG tasking from the CNO to SSG XXVII.
- Initiate revolutionary operating and warfighting concepts for 2035 and beyond under CNO tasking.

FY10 Plans:

- Continue 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.
- Continued to support the OPNAV Staff on operational and strategic level of war tasked research projects.
- CNO SSG tasking from the CNO to SSG XXVIII.
- Initiate revolutionary operating and warfighting concepts for 2035 and beyond under CNO tasking.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	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 08	FY 09	FY 10
Naval War Gaming Support	1.692	1.767	2.224

Naval War College (NWC) conducts strategic and operational war gaming and research for Office of the Chief of Naval Operations (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.

FY08 Accomplishments:

- 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.

FY09 Plans:

- Continued all efforts of FY08.

FY10 Plans:

- Continued all efforts of FY09.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	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 08	FY 09	FY 10	
Warfare Analysis and Research	0.406	0.490	0.501	

Naval War College (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.

FY08 Accomplishments:

- Continued to conduct major decision events in support of Office of the Chief of Naval Operations (OPNAV), the numbered Fleets, Fleet 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
- 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.
- Conducted research targeted at the strategic and policy level decision making within China
- Continued to provide direct support to NWC student research groups and war gaming.
- 30-40 major decision are conducted in support of there efforts.

FY09 Plans:

- Continue all efforts of FY08.

FY10 Plans:

- Continue all efforts of FY09.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-6	0605853N Management, Technical and International Support	1767 NAVAL WAR COLLEGE STRATEGIC STUDIES SUPT

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 08	FY 09	FY 10
NWC Student Research Projects	0.149	0.152	0.155

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.

FY08 Accomplishments:

- 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.
- 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.

FY09 Plans:

- Continue all efforts of FY08.

FY10 Plans:

- Continue all efforts of FY09.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	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 08	FY 09	FY 10
Maritime Headquarters (MHQ)/Maritime Operations (MOC) Analysis	0.300	0.600	0.613

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.

FY08 Accomplishments:

- Conducted 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.
- Initiated research into the required competencies for Maritime Staff Operations Course for officer and enlisted personnel to successful operate at the operational level of war.

FY09 Plans:

- Continue all efforts of FY08.

FY10 Plans:

- Continue all efforts of FY09.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 1767 NAVAL WAR COLLEGE STRATEGIC STUDIES SUPT
<p>C. OTHER PROGRAM FUNDING SUMMARY:</p> <p>Not Applicable</p> <p>D. ACQUISITION STRATEGY:</p> <p>Not Applicable</p>		

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE: May 2009		
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 2008	FY 2009	FY 2010				
Project Cost		21.476	22.387	25.401				
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 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-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.

Joint Mission Assessment Studies supports the development of platform specific studies and Capability Based Assessments (CBAs), an analytical effort resulting in Functional Area Analysis (FAA), Functional Needs Analysis (FNA), and Functional Solutions Analysis (FSA). Efforts provide added analytical rigor relative to program's maturation under the Joint Capabilities, Integration, and Development System (JCIDS) and support warfare integration initiatives.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
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

B. Accomplishments/Planned Program

	FY 08	FY 09	FY 10
Navy Standard Scenarios	1.487	1.520	1.551

FY08 Accomplishments:

Developed, updated and maintained detailed level Navy Standard scenarios based on Defense Planning Guidance. Developed alternative scenarios in support of 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.

FY09 Plans:

Continue all efforts of FY08.

FY10 Plans:

Continue all efforts of FY09.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
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

B. Accomplishments/Planned Program

	FY 08	FY 09	FY 10	
Capability Based Assessments	2.797	2.864	2.922	

FY 08 Accomplishments:

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). Presented 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 perform assessments for Program Review and Program Objective Memorandum (POM). Assessed capability sponsor's products for senior leadership decision forums. Conducted Verification, Validation & Accreditation (VV&A) of warfare, performance, and pricing models. Conducted Overseas Contingency Operations (OCO)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 OCO, and intelligence preparation of the environment for both MCOs and OOC. Performed Capabilities-Based Assessments (CBAs) to meet the requirements of current and future scenarios, and make strategic decisions within a constrained economic framework.

FY09 Plans:

Continue all efforts of FY08.

FY10 Plans:

Continue all efforts of FY09.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
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

B. Accomplishments/Planned Program

	FY08	FY09	FY10	
Campaign Analysis - Modeling and Simulation	6.166	6.690	6.449	

FY08 Accomplishments:

Developed and maintained common baselines from which campaign excursions and mission-level analyses are executed. Identified, developed, and improved data and modeling. Led 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. Brokered 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.

FY09 Plans:

Continue all efforts of FY08.

FY10 Plans:

Continue all efforts of FY09.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
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

B. Accomplishments/Planned Program

	FY 08	FY 09	FY10	
OSD/Joint Staff Study Analysis & Assessment	1.814	1.857	1.895	

FY08 Accomplishments:

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).

FY09 Plans:

Continue all efforts of FY08.

FY10 Plans:

Continue all efforts of FY09.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
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

B. Accomplishments/Planned Program

	FY 08	FY 09	FY 10
World Class Modeling, Simulation, and Capability Analysis	9.212	9.456	9.430

FY 08 Accomplishments:

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.

FY09 Plans:

Continue all efforts of FY08.

FY10 Plans:

Continue all efforts of FY09.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 2221 Joint Mission Assessment Studies

B. Accomplishments/Planned Program

	FY 2008	FY 2009	FY 2010
Joint Mission Assessment Studies	0.000	0.000	3.154

Capabilities-Based Assessment (CBA) – The CBA is the Joint Capabilities Integration and Development System analysis process that includes three phases: the Functional Area Analysis (FAA), the Functional Needs Analysis (FNA), and the Functional Solution Analysis (FSA). The results of the CBA are used to develop a joint capabilities document (based on the FAA and FNA) or initial capabilities document (based on the full analysis). CBA funding provides the Resource Sponsors the means to develop the analytic underpinning to support the determination of naval capabilities and force structure recapitalization investments needed to fulfill the Maritime Strategy.

FY10 Plans:

CBA efforts are a tool designed to address emergent questions and analysis needs. CBA effort will improve the quality of Analysis of Alternatives (AOA's) generated, complement our warfare integration task, and increase our ability to respond to questions received regarding the generation of requirements to address capability based assessments.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE: May 2009				
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6		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 2008	FY 2009	FY 2010				
Project Cost			1.578	1.567	1.594				
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. 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) are being identified.

Performance Metrics:

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

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 3025 MID-RANGE FINANCIAL IMPROVEMENT PLANS

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 08	FY 09	FY 10
Financial Improvements	1.578	1.567	1.594

FY08 Accomplishments:

- Posted obligations within the reporting period in which they were incurred.
- Expanded the practice of having major contracting activities post awards electronically to the Standard Accounting and Reporting System (STARS).
- Performed obligation validations to ensure that posted obligations were accurate.
- Revised the accounts receivable process to more accurately record collections.
- Monitored duplication in vendor pay accounting system and STARS one pay, as invoices were settled.
- Eliminated problem disbursements older than 120 days, narrowing to 60 days, and potentially narrowing even further.
- Discovered and started correction phase for the Financial Improvement Program (FIP).
- Updated of Wide Area Workflow (WAWF) in order to allow Grants and Intergovernmental Personnel Agreements (IPA) invoices to be processed using WAWF.
- Continued 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.
- Completed validation packages containing financial business processes for the Naval Research Laboratory (NRL).

FY09 Plans:

- Continue all efforts of FY 08 less those noted as completed above.

FY10 Plans:

- Continue all efforts of FY09.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 3025 MID-RANGE FINANCIAL IMPROVEMENT PLANS
<p>C. OTHER PROGRAM FUNDING SUMMARY:</p> <p>Navy Related RDT&E: PE 0605013N (Information Technology Development) PE 0605861N (RDT&E Science and Technology Management)</p> <p>Non-Navy Related RDT&E: Not Applicable</p> <p>D. ACQUISITION STRATEGY:</p> <p>Not Applicable</p> <p>E. MAJOR PERFORMERS</p> <p>No performer in this PE received more than 15% or \$10 million of the program.</p>		

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N BA-6		PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support			PROJECT NUMBER AND NAME 3039 CHENG			
COST (\$ in Millions)		FY 2008	FY 2009	FY 2010				
Project Cost		16.647	18.307	18.907				
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 Nav (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: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 3039 CHENG

B. Accomplishments/Planned Program

	FY 2008	FY 2009	FY 2010	
Standards, Policy, and Guidelines	4.800	5.030	5.130	

FY 2008 Accomplishments:

- Continued 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.
- Continued 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).
- Represented ASN RD&A in the OSD Systems Engineering Forums to address the impact of SOS engineering policy in acquisition.
- Completed 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.
- Worked with the DOD Anti-Tamper Executive Agent on DON policy and Implementation. Select and evaluate anti-tamper technologies in designated areas of interest.
- Completed technical alignment of Naval Power 21 and OA standards with DISR standards and technical warrant holder roles and responsibilities for information technology standards.

FY09 Plans:

- Continue all efforts of FY08 less those noted as completed above.
- Continue work with DOD Institutional Reform & Governance Agent on DOD/DON policy and implementation.
- Develop Naval Power 21 and OA standards policy updates for alignment of Navy with DISR standards and technical warrant holder roles and responsibilities.
- Develop Naval Power 21 Integration and Interoperability Management Plan policy updates.

FY10 Plans:

- Continue all efforts of FY09.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
---	--	--------------------------

APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 3039 CHENG
---	---	---------------------------------------

B. Accomplishments/Planned Program

	FY 2008	FY 2009	FY 2010
Naval Collaborative Engineering Environment (NCEE)	2.577	2.611	2.765

FY 2008 Accomplishments:

- Continued 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.
- Continued Interoperability Data Management and Analysis: update acquisition milestone document automation process and capabilities; complete deployment to programs of interest.
- Continued 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 (NAVSEASYSYSCOM) programs technical support.
- Continued 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.
- Continued 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 Plans:

- Continue all efforts of FY 08.

FY10 Plans:

- Continue all efforts of FY09.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 3039 CHENG

B. Accomplishments/Planned Program

	FY 2008	FY 2009	FY 2010	
Systems Engineering	9.270	10.666	11.012	

FY 2008 Accomplishments:

- Continued 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.
- Continued Software Acquisition Process Improvement (Section 804) pilot project implementation.
- Completed System-of-Systems (SOS) Systems Engineering (SE) Guidebook Volumes I and II to address specialty engineering functions to include Human Systems Integration, Safety, etc.
- Continued SOS SE Integrated Product Team (IPTs) for Battlespace, 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 incorporate results in the ASN Research, Development and Acquisition Dashboard.
- Continued NP 21 Integration and Interoperability Management Plan (I&IMP) implementation.
- Developed and promulgate integrated architecture roadmap with Mission Capability Package System View 8 and Capability Evolution Document.
- Completed mission and capability technical warrant holder roles and responsibilities.

FY09 Plans:

- Continue all efforts of FY08 less those noted as completed above.
- 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 ISP's received via Office of the Secretary of Defense/Joint Capabilities Integration and Development System (OSD/JCIDS).
- 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.

FY10 Plans:

- Continue all efforts of FY09.
- 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.
- Complete mission and capability technical warrant holder roles and responsibilities.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support	PROJECT NUMBER AND NAME 3039 CHENG
<p>C. OTHER PROGRAM FUNDING SUMMARY:</p> <p><u>Line Item No. & Name:</u> Not Applicable</p>		
<p>D. ACQUISITION STRATEGY: Not Applicable</p>		
<p>E. MAJOR PERFORMERS:</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>		

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification						DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6		PROGRAM ELEMENT NUMBER AND NAME 0605853N Management, Technical and International Support			PROJECT NUMBER AND NAME 3028 Operations Integration Group		
COST (\$ in Millions)		FY 2008	FY 2009	FY 2010			
Project Cost		0.000	0.000	4.436			
RDT&E Articles Qty							

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Classified program details are held at a higher classification.

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

COST: (Dollars in Millions)

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
Total PE	3.359	3.585	3.633

0128 MANAGEMENT AND TECHNICAL STRATEGIC
SUPPORT

1.279	1.336	1.357
-------	-------	-------

1038 ACOUSTIC AND NONACOUSTIC ANALYSIS
SUPPORT

2.080	2.249	2.276
-------	-------	-------

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

B. PROGRAM CHANGE SUMMARY:

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
President's Budget 2009	3.382	3.597	3.688
Congressional Program Reductions	0.000	-0.011	0.000
Program Adjustments	0.000	0.000	-0.053
Rate/Misc Adjustments	0.000	-0.001	-0.002
SBIR/STTR Transfer	-0.023	0.000	0.000
President's Budget 2010	3.359	3.585	3.633

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 contributions. To this goal, research is conducted by educational and research institutions

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06
 PROGRAM ELEMENT: 0605856N PROGRAM ELEMENT TITLE: STRATEGIC TECHNICAL SUPPORT
 PROJECT NUMBER: 0128 PROJECT TITLE: MANAGEMENT AND TECHNICAL STRATEGIC SUPPORT

COST: (Dollars in Millions)

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
0128 MANAGEMENT AND TECHNICAL STRATEGIC SUPPORT	1.279	1.336	1.357

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 2008	FY 2009	FY 2010
MANAGEMENT AND TECHNICAL SUPPORT, STRATEGIC	1.279	1.336	1.357

FY 2008 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.

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605856N

PROGRAM ELEMENT TITLE: STRATEGIC TECHNICAL SUPPORT

PROJECT NUMBER: 0128

PROJECT TITLE: MANAGEMENT AND TECHNICAL STRATEGIC SUPPORT

- 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.
- 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 2009 Plans:

- Continue all efforts of FY08.

FY 2010 Plans:

- Continue all efforts of FY09.

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605856N

PROGRAM ELEMENT TITLE: STRATEGIC TECHNICAL SUPPORT

PROJECT NUMBER: 1038

PROJECT TITLE: ACOUSTIC AND NONACOUSTIC ANALYSIS SUPPORT

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
1038 ACOUSTIC AND NONACOUSTIC ANALYSIS SUPPORT	2.080	2.249	2.276

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides analytical support to the Director, Submarine Warfare Division and the 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 2008	FY 2009	FY 2010
ACOUSTIC AND NON-ACOUSTIC ANALYSIS SUPPORT	2.080	2.249	2.276

FY 2008 Accomplishments:

- Continued environmental compliance requirements and actions pertinent to Compact Low Frequency Active (CLFA) at-sea testing, training and operations.
- Continued the SURTASS Engineering Measurements Program (SURTASS EMP) to provide for post-mission engineering analysis of SURTASS acoustic data.
- 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.

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605856N

PROGRAM ELEMENT TITLE: STRATEGIC TECHNICAL SUPPORT

PROJECT NUMBER: 1038

PROJECT TITLE: ACOUSTIC AND NONACOUSTIC ANALYSIS SUPPORT

- Completed planning and execution of the Phase II of deep diving odontocete behavioral response study research strategy and continued the marine animal behavioral response studies and research; in concert with ONR, oil industry, and U.K. support.

FY 2009 Plans:

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

FY 2010 Plans:

- Continue all efforts of FY09.

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

COST: (Dollars in Millions)

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
Total PE	68.212	69.724	70.942
0135 ONR SCIENCE AND TECHNOLOGY MANAGEMENT	64.823	66.350	67.487
2353 R&D DFAS BILLINGS	3.389	3.374	3.455

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

B. PROGRAM CHANGE SUMMARY:

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
President's Budget 2009	67.747	69.913	71.311
Congressional Program Reductions	0.000	-0.189	0.000
Program Adjustments	0.000	0.000	0.205
Rate/Misc Adjustments	0.000	0.000	-0.574
Total Reprogrammings	0.465	0.000	0.000
President's Budget 2010	68.212	69.724	70.942

PROGRAM CHANGE SUMMARY EXPLANATION:

Technical:

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605861N

PROGRAM ELEMENT TITLE: RDT&E SCIENCE AND TECHNOLOGY MANAGEMENT

PROJECT NUMBER: 0135

PROJECT TITLE: ONR SCIENCE AND TECHNOLOGY MANAGEMENT

COST: (Dollars in Millions)

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
0135 ONR SCIENCE AND TECHNOLOGY MANAGEMENT	64.823	66.350	67.487

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.

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2008	FY 2009	FY 2010
S&T MANAGEMENT SUPPORT	64.823	66.350	67.487

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

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

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.

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

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 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
2353 R&D DFAS BILLINGS	3.389	3.374	3.455

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 2008	FY 2009	FY 2010
TRANSACTIONS PROCESSED IN SUPPORT OF DON R&D	3.389	3.374	3.455

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: May 2009

Appropriation/Budget Activity RDT&E,N BA 6				R-1 Item Nomenclature: RDT&E,N Instrumentation Modernization 0605862N			
Cost (\$ in millions)	FY 2008	FY 2009	FY 2010				
Total PE Cost	1.382	0.000	0.000				
Medical Force Protection/3047	1.382	0.000	0.000				

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. (Funding was transferred to CNIC beginning in FY 09).

B. Program Change Summary:

	FY 2008	FY 2009	FY 2010
FY 2009 President's Budget Submission	1.393	0.000	0.000
FY 2010 President's Budget Submission	<u>1.382</u>	<u>0.000</u>	<u>0.000</u>
Total Adjustments	-0.011	0.000	0.000
Program Adjustments:			
Congressional Rescissions	0.000	0.000	0.000
Congressional Adjustments	0.000	0.000	0.000
SBIR/STTR/FTT Assessment	-0.011	0.000	0.000
Program Adjustments	0.000	0.000	0.000
Rate/Miscellaneous Adjustments	<u>0.000</u>	<u>0.000</u>	<u>0.000</u>
Total Adjustments	-0.011	0.000	0.000

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

Date: May 2009

Appropriation/Budget Activity RDT&E,N BA 6				RDT&E,N Instrumentation Modernization 0605862N			
Cost (\$ in millions)	FY 2008	FY 2009	FY 2010				
Medical Force Protection/3047	1.382	0.000	0.000				
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 2008	FY 2009	FY 2010				
Accomplishment/Effort/Subtotal Cost	1.382	0.000	0.000				
RDT&E,N Articles Quantity							

FY 2008 Accomplishments

The funds continue to provide for the on-going Force Protection Requirements at BUMED OCONUS Medical Research Laboratories. These recurring requirements include: Security Specialist (required by RSO, Indonesia); Security Guards; Security Driver Training and Overtime; Maintenance of Non-Tactical Armored Vehicles; Perimeter Upgrades (barriers); Alarm Systems; Perimeter Lighting; Personal Protective Equipment; Maintenance of Communications Systems/Equipment (radios, cell phones for emergency recall, satellite phones for deployed personnel, and Closed Circuit TV equipment). Replaced Emergency Generator for critical systems NAMRU-3 Cairo. Additionally in FY08 a Safe Haven Study was funded and conducted for NMRC, Lima as a requirement by the RSO. The study culminated in a report that will generate design requirements for Safe Haven provisions in existing and planned

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 May 2009
---	------------------

APPROPRIATION/BUDGET ACTIVITY RDTEN/BA 6				R-1 ITEM NOMENCLATURE 0605863N/RDT&E SHIP AND AIRCRAFT SUPPORT				
COST (In Millions)	FY 2008	FY 2009	FY 2010					
Total PE Cost	178.651	194.034	193.353					
0568 / A/C FLT Hours	34.670	34.098	32.629					
0569 / A/C Support	41.913	45.234	35.850					
2924 / SDTS	8.815	9.448	9.114					
3186 / Air and Missile Defense Radar	93.253	0.000	0.000					
3206 / T&E Enterprise	0.000	105.254	115.760					

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.

B. PROGRAM CHANGE SUMMARY:

Funding:	FY 2008	FY 2009	FY 2010
FY09 President's Budget	178.651	195.017	201.110
FY10 President's Budget	178.651	194.034	193.353
Total Adjustments	0.000	-0.983	-7.757
(U) Summary of Adjustments			
Congressional Adjustments	0.000	-0.303	0.000
SBIR/STTR Transfer	0.000	0.000	0.000
Program adjustment	0.000	-0.680	-3.657
Rate/Misc Adjustments	0.000	0.000	-4.100
Total	0.000	-0.983	-7.757

CLASSIFICATION:		UNCLASSIFIED						
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION						DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 6		PROGRAM ELEMENT NUMBER AND NAME 0605863N/RDT&E SHIP AND AIRCRAFT SUPPORT				PROJECT NUMBER AND NAME 0568/A/C FLT Hours		
COST (In Millions)	FY 2008	FY 2009	FY 2010					
Project Cost	34.670	34.098	32.629					
RDT&E Articles Qty	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.								

CLASSIFICATION:		UNCLASSIFIED		
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION				DATE May 2009
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 6	PROGRAM ELEMENT NUMBER AND NAME 0605863N/RDT&E SHIP AND AIRCRAFT SUPPORT	PROJECT NUMBER AND NAME 0568/A/C FLT Hours		
B. ACCOMPLISHMENTS/PLANNED PROGRAM:				
	FY 2008	FY 2009	FY 2010	
Accomplishments/Effort/Subtotal Cost	34.670	34.098	36.850	
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.				
C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable				
D. ACQUISITION STRATEGY: Not Applicable				
E. MAJOR PERFORMERS: NAWCAD Patuxent River, MD: In support of direct flight hours for R&D programs at NAWCAD. NAWCWD Point Mugu, CA: In support of direct flight hour costs for R&D programs at NAWCWD.				

CLASSIFICATION:		UNCLASSIFIED						
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION						DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 6		PROGRAM ELEMENT NUMBER AND NAME 0605863N/RDT&E SHIP AND AIRCRAFT SUPPORT				PROJECT NUMBER AND NAME 0569/A/C Support		
COST (In Millions)	FY 2008	FY 2009	FY 2010					
Project Cost	41.913	45.234	35.850					
RDT&E Articles Qty	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 repairs, 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.								

CLASSIFICATION:		UNCLASSIFIED		
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION				DATE May 2009
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 6	PROGRAM ELEMENT NUMBER AND NAME 0605863N/RDT&E SHIP AND AIRCRAFT SUPPORT	PROJECT NUMBER AND NAME 0569/A/C Support		
B. ACCOMPLISHMENTS/PLANNED PROGRAM:				
	FY 2008	FY 2009	FY 2010	
Accomplishments/Effort/Subtotal Cost	40.531	43.548	34.220	
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 2008	FY 2009	FY 2010	
Accomplishments/Effort/Subtotal Cost	1.382	1.686	1.630	
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.				
C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable				
D. ACQUISITION STRATEGY: Not Applicable				
E. MAJOR PERFORMERS: NAWCAD Patuxent River, MD: Support of aircraft for RDT&E inventory; AVDLR/IMRL support; Operation and implementation of maintenance and material management programs. NAWCWD Point Mugu, CA: Support of aircraft for RDT&E inventory; AVDLR/IMRL support; Operation and implementation of maintenance and material management programs. NADEP Jacksonville, FL: Provide aircraft depot maintenance and engine repairs for RDT&E aircraft, and in-service repairs. NADEP North Island, CA: Provide aircraft depot maintenance for RDT&E aircraft, and in-service repairs. Hill Air Force Base Hill AFB, UT: Provide aircraft depot maintenance for RDT&E aircraft.				

CLASSIFICATION:		UNCLASSIFIED						
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION						DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 6		PROGRAM ELEMENT NUMBER AND NAME 0605863N/RDT&E SHIP AND AIRCRAFT SUPPORT				PROJECT NUMBER AND NAME 2924/SDTS		
COST (In Millions)	FY 2008	FY 2009	FY 2010					
Project Cost	8.815	9.448	9.114					
RDT&E Articles Qty	0	0	0					
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:								
<p>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.</p> <p>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.</p>								

CLASSIFICATION:		UNCLASSIFIED		
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION				DATE May 2009
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 6	PROGRAM ELEMENT NUMBER AND NAME 0605863N/RDT&E SHIP AND AIRCRAFT SUPPORT	PROJECT NUMBER AND NAME 2924/SDTS		
B. ACCOMPLISHMENTS/PLANNED PROGRAM:				
	FY 2008	FY 2009	FY 2010	
Accomplishments/Effort/Subtotal Cost	8.815	9.448	9.114	
RDT&E Articles Quantity	0	0	0	
<p>2008: SDTS priority consisted 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&E Enterprise TEMP, and executing according to the Enterprise TEMP. SDTS began the planning, scheduling, and performing of maintenance onboard EDD 964 for HM&E, CS and remote control elements in support of such activities.</p> <p>2009: NAVSURFWARCENDIV Port Hueneme, CA will plan, schedule, and perform recurring maintenance onboard EDD 964 and continue to support installation of Enterprise Equipment for multiple ship classes (LHDs/CVNs, DDG 1000, and LCS) PHD will also determine the feasibility of multiple configurations in support of the Navy AAW SSD Enterprise Strategy.</p> <p>2010: Continue efforts from 2009</p>				
C. OTHER PROGRAM FUNDING SUMMARY:				
Not Applicable				
D. ACQUISITION STRATEGY:				
This line of accounting is for recurring combat system and ship maintenance.				
E. MAJOR PERFORMERS:				
NSWC PHD Northrop Grumman ATI				

CLASSIFICATION:		UNCLASSIFIED						
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION						DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 6		PROGRAM ELEMENT NUMBER AND NAME 0605863N/RDT&E SHIP AND AIRCRAFT SUPPORT				PROJECT NUMBER AND NAME 3186/Air and Missile Defense Radar		
COST (In Millions)	FY 2008	FY 2009	FY 2010					
Project Cost	93.253	0.000	0.000					
RDT&E Articles Qty	0	0	0					
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:								
<p>The T&E Enterprise consolidates all Air Warfare (AW) Ship Self Defense (SSD) at-sea testing to across multiple class ships, beginning with CVN 74, LHD 8, LPD17, LHA 6, DDG 1000, CVN 78, and 2 versions of Littoral Combat Ship (LCS). This consolidated AW SSD test and evaluation approach meets the Probability of Raid Annihilation (PRA) (PRA is defined as a required surface ship defense against Anti-Ship Cruise Missiles), Self Defense Test Ship (SDTS), and lead/operational ship testing requirements for ESSM TEMP 1471, RAM Blk 2 TEMP 286-1, DDG 1000 TEMP 1560, CVN 78 TEMP 1610, CEC TEMP 1415, SSDS TEMP 1400, LHA 6 TEMP 1697, AN/SPQ-9B TEMP 1463, SEWIP TEMP 1658 (Block 1A), TEMP 0686, and the LCS TEMP 1695.</p> <p>LHA 6 acquisition, installation and testing supports all big deck Amphibs and Carriers in the OA configuration as well RAM BLK 2 OPEVAL, SSDS OA with RAM BLK 2, SEWIP and ESSM.</p> <p>The T&E Enterprise merges common ship, element, and system requirements into the least number of test events while leveraging planned Combat System Ship Qualification Trials (CSSQTs) to accomplish Developmental Testing (DT) and Operational Testing (OT) requirements. All tests on the SDTS require the sharing of infrastructure, missile range allocations, execution time and underway time to eliminate duplicative testing. T&E Enterprise preserves "end-to-end" mission Operational Testing in a realistic operational environment, capitalizing on Probability of Raid Annihilation M&S data validated with results of that Operational Testing, and ensuring a consistent approach across ship classes. Applicability of all test events are beneficial across multiple ship classes with the same variation under test.</p> <p>The T&E Enterprise acquires equipment (FY08-10) for installation onboard the SDTS (FY10), conducts test and evaluation on the SDTS and lead/operational ships (FY08-FY10) and satisfies the Probability of Raid Annihilation (PRA) Testbed Model Development and test execution requirements (FY08-FY10).</p> <p>FY09 and out funding is in PE 0605863N under PU 3206.</p>								

CLASSIFICATION:		UNCLASSIFIED		
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION				DATE May 2009
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 6	PROGRAM ELEMENT NUMBER AND NAME 0605863N/RDT&E SHIP AND AIRCRAFT SUPPORT	PROJECT NUMBER AND NAME 3186/Air and Missile Defense Radar		
B. ACCOMPLISHMENTS/PLANNED PROGRAM:				
	FY 2008	FY 2009	FY 2010	
Accomplishments/Effort/Subtotal Cost	93.253	0.000	0.000	
RDT&E Articles Quantity	0	0	0	
<p>2008: This effort initiated Enterprise Acquisition of the LCS SEARAM, and DDG 1000 single MFR array. Efforts focused on the establishment of system engineering planning, components development, Verification and Validation (V&V) Virtual Range Updates, Extensions, Integration and Testbed Verification, Validation and Accreditation (VV&A), and reporting. Developed/implemented/executed Enterprise Test and Evaluation matrix.</p> <p>Test and Evaluation includes all range services, use of the SDTS, aircraft, missiles, threats, target and target build up, planning and execution of test event in conjunction with other Enterprise test events and Navy CSSQT's.</p> <p>C. OTHER PROGRAM FUNDING SUMMARY: LHA 6, CVN 78, DDG 1000, LCS RAM BLK 2, ESSM, SPQ 9B, SSDS, SEARAM</p> <p>D. ACQUISITION STRATEGY: DDG 1000 single MFR array, DDG 1000 Mk 41/57 hybrid, and DDG 1000 TSCE through Raytheon. LCS SEARAM through PEO IWS 3.0 to Raytheon. The acquisition strategy allows for Enterprise equipment to be developed/built, delivered and installed on the Self Defense Test Ship in time to support FY 2010 testing.</p> <p>E. MAJOR PERFORMERS: NSWC PHD NSWC Point Mugu NAWC China Lake Northrop Grumman NSWC Corona Department of Interior NAWCAD Pax River Raytheon Applied Physics Lab PMS 500 and PMS 501 NRL</p>				

CLASSIFICATION:		UNCLASSIFIED						
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION						DATE May 2009		
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 6		PROGRAM ELEMENT NUMBER AND NAME 0605863N/RDT&E SHIP AND AIRCRAFT SUPPORT				PROJECT NUMBER AND NAME 3206/T&E Enterprise		
COST (In Millions)	FY 2008	FY 2009	FY 2010					
Project Cost	0.000	105.254	115.760					
RDT&E Articles Qty	0	0	0					
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:								
<p>The T&E Enterprise consolidates all Air Warfare (AW) Ship Self Defense (SSD) at-sea testing across multiple class ships, beginning with CVN 74, LHD 8, LPD17, LHA 6, DDG 1000, CVN 78, and 2 versions of Littoral Combat Ship (LCS). This consolidated AW SSD test and evaluation approach meets the Probability of Raid Annihilation (PRA) (PRA is defined as a required surface ship defense against Anti-Ship Cruise Missiles), Self Defense Test Ship (SDTS), and lead/operational ship testing requirements for ESSM TEMP 1471, RAM Blk 2 TEMP 286-1, DDG 1000 TEMP 1560, CVN 78 TEMP 1610, CEC TEMP 1415, SSDS TEMP 1400, LHA 6 TEMP 1697, AN/SPQ-9B TEMP 1463, SEWIP TEMP 1658 (Block 1A), 0686, and the LCS TEMP 1695.</p> <p>LHA 6 acquisition, installation and testing supports all big deck Amphibs and Carriers in the OA configuration as well RAM BLK 2 OPEVAL, SSDS OA with RAM BLK 2, SEWIP and ESSM.</p> <p>The T&E Enterprise merges common ship, element, and system requirements into the least number of test events while leveraging planned Combat System Ship Qualification Trials (CSSQTs) to accomplish Developmental Testing (DT) and Operational Testing (OT) requirements. All tests on the SDTS require the sharing of infrastructure, missile range allocations, execution time and underway time to eliminate duplicative testing.</p> <p>T&E Enterprise preserves "end-to-end" mission Operational Testing in a realistic operational environment, capitalizing on Probability of Raid Annihilation M&S data validated with results of that Operational Testing, and ensuring a consistent approach across ship classes. Applicability of all test events are beneficial across multiple ship classes with the same variation under test.</p> <p>The T&E Enterprise acquires equipment (FY08-10) for installation onboard the SDTS (FY10), conducts test and evaluation on the SDTS and lead/operational ships (FY08-FY10) and satisfies the Probability of Raid Annihilation (PRA) Testbed Model Development and test execution requirements (FY08-FY10).</p> <p>FY08 funding is in PE 0605863N under PU 3186.</p>								

CLASSIFICATION:		UNCLASSIFIED		
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION				DATE May 2009
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 6	PROGRAM ELEMENT NUMBER AND NAME 0605863N/RDT&E SHIP AND AIRCRAFT SUPPORT	PROJECT NUMBER AND NAME 3206/T&E Enterprise		
B. ACCOMPLISHMENTS/PLANNED PROGRAM:				
	FY 2008	FY 2009	FY 2010	
Accomplishments/Effort/Subtotal Cost	0.000	105.254	115.760	
RDT&E Articles Quantity	0	0	0	
<p>2009: This effort continues acquisition of Enterprise equipment. DDG 1000 Mk 41/57 hybrid, and DDG 1000 TSCE. SSDS MK2 Mod 3b, SPS-48 E, CEC P3I, Mk 53 DLS & NULKA Mod 3, SEWIP SLQ 32 B (V2), LCS Electro-Optic Directors, LCS CS Modules, LCS EW Suites, LCS 57 Bofors Gun Mount, Enterprise Interfaces/Remote Control System/Mods. Establishing System Engineering planning, components development, Verification & Validation (V&V) Virtual Range Updates, extensions, Integration and Testbed Verification, Validation and Accreditations (VV&A). Reporting execution strategies for Probability of Raid Annihilation Testbed development and test execution, and Lead and Operational Ship test and evaluation. Develop/implement/execute Test and Evaluation matrix. Execute testing and evaluation for LPD 17, CVN 74 and SDTS.</p> <p>2010: The primary focus of 2010 for T&E Enterprise is installation of all previously ordered/delivered Enterprise equipment onto the Self Defense Test Ship. Installation services have been combined into a single window in 2010 to reduce the duplication of multiple staging services (scaffolding, rigging, cabling, power generation, integration, etc.) PRA Testbed development, virtual range updates, and systems engineering will continue in support of LCS, LHA 6 and developed architecture will be documented for future support to CVN 78. Implementation and execution of Enterprise test events will continue to effectively leverage resources and support changes in ship delivery schedules.</p>				
C. OTHER PROGRAM FUNDING SUMMARY:				
LHA 6, CVN 78, DDG 1000, LCS				
RAM BLK 2, ESSM, SPQ 9B, SSDS, SEARAM				
DDG Mod and CG MOD				
D. ACQUISITION STRATEGY:				
Acquisition of test equipment assets for Enterprise Ship Classes.				
Acquisition of LHA 6 test equipment assets begins in FY09 and continues in FY10.				
Acquisition of systems is tailored to each ship class, however applicable and beneficial across multiple ship classes with the same variation being testing.				
DDG 1000 test equipment assets 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.				

CLASSIFICATION:		UNCLASSIFIED	
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION (CONTINUATION)			DATE May 2009
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 6	PROGRAM ELEMENT NUMBER AND NAME 0605863N/RDT&E SHIP AND AIRCRAFT SUPPORT	PROJECT NUMBER AND NAME 3206/T&E Enterprise	
E. MAJOR PERFORMERS: NSWC PHD NSWC Point Mugu NAWC China Lake Northrop Grumman NSWC Corona Department of Interior NAWCAD Pax River Raytheon Applied Physics Lab PMS 500 and PMS 501 NRL			

EXHIBIT R-2, RDT&E Budget Item Justification							DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-6					R-1 ITEM NOMENCLATURE 0605864N, TEST AND EVALUATION SUPPORT			
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010					
Total PE Cost	334.124	340.890	380.733					
0541 AUTEC	53.646	55.082	56.195					
0566 NAVAIR ENVIRONMENTAL COMPL	3.679	3.826	4.087					
0653 NAWC WEAPONS	142.711	145.823	150.710					
0654 NAW AIRCRAFT	101.845	103.285	126.574					
2921 PACIFIC MISSILE RANGE FACILITY	4.800	5.003	5.140					
2922 MRTFB MAINT AND REPAIR	15.383	15.520	25.474					
3029 T&E POLICY SUPPORT	0.671	0.691	0.758					
3154 NANOOSE AND DABOB	11.389	11.660	11.795					
<p>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 (NAVUNSEAWARCEN DET AUTEC), Andros Island, Bahamas; the Environmental Compliance Program; Naval Air Warfare Center Weapons Division (NAVAIRWARCENWPNDIV), Point Mugu and China Lake, CA; Naval Air Warfare Center Aircraft Division (NAVAIRWARCENACDIV), Patuxent River, MD; T&E related capabilities at the Pacific Missile Range Facility, Barking Sands, HI; Maintenance and Repair at NAVAIRWARCENWPNDIV and NAVAIRWARCENACDIV; and the Naval Undersea Warfare Center Keyport (NAVUNSEAWARCENKEYPORT) 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.</p>								

R-1 SHOPPING LIST - Item No. 149

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification	DATE: May 2009
--	-----------------------

APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-6	R-1 ITEM NOMENCLATURE 0605864N, TEST AND EVALUATION SUPPORT
---	--

B. PROGRAM CHANGE SUMMARY:

Funding:	FY08	FY09	FY10
President's Budget 2009:	329.026	356.254	356.930
President's Budget 2010:	334.124	340.890	380.733
Total Adjustments	5.098	-15.364	23.803
Summary of Adjustments			
Congressional Rescissions			
Congressional Adjustments		-14.427	
SBIR/STTR/FTT Assessments	4.598		
Program Adjustments	0.500		24.404
Rate/Misc Adjustments		-0.937	-0.601
Subtotal	5.098	-15.364	23.803

Schedule:
Not Applicable.

Technical:
Not Applicable.

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6		PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT			PROJECT NUMBER AND NAME 0541, AUTEC			
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010					
Project Cost	53.646	55.082	56.195					
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 (AUTEC) 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 AUTEC Program Office is headquartered at Newport, RI. AUTEC'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. AUTEC aircraft make scheduled daily flights between West Palm Beach and Andros Town Airport.

AUTEC 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.

AUTEC 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 AUTEC 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.

R-1 SHOPPING LIST - Item No.149

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT	PROJECT NUMBER AND NAME 0541, AUTEK

B. Accomplishments/Planned Program

Atlantic Undersea Test and Eval Ctr Facility	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	42.596	44.032	45.145	
RDT&E Articles Quantity "Not Applicable"				

AUTEK 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 AUTEK 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.

Bahamian Lease	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	11.050	11.050	11.050	
RDT&E Articles Quantity "Not Applicable"				

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

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE:	May 2009
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDT&E, N / BA-6	0605864N, TEST AND EVALUATION SUPPORT	0541, AUTEK	
C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.			
<u>Line Item No. & Name</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
D. ACQUISITION STRATEGY:			
Not Applicable.			

R-1 SHOPPING LIST - Item No. 149

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
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 COMPLIANCE			
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010					
Project Cost	3.679	3.826	4.087					
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 Range and Test Facility Base (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.

R-1 SHOPPING LIST - Item No. 149

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
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 COMPLIANCE

B. Accomplishments/Planned Program

Environmental Compliance	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	3.679	3.826	4.087	
RDT&E Articles Quantity "Not Applicable"				

Continues hazardous waste disposal, solid waste disposal, natural and cultural resources programs, environmental permits, and environmental monitoring at AUTECH, 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.

R-1 SHOPPING LIST - Item No. 149

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE:	May 2009
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDT&E, N / BA-6	0605864N, TEST AND EVALUATION SUPPORT	0566, NAVAIR ENVIRONMENTAL COMPLIANCE	
C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.			
<u>Line Item No. & Name</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
D. ACQUISITION STRATEGY:			
Not Applicable.			

R-1 SHOPPING LIST - Item No. 149

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
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 2008	FY 2009	FY 2010					
Project Cost	142.711	145.823	150.710					
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.

R-1 SHOPPING LIST - Item No.149

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
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

B. Accomplishments/Planned Program

Pacific Ranges	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	65.947	63.333	63.942	
RDT&E Articles Quantity "Not Applicable"				

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 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	23.734	24.899	25.163	
RDT&E Articles Quantity "Not Applicable"				

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.

Threat/Target Systems	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	11.368	11.835	11.964	
RDT&E Articles Quantity "Not Applicable"				

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.

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
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

B. Accomplishments/Planned Program (Cont.)

Test and Evaluation Ordnance	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	3.271	3.300	3.342	
RDT&E Articles Quantity "Not Applicable"				

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 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	38.391	42.456	46.299	
RDT&E Articles Quantity "Not Applicable"				

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.

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE:	
		May 2009	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDT&E, N / BA-6	0605864N, TEST AND EVALUATION SUPPORT	0653, NAWC WEAPONS	
C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.			
<u>Line Item No. & Name</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
D. ACQUISITION STRATEGY:			
Not Applicable.			

R-1 SHOPPING LIST - Item No.149

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
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 2008	FY 2009	FY 2010					
Project Cost	101.845	103.285	126.574					
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.

R-1 SHOPPING LIST - Item No.149

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
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

B. Accomplishments/Planned Program

Atlantic Ranges	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	25.209	23.957	25.105	
RDT&E Articles Quantity "Not Applicable"				

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 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	21.439	21.598	21.469	
RDT&E Articles Quantity "Not Applicable"				

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 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	4.500	4.545	4.589	
RDT&E Articles Quantity "Not Applicable"				

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

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
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

B. Accomplishments/Planned Program (Cont.)

Threat/Target Systems	FY 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	1.802	1.472	1.954
RDT&E Articles Quantity "Not Applicable"			

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 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	22.685	23.638	44.221
RDT&E Articles Quantity "Not Applicable"			

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. FY10-11 budget increased to support additional chase and tanker aircraft required to support F/A-18E/F/G and JSF.

Staff	FY 08	FY 09	FY 10
Accomplishments/Effort/Subtotal Cost	26.210	28.075	29.236
RDT&E Articles Quantity "Not Applicable"			

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.

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE:	
		May 2009	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDT&E, N / BA-6	0605864N, TEST AND EVALUATION SUPPORT	0654, NAWC AIRCRAFT	
C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.			
<u>Line Item No. & Name</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
D. ACQUISITION STRATEGY:			
Not Applicable.			

R-1 SHOPPING LIST - Item No.149

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6		PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT			PROJECT NUMBER AND NAME 2921, PACIFIC MISSILE RANGE FACILITY			
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010					
Project Cost	4.800	5.003	5.140					
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.

R-1 SHOPPING LIST - Item No.149

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT	PROJECT NUMBER AND NAME 2921, PACIFIC MISSILE RANGE FACILITY

B. Accomplishments/Planned Program

PMRF Test and Evaluation Assets	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	4.800	5.003	5.140	
RDT&E Articles Quantity "Not Applicable"				

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.

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE:	May 2009
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDT&E, N / BA-6	0605864N, TEST AND EVALUATION SUPPORT	2921, PACIFIC MISSILE RANGE FACILITY	
C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.			
<u>Line Item No. & Name</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
D. ACQUISITION STRATEGY:			
Not Applicable.			

R-1 SHOPPING LIST - Item No.149

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6		PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT			PROJECT NUMBER AND NAME 2922, MRTFB MAINT AND REPAIR			
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010					
Project Cost	15.383	15.520	25.474					
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.

R-1 SHOPPING LIST - Item No.149

UNCLASSIFIED

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT	PROJECT NUMBER AND NAME 2922, MRTFB MAINT AND REPAIR

B. Accomplishments/Planned Program

Facility Maintenance and Repair	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	15.383	15.520	25.474	
RDT&E Articles Quantity "Not Applicable"				

Support mission critical emergency services, recurring maintenance and repair, and minor and major repair efforts at the Naval Air Warfare Center Weapons Division, the Naval Air Warfare Center Aircraft Division, and the Atlantic Undersea Test and Evaluation Center (AUTECE). FY10-11 budget funds MRTFB facility to 90% of DoD sustainment model.

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE:	May 2009
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	
C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.			
<u>Line Item No. & Name</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
D. ACQUISITION STRATEGY:			
Not Applicable.			

R-1 SHOPPING LIST - Item No.149

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6		PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT			PROJECT NUMBER AND NAME 3029, T&E POLICY SUPPORT			
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010					
Project Cost	0.671	0.691	0.758					
RDT&E Articles Qty "Not Applicable"								
<p>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.</p>								

R-1 SHOPPING LIST - Item No.149

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-6	PROGRAM ELEMENT NUMBER AND NAME 0605864N, TEST AND EVALUATION SUPPORT	PROJECT NUMBER AND NAME 3029, T&E POLICY SUPPORT

B. Accomplishments/Planned Program

T&E Policy & Requirements Validation Support	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	0.671	0.691	0.758	
RDT&E Articles Quantity "Not Applicable"				

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

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE:	May 2009
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	
C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.			
<u>Line Item No. & Name</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
D. ACQUISITION STRATEGY:			
Not Applicable.			

R-1 SHOPPING LIST - Item No.149

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification							DATE: May 2009	
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 2008	FY 2009	FY 2010					
Project Cost	11.389	11.660	11.795					
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.

R-1 SHOPPING LIST - Item No.149

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification	DATE: May 2009
---	--------------------------

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
---	--	--

B. Accomplishments/Planned Program

Undersea Ranges	FY 08	FY 09	FY 10	
Accomplishments/Effort/Subtotal Cost	11.389	11.660	11.795	
RDT&E Articles Quantity "Not Applicable"				

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.

UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE:	
		May 2009	
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDT&E, N / BA-6	0605864N, TEST AND EVALUATION SUPPORT	3154, NANOOSE AND DABOB	
C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.			
<u>Line Item No. & Name</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
D. ACQUISITION STRATEGY:			
Not Applicable.			

R-1 SHOPPING LIST - Item No.149

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

COST: (Dollars in Millions)

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
Total PE	12.092	12.162	12.010

0831 OPERATIONAL TEST & EVALUATION FORCE (OPTEVFOR) SUPPORT	11.644	11.674	11.512
2923 NAVY JT&E SUPPORT	0.448	0.488	0.498

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

B. PROGRAM CHANGE SUMMARY:

	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
President's Budget 2009	12.094	12.195	12.626
Congressional Program Reductions	0.000	-0.033	0.000
Program Adjustments	0.000	0.000	-0.616
SBIR/STTR Transfer	-0.002	0.000	0.000
President's Budget 2010	12.092	12.162	12.010

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 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 RDTEN vice OMN; hence, and unlike most RDT&EN programs, these funds provide for O&S costs typical of military field commands/activities). Within the 0831 project, 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 project within the PE, 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

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2

DATE: May 2009

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

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 customers/stakeholders. The following metrics relate directly to the funding provided and are applicable to current operations.

	FY08	FY09	FY10
Number of Tests Conducted	122	134	143
Number of Programs Supported	604	604	604

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06
 PROGRAM ELEMENT: 0605865N PROGRAM ELEMENT TITLE: OPERATIONAL TEST AND EVALUATION CAPABILITY
 PROJECT NUMBER: 0831 PROJECT TITLE: OPERATIONAL TEST & EVALUATION FORCE (OPTEVFOR) SUPPORT

COST: (Dollars in Millions)

Project Number & Title	FY 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
0831 OPERATIONAL TEST & EVALUATION FORCE (OPTEVFOR) SUPPORT	11.644	11.674	11.512

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This PE provides COMOPTEVFOR general support funding for headquarters annual operating costs and ensures COMOPTEVFOR compliance with SECDEF and SECNAV directives to conduct independent operational testing and evaluation as well as emerging requirements associated with establishing and maintaining compliance with the Department of the Navy's Continuity of Operation (COOP) Program. Funding supports planning, conducting, and reporting on the operational effectiveness and suitability of new and improved systems and recommending fleet usage to the 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 2008	FY 2009	FY 2010
OPTEVFOR SUPPORT	11.644	11.674	11.512

FY 2008 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

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

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

technology demonstrations, and advanced technology demonstrations.

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

FY 2009 Plans:

- Continue all efforts of FY08.

FY 2010 Plans:

- Continue all efforts of FY09.

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 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

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 2008 Actual	FY 2009 Estimate	FY 2010 Estimate
2923 NAVY JT&E SUPPORT	0.448	0.488	0.498

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 2008	FY 2009	FY 2010
JOINT TEST & EVALUATION	0.448	0.488	0.498

FY 2008 Accomplishments:

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

FY 2009 Plans:

- Continue all efforts of FY08

FY 2010 Plans:

- Continue all efforts of FY09.

UNCLASSIFIED

FY 2010 RDT&E,N BUDGET ITEM JUSTIFICATION SHEET
Exhibit R-2a

DATE: May 2009

BUDGET ACTIVITY: 06

PROGRAM ELEMENT: 0605865N

PROGRAM ELEMENT TITLE: OPERATIONAL TEST AND EVALUATION CAPABILITY

PROJECT NUMBER: 2923

PROJECT TITLE: NAVY JT&E SUPPORT

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 May 2009
---	------------------

APPROPRIATION/BUDGET ACTIVITY RDTEN/BA 6	R-1 ITEM NOMENCLATURE 0605866N/NAVY SPACE AND ELECTRONIC WARFARE (SEW) SUPPORT
--	--

COST (In Millions)	FY 2008	FY 2009	FY 2010
Total PE Cost	2.366	2.698	2.703
0706 / EMC & RF Mgmt	1.617	2.018	2.089
0739 / NAVY C4 TOP LEVEL RQMTS	0.749	0.680	0.614

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. Funding supports the FY2009 start of the Nuclear Electromagnetic Pulse (EMP) Survivability Program and a programmatic adjustment in FY2010 of Shipboard Electromagnetic Compatibility Improvement Program (SEMCIIP), an element of the Electromagnetic Compatibility (EMC) Systems Engineering Program.

Project 0739, Navy Command, Control, Communications, Computers, and Intelligence (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 Program (SEWSAP) 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.

B. PROGRAM CHANGE SUMMARY:

Funding:	FY 2008	FY 2009	FY 2010
FY09 President's Budget	2.386	2.708	2.862
FY10 President's Budget	<u>2.366</u>	<u>2.698</u>	<u>2.703</u>
Total Adjustments	(0.020)	(0.010)	(0.159)
(U) Summary of Adjustments			
Congressional Adjustments	0.000	(0.007)	0.000
SBIR/STTS/FTT Assessment	(0.018)	0.000	0.000
Program Adjustments	(0.002)	(0.001)	(0.146)
Rate/Misc Adjustments	<u>0.000</u>	<u>(0.002)</u>	<u>(0.013)</u>
Total	(0.020)	(0.010)	(0.159)

CLASSIFICATION:		UNCLASSIFIED		
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION				DATE May 2009
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 6		PROGRAM ELEMENT NUMBER AND NAME 0605866N/NAVY SPACE AND ELECTRONIC WARFARE (SEW) SUPPORT		PROJECT NUMBER AND NAME 0706/EMC & RF Mgmt
COST (In Millions)	FY 2008	FY 2009	FY 2010	
Project Cost	1.617	2.018	2.089	
RDT&E Articles Qty	0	0	0	
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.				
(a) Automated spectrum capabilities will be enhanced that reflect current Fleet Operational Requirements and streamline Strike Force frequency management processes. Provide automated Spectrum Management (SM) Tools for development of Operational Task Communication and Radar/Weapon plans to support Fleet deployments, Exercises, and Contingency Operations. Provides identification and mitigation of EMI in Navy, NATO, Allied, Ashore and Joint Combat Operations.				
(b) Supports the Shipboard Electromagnetic Compatibility Improvement Program (SEMCIIP), an element of the Electromagnetic Compatibility (EMC) Systems Engineering Program to identify, engineer, and evaluate effectiveness of potential EMI corrections.				
(c) Electromagnetic Pulse (EMP) Survivability Program provides for the Navy response to Secretary of Defense (SECDEF) tasking to assess the EMP survivability of all mission critical systems and to develop a hardness assurance and maintenance program. Develops improved modeling capability to reduce hardness validation costs at delivery and over the lifetime of the system/platform. Provides design criteria, test methodology, test limits, and survivability validation procedures for all Navy systems, ships, submarines and shore facilities.				
(d) Advanced Technology: Investigates below deck electromagnetic environmental effects and develops the capability to perform remote spectrum monitoring and electromagnetic noise monitoring. Also, develops the tools and technologies for innovative and efficient spectrum use, and continues the development of relationships between measured EMI and system performance for selected communications systems.				

CLASSIFICATION:		UNCLASSIFIED		
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION				DATE May 2009
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME		PROJECT NUMBER AND NAME	
RD TEN/BA 6	0605866N/NAVY SPACE AND ELECTRONIC WARFARE (SEW) SUPPORT		0706/EMC & RF Mgmt	
B. ACCOMPLISHMENTS/PLANNED PROGRAM:				
	FY 2008	FY 2009	FY 2010	
AESOP (Integrated CPM and EMCAP)	0.855	0.879	0.761	
RDT&E Articles Quantity	0	0	0	
FY 2008 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 Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems for both government and commercial communication systems being used by the Navy.				
FY 2009 - Continuing development of 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. 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 relocation for systems used during tests, such as telemetry and data collection. Update the AESOP with the new radiation restrictions that reflect current legal requirements that result from spectrum relocation worldwide.				
	FY 2008	FY 2009	FY 2010	
EMP Survivability	0.005	0.928	1.000	
RDT&E Articles Quantity	0	0	0	
FY 2008 Accomplishments - Completed and delivered a technical summary report titled "Pulse Current Injection (PCI) Technique Applied to US Navy Ships for Electromagnetic Pulse (EMP) hardness Assurance; an Investigation and Historical Summary", dated 10 June 2008.				
FY 2009 -2010 PLANS - Prepare EMP Survivability Assessment and EMP Hardness Maintenance Plans. Prepare updates to OPNAVINST/NAVSEAINST for EMP Survivability based on the requirements of the new DODI 3150.9. Develop computational electromagnetic modeling and simulation capabilities and alternative techniques to reduce hardness validation costs at delivery. Support Navy and DTRA in the development of a Maritime EMP Standard in accordance with ATSD/NCB memo 7 Apr 2007. This includes conducting a baseline EMP assessment of an LCAC in support of the Maritime Standard development.				
	FY 2008	FY 2009	FY 2010	
Advanced Technology	0.757	0.211	0.328	
RDT&E Articles Quantity	0	0	0	
FY 2008 Accomplishments - Completed initial below decks Electromagnetic Environmental Effects (E3) characterization. Selected spaces to date assessed aboard USS KEARSARGE (LHD 3) and USNS SACAGAWEA (TAKE 2); USS BATAAN (LHD 5), and USS ABRAHAM LINCOLN (CVN 72).				
FY 2009 - 2010 PLANS - Continue below decks characterization; investigate availability of predictive software applications, and develop tools/technologies for managing the below decks electromagnetic environment (EME).				

CLASSIFICATION:		UNCLASSIFIED	
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION (CONTINUATION)			DATE May 2009
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RD TEN/BA 6	0605866N/NAVY SPACE AND ELECTRONIC WARFARE (SEW) SUPPORT	0706/EMC & RF Mgmt	
<p>C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable</p> <p>D. ACQUISITION STRATEGY: Not Applicable</p>			

CLASSIFICATION:		UNCLASSIFIED		
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION				DATE May 2009
APPROPRIATION/BUDGET ACTIVITY RD TEN/BA 6		PROGRAM ELEMENT NUMBER AND NAME 0605866N/NAVY SPACE AND ELECTRONIC WARFARE (SEW) SUPPORT		PROJECT NUMBER AND NAME 0739/NAVY C4 TOP LEVEL RQMTS
COST (In Millions)	FY 2008	FY 2009	FY 2010	
Project Cost	0.749	0.680	0.614	
RDT&E Articles Qty	0	0	0	
A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:				
<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 Program (SEWSAP) 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>				

CLASSIFICATION:		UNCLASSIFIED	
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION			DATE May 2009
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RD TEN/BA 6	0605866N/NAVY SPACE AND ELECTRONIC WARFARE (SEW) SUPPORT	0739/NAVY C4 TOP LEVEL RQMTS	
B. ACCOMPLISHMENTS/PLANNED PROGRAM:			
	FY 2008	FY 2009	FY 2010
NAVY C41 TOP LEVEL REQUIREMENTS	0.749	0.680	0.614
RDT&E Articles Quantity	0	0	0
<p>FY 2008 ACCOMPLISHMENTS: Initiated and completed studies supporting 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&T) and Research and Development, Test and Evaluation (RDT&E) efforts with FORCEnet requirements; evaluation and selection of Modeling and Simulation (M&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) 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>FY 2009 - 2010 PLANS: Continue initiating and completing studies supporting resource and requirement decisions in the Planning, Programming, Budgeting and Execution (PPBE) System; 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.</p>			
C. OTHER PROGRAM FUNDING SUMMARY:			
Not Applicable			
D. ACQUISITION STRATEGY:			
Not Applicable			
E. MAJOR PERFORMERS:			

Exhibit R-2, RDT&E Budget Item Justification				Date: May 2009																													
APPROPRIATION/BUDGET ACTIVITY RDT&E,N, BA 6				R-1 Item Nomenclature - Space & Electronic Warfare Surveillance/Reconnaissance Support 0605867N, Link Crimson																													
Cost (\$ in Millions)	FY08	FY09	FY10																														
Project 1034	23.915	25.270	20.921																														
Quantity of RDT&E,N Articles	N/A	N/A	N/A																														
<p>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.</p> <p>(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. Baseline will also address analysis into potential BMD threats and cross domain solutions. Additional detailed information is available at a higher level of classification. This program is funded under Budget Activity 6 because it supports the operations and installations required for general research and development use.</p> <p>B. (U) PROGRAM CHANGE SUMMARY:</p> <table border="0"> <thead> <tr> <th></th> <th><u>FY08</u></th> <th><u>FY09</u></th> <th><u>FY10</u></th> </tr> </thead> <tbody> <tr> <td>PB09</td> <td>23.915</td> <td>25.358</td> <td>24.224</td> </tr> <tr> <td>PB10</td> <td><u>23.915</u></td> <td><u>25.270</u></td> <td><u>20.921</u></td> </tr> <tr> <td>Total Adjustments</td> <td>0.000</td> <td>(0.088)</td> <td>(3.303)</td> </tr> </tbody> </table> <p>C. OTHER PROGRAM FUNDING SUMMARY:</p> <table border="0"> <thead> <tr> <th></th> <th><u>FY08</u></th> <th><u>FY09</u></th> <th><u>FY10</u></th> </tr> </thead> <tbody> <tr> <td>O&M,N/1C3C</td> <td>0.223</td> <td>0.230</td> <td>0.232</td> </tr> </tbody> </table> <p>D. (U) ACQUISITION STRATEGY: Not Applicable</p> <p>E. (U) PERFORMANCE METRICS: Not Applicable</p>											<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	PB09	23.915	25.358	24.224	PB10	<u>23.915</u>	<u>25.270</u>	<u>20.921</u>	Total Adjustments	0.000	(0.088)	(3.303)		<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	O&M,N/1C3C	0.223	0.230	0.232
	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>																														
PB09	23.915	25.358	24.224																														
PB10	<u>23.915</u>	<u>25.270</u>	<u>20.921</u>																														
Total Adjustments	0.000	(0.088)	(3.303)																														
	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>																														
O&M,N/1C3C	0.223	0.230	0.232																														

Exhibit R-2a, RDT&E Budget Item Justification				Date: May 2009																																							
APPROPRIATION/BUDGET ACTIVITY RDT&E,N, BA 6				R-1 Item Nomenclature - Space & Electronic Warfare Surveillance/Reconnaissance Support 0605867N, Link Crimson																																							
Cost (\$ in Millions)	FY08	FY09	FY10																																								
Link Crimson/Z1034	23.915	25.270	20.921																																								
Quantity of RDT&E,N Articles	N/A	N/A	N/A																																								
<p>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.</p> <p>(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. Baseline will also address analysis into potential BMD threats and cross domain solutions. Additional detailed information is available at a higher level of classification. This program is funded under Budget Activity 6 because it supports the operations and installations required for general research and development use.</p> <p>(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</p>																																											
<p>B. ACCOMPLISHMENTS/PLANNED PROGRAM:</p> <table border="1"> <thead> <tr> <th><u>Accomplishment/Effort</u></th> <th><u>FY08</u></th> <th><u>FY09</u></th> <th><u>FY10</u></th> </tr> </thead> <tbody> <tr> <td>Joint Exercise/Training</td> <td>1.000</td> <td>0.900</td> <td>0.900</td> </tr> <tr> <td>Precision Strike/Mission Planning</td> <td>0.900</td> <td>1.400</td> <td>2.000</td> </tr> <tr> <td>ASW/USW</td> <td>5.700</td> <td>5.000</td> <td>4.000</td> </tr> <tr> <td>Improved Information Management (Data Dissemination/Exploitation/Analysis)</td> <td>2.000</td> <td>5.000</td> <td>2.800</td> </tr> <tr> <td>Battlespace and Maritime Domain Awareness (ASuW)</td> <td>11.315</td> <td>9.970</td> <td>8.021</td> </tr> <tr> <td>Assured Navigation & Support to Mine/Littoral/Expeditionary Warfare</td> <td>1.000</td> <td>1.000</td> <td>1.000</td> </tr> <tr> <td>Information Operations/GWOT</td> <td>2.000</td> <td>2.000</td> <td>2.200</td> </tr> <tr> <td></td> <td><u>23.915</u></td> <td><u>25.270</u></td> <td><u>20.921</u></td> </tr> </tbody> </table>								<u>Accomplishment/Effort</u>	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	Joint Exercise/Training	1.000	0.900	0.900	Precision Strike/Mission Planning	0.900	1.400	2.000	ASW/USW	5.700	5.000	4.000	Improved Information Management (Data Dissemination/Exploitation/Analysis)	2.000	5.000	2.800	Battlespace and Maritime Domain Awareness (ASuW)	11.315	9.970	8.021	Assured Navigation & Support to Mine/Littoral/Expeditionary Warfare	1.000	1.000	1.000	Information Operations/GWOT	2.000	2.000	2.200		<u>23.915</u>	<u>25.270</u>	<u>20.921</u>
<u>Accomplishment/Effort</u>	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>																																								
Joint Exercise/Training	1.000	0.900	0.900																																								
Precision Strike/Mission Planning	0.900	1.400	2.000																																								
ASW/USW	5.700	5.000	4.000																																								
Improved Information Management (Data Dissemination/Exploitation/Analysis)	2.000	5.000	2.800																																								
Battlespace and Maritime Domain Awareness (ASuW)	11.315	9.970	8.021																																								
Assured Navigation & Support to Mine/Littoral/Expeditionary Warfare	1.000	1.000	1.000																																								
Information Operations/GWOT	2.000	2.000	2.200																																								
	<u>23.915</u>	<u>25.270</u>	<u>20.921</u>																																								
<p>C. OTHER PROGRAM FUNDING SUMMARY:</p> <table border="1"> <thead> <tr> <th></th> <th><u>FY08</u></th> <th><u>FY09</u></th> <th><u>FY10</u></th> </tr> </thead> <tbody> <tr> <td>O&M,N/1C3C</td> <td>0.223</td> <td>0.230</td> <td>0.232</td> </tr> </tbody> </table>									<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	O&M,N/1C3C	0.223	0.230	0.232																												
	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>																																								
O&M,N/1C3C	0.223	0.230	0.232																																								
<p>D. (U) ACQUISITION STRATEGY: Not Applicable</p>																																											
<p>E. (U) MAJOR PERFORMERS: Not Applicable</p>																																											

EXHIBIT R-2, RDT&E Project Justification					Date: May 2009		
APPROPRIATION/BUDGET ACTIVITY		PROGRAM ELEMENT NUMBER AND NAME					
RDT&E, N /BA-6 Management Support		0605873M Marine Corps Program Wide Support					
COST (\$ in Millions)		FY08	FY09	FY10	FY10 OCO	FY10 Total	
Total PE Cost		22.113	30.167	19.004	0.000	19.004	
C0030 Marine Corps Studies and Analyses		6.224	6.631	6.556	0.000	6.556	
C0033 Marine Corps Operational Testing & Evaluation Activity		0.000	3.918	3.955	0.000	3.955	
C2330 Family of Incident Response Systems (FIRS)		1.822	4.028	4.25	0.000	4.250	
C2930 Phase A Activities		7.029	10.005	4.243	0.000	4.243	
C9999 Congressional Adds		7.038	5.585	0.000	0.000	0.000	
Quantity of RDT&E Articles							
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 system.							
This program is funded under RDT&E MANAGEMENT SUPPORT because it supports the operations and installation required for general research and development use.							
B. PROGRAM CHANGE SUMMARY							
		FY2008	FY2009	FY2010			
Funding:							
FY 2009 President's Budget:		27.039	24.687	25.417			
FY 2010 President's Budget:		<u>22.113</u>	<u>30.167</u>	<u>19.004</u>			
Total Adjustments:		-4.926	5.480	-6.413			
Summary of Adjustments:							
a. SBIR/STTR Transfer:		-0.315					
b. Program Adjustments:		-4.611	-0.120	-5.816			
c. Congressional Adjustments:			5.600	-0.317			
d. Rate/Misc Adjustment:				<u>-0.280</u>			
Subtotal		<u>-4.926</u>	<u>5.480</u>	<u>-6.413</u>			

EXHIBIT R-2a, RDT&E Project Justification			DATE:				
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 Analysis		
COST (\$ in Millions)			FY 2008	FY 2009	FY 2010	FY 2010OCO	FY 2010 Total
Project Costs			6.224	6.631	6.717	0.000	6.717
RDT&E Articles Qty			1	1	1	0	1
(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:							
<p>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. 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, logistics 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. The MCSS also supports the Marine Corps' acquisition system, the Expeditionary Force Development System (EFDS), and the Combat Development Process (CDP). The Mission Area Analyses (MAA) process provides quantitative and qualitative information to decision makers for basing decisions effecting improvements in operational concepts, doctrine, force structure, education, training, and procurement.</p> <p>MCSS provides analytical support to decision makers for resolution of current problems and issues identified by the operating forces and utilizes Marine Corps Research University to conduct studies and analysis projects in basic and applied research and Advanced Technology Development. Funds were provided to the Naval Sea Systems Command (NAVSEA) for direct support, technical, analyses, and liaison services to assure a sound bridge between the Marine Corps' role in defining Expeditionary Warfare Specialist (EXW)/Seabasing requirements and the SEA 05 role for Future Concepts and Ships Designs for amphibious ships/aircraft. Maritime Prepositioning Force (Future), (MPF (F)), High Speed Connectors, Sea based operations and related systems. SPAWAR was funded to support Naval Assessment Program to modify and upgrade all DoN war fighting, crisis response and support capabilities and vulnerabilities to provide baseline of future capabilities for further analysis. Baseline analysis supports Mission Capability Packages (MCPs), Investment Strategy, Joint Capability Areas (JCAs), and the Naval Strategic Plan to provide the DoN with the assessments necessary for future force development.</p> <p>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. Funds were provided to the Naval Sea Systems Command (NAVSEA) to provide direct support, technical, analyses, and liaison services that will assure a sound bridge between the Marine Corps' role in defining Expeditionary Warfare Specialist (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. SPAWAR was provided funding to support the Naval Assessment Program to modify and upgrade all DoN war fighting, crisis response and support capabilities and vulnerabilities in order to provide a baseline of future capabilities for further analysis. This baseline analysis supports Mission Capability Packages (MCPs), Investment Strategy, Joint Capability Areas (JCAs), and the Naval Strategic Plan that will provide the DoN with the assessments necessary to support future force development.</p>							
(U) B. ACCOMPLISHMENTS/PLANNED PROGRAM:							
COST (\$ in Millions)			FY 2008	FY 2009	FY 2010	FY 2010 OCO	
Accomplishment/Effort Subtotal Cost			6.224	6.631	6.717	0.000	
RDT&E Articles Qty			1	1	1	0	
<p>FY09: continue and complete the following FY 08 efforts: Pythagoras Counterinsurgency; Marine Aviation Logistics Support Program (MALC III) Lift Capability Optimization Model (MALCOM); Engineer Equipment Petroleum Equipment Institute (PEI)-to-Maintainer Ratios; MAGTF Bulk Fuel; Marine Air Ground Task Force (MAGTF) Depot Capacity for Joint Materials; MAGTF Distribution Center Update Study and the . Mobile Electric Power (MEP) and Environmental Control Requirements Study.</p>							

EXHIBIT R-2a, RDT&E Project Justification			DATE:	
			May 2009	
APPROPRIATION/BUDGET ACTIVITY:	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER		
RDT&E, N /BA-6 Management Support	0605873M Marine Corps Program Wide Support	C0030 Marine Corps Studies and Analysis		
<p>FY09: initiate following efforts: Marine Air Ground Task Force (MAGTF) Command and Control (C2) Systems and Emergency Situations Study: analyze training and education on C2 systems and Marine Corps capabilities to provide responding Joint Task Force (JTF) headquarters in emergency situations. Bandwidth Requirements Study: determine amount of communication bandwidth required throughout entire Marine Corps Intelligence Surveillance - Enterprise (MCISR-E) architecture for current and future operations; and assess bandwidth requirement against current and future Marine Corps capabilities (programs of record, etc) and determine the corresponding shortfalls and/or surpluses. Explosive Hazard Capability Study (EOD): to determine a more effective way of supporting the explosive hazard reduction requirements for mobility operations within the MAGTF and identify the most appropriate placement of EOD assets within Marine Corps Forces.</p> <p>Expanded Fleet Mobility and Support Teams (FMAST) III - Follow-on study to FMAST: capture all the Marine Corps' Type 1 equipment in FMAST vice all vehicles and rolling stock and generate the following Measures of Effectiveness (MOEs) for various MAGTFs. Combine information gathered in Tasks 1 and 2 Strategic Mobility, Aggregate footprint (weight, area, and volume) relative to available strategic lift and Tactical Mobility.</p> <p>Maritime Prepositioned Ships Squadron/Maritime Prepositioned Forces (MPSRON/MPF(F) Excursion Study Mission Analysis: identify programmatic and warfighting risks and benefits, and recommend alternatives/adjustments to the current geographic prepositioning, legacy MPF, and MPF(F) programs of record. Time Domain Analysis for Airspace C2 Study: to define Marine Aviation C2 Time Domain (TD) in quantifiable and measurable terms for: Real-Time (RT), Near-Real-Time (NRT), and Non-Real-Time (Non-RT) and define Marine Aviation C2 Data Fusion (DF) requirements in quantifiable and measurable terms. Future (PP&O); MPS Loadout Study (II Marine Expeditionary Force MEF); MAGTF Core Competencies (II MEF) Naval Expeditionary Warfare (NEXW) Assessment : Baseline assessment of amphibious warfare capabilities and proficiency (PP&O); enabling capabilities needed to support smaller scale MAGTF operations in the future (PP&O); MPS Loadout Study (II MEF); MAGTF Core Competencies (II MEF). Marine Corps Training and Advisory Group (MCTAG) Deployment Analysis Study: study will examine the operational drivers that affect the deployments and their implications for MCTAG in coordinating, forming, training Anti-Armor Study: identify the overall anti-armor requirements for a Marine Air-Ground Task Force (MAGTF),develop and evaluate various weapons systems (force) mixes for the MAGTF and document the range of densities and distributions on current or alternative organizational locations. Initiate the high priority studies and analyses projects approved in the FY2009 - FY2010 Marine Corps Studies System Master Plan (MCSSMP).</p>				
	FY 2008	FY 2009	FY 2010	FY 2010 OCO
(U) Total \$	6.224	6.631	6.717	0.000
<p>(U) C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable.</p> <p>(U) Related RDT&E: PE 0605154N (Center for Naval Analysis (CNA), Project C0031 (Marine Corps Operations Analysis Group)</p> <p>(U) D. ACQUISITION STRATEGY: Not Required.</p> <p>(U) E. MAJOR PERFORMERS: Indefinite Delivery Indefinite Quantity contracts as follows:</p> <p>FY05 - FY10 Academia Analytical Support Services Contract.</p> <p>FY06 - FY10 Northrop Grumman Mission Systems (NGMS), Fairfax, VA for Military Modeling, Simulation, Analytical, and Support Services. May 06</p> <p>FY06 - FY10 Northrop Grumman Mission Systems (NGMS), Fairfax, VA for Logistics Modeling, Simulation, Analytical, and Support Services Contract. Sep 06</p> <p>FY06 - FY10 Group W Professional Services Support Contract, Fairfax, VA for Professional Services and Research. Sep 06</p> <p>(U) SCHEDULE PROFILE: Not Applicable</p>				

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification					DATE: MAY 2009	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N /BA-6 Management Support		PROGRAM ELEMENT NUMBER AND NAME 0605873M Marine Corps Program Wide Support			PROJECT NUMBER AND NAME C0033 Marine Corps OT&E Activity	
COST (\$ in Millions)						
		FY 2008	FY 2009	FY2010	FY2010 OCO	Total FY2010
Project Cost		0	3.918	3.955	0	3.955
RDT&E Articles Qty (U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: 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&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. This funding supported salaries of MCOTEA mission employees and physical overhead.						
(U) B. ACCOMPLISHMENTS/PLANNED PROGRAM:						
	COST (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY2010 OCO	
Accomplishment/Effort Subtotal Cost		0.000	3.918	3.955	0.000	
RDT&E Articles Qty						
MCOTEA:						
(U) Total \$		0.000	3.918	3.955	0.000	
(U) C. OTHER PROGRAM FUNDING SUMMARY: Not Applicable (U) Related RDT&E: Not Applicable. (U) D. ACQUISITION STRATEGY: Not Required. (U) E. MAJOR PERFORMERS: Not Applicable.						

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification						DATE: May 2009		
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)		
COST (\$ in Millions)			FY2008	FY2009	FY2010	FY2010 OCO	FY2010 Total	
Project Cost			1.822	4.028	4.250	0.000	4.250	
(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:								
<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 needed to respond to a terrorist attack using Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives (CBRNE). 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&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>								
(U) B. ACCOMPLISHMENTS/PLANNED PROGRAM:								
COST (\$ in Millions)			FY 2008	FY 2009	FY 2010	FY 2010 OCO		
Accomplishment/Effort Subtotal Cost			0.923	2.116	2.002	0.000		
RDT&E Articles Qty								
<p>with the Department of Homeland Security and the Technical Support Working Group (TSWG) 2) assessment of Hand-Held Biological Detection Systems 3) transition of a Field Chemical Analytical Tool (GC/MS) 4) testing and evaluation of a portable bio-aerosol sampler 5) evaluation and testing of an arsenic detector 6) development and testing of the Chemical Biological Incident Response Force (CBIRF) Standoff Chemical Agent Detector in conjunction with the TSWG. Incorporates previous CBIRF RDT&E activities.</p>								
COST (\$ in Millions)			FY 2008	FY 2009	FY 2010	FY 2010 OCO		
Accomplishment/Effort Subtotal Cost			0.100	0.150	0.300	0.000		
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 SAR HazMat boots that can be decontaminated 3) evaluation of Commercial Off the Shelf (COTS) and emerging SAR tools. Incorporates previous CBIRF RDT&E activities.</p>								
COST (\$ in Millions)			FY 2008	FY 2009	FY 2010	FY 2010 OCO		
Accomplishment/Effort Subtotal Cost			0.100	0.350	0.300	0.000		
RDT&E Articles Qty								
<p>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 (flash heaters) and procedures. Incorporates previous CBIRF RDT&E activities.</p>								

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification			DATE: May 2009	
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)	
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2010 OCO
Accomplishment/Effort Subtotal Cost	0.100	0.150	0.150	0.000
RDT&E Articles Qty				
FIRS: C4I Mission Area includes 1) technology assessments 2) field user evaluations 3) prototypes.				
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2010 OCO
Accomplishment/Effort Subtotal Cost	0.299	0.762	0.698	0.000
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) radiation hardness survey and assessment of COTS CM equipment 3) development and validation of an electronic filter matrix from military and commercial filter testing data. 4) testing and evaluation of a hydration system in conjunction with the Army. 5) testing and evaluation of the M-53 mask as a system with Commercial Self Contained Breathing Apparatus and Powered Air Purifying Respirators. Incorporates previous CBIRF RDT&E activities.				
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2010 OCO
Accomplishment/Effort Subtotal Cost	0.100	0.100	0.300	0.000
RDT&E Articles Qty				
FIRS: Medical Mission Area Includes 1) development and decontamination testing of cumulative dose dosimeter 2) evaluation of patient tracking systems 3) development of a Standoff patient triage tool. 4) development and testing of gloves with increased dexterity.				
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY 2010 OCO
Accomplishment/Effort Subtotal Cost	0.200	0.400	0.500	0.000
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).				
TOTAL	1.822	4.028	4.250	0.000
(U) C. OTHER PROGRAM FUNDING SUMMARY:				
Line Item No. & Name	FY 2008	FY 2009	FY 2010	
(U) PMC Line (BLI# 652200) Field Medical Equipment	28.203	29.037	6.811	
(U) Related RDT&E: Not Applicable.				
(U) D. ACQUISITION STRATEGY: Not Required.				
(U) D. SCHEDULE PROFILE: Not Applicable.				

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification							MAY 2009			
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 A Activities			
COST (\$ in Millions)			FY 2008	FY 2009	FY 2010	FY2010 0C0	FY2010 TOTAL			
			7.029	10.005	4.243	0	4.243			
<p>RDT&E Articles Qty</p> <p>(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&A) program, MCSC Phase A Activities, Marine Corps Warfighting Lab (MCWL) warfighting experimentation or Science and Technology (S&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 (COMMARCORSYSCOM) 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</p>										

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification				MAY 2009			
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 A Activities			
<p>(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> <p>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.</p>							
(U) ACCOMPLISHMENTS/PLANNED PROGRAM:							
COST (\$ in Millions)				FY 2008	FY 2009	FY 2010	FY2010 0C0
Accomplishment/Effort Subtotal Cost				2.085	4.315	4.243	0.000
RDT&E Articles Qty							
<p>Phase A Activities - 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: Electronic Records Management, Net Enabled Command Capability, Target Processing, Ground Based Air Defense, Ground Based Operational Surveillance, Optical Systems, Route Reconnaissance and Clearance, Mortar Fire Control and Indirect Fire, Ground Radio and Maintenance and the Squad Immersive Training Environment.</p>							
COST (\$ in Millions)				FY 2008	FY 2009	FY 2010	FY2010 0C0
Accomplishment/Effort Subtotal Cost				3.771	4.229	0.000	0.000
RDT&E Articles Qty							
<p>Pre-Phase A Activities - 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.</p> <p>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.</p>							
COST (\$ in Millions)				FY 2008	FY 2009	FY 2010	FY2010 0C0
Accomplishment/Effort Subtotal Cost				1.173	1.461	0.000	0.000
RDT&E Articles Qty							

UNCLASSIFIED

EXHIBIT R-2a, RDT&E Project Justification		MAY 2009			
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 A Activities			
<p>Pre-Phase A - Future Combat Vehicle - 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</p> <p>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.</p> <p>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.</p>					
(U) Total \$		7.029	10.005	4.243	0.000
(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: MAY 2009			
APPROPRIATION/BUDGET ACTIVITY RDT&E, N /BA-6 Management Support		PROGRAM ELEMENT NUMBER AND NAME 0605873M Marine Corps Program Wide Support		PROJECT NUMBER AND NAME C9999 Congressional Adds			
COST (\$ in Millions)		FY 2008	FY 2009	FY2010	FY2010 OCO	FY2010 TOTAL	
Project Cost		7.038	5.585	0.000	0.000	0.000	
RDT&E Articles Qty							
(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:							
(U) B. ACCOMPLISHMENTS/PLANNED PROGRAM:							
COST (\$ in Millions)		FY 2008	FY 2009	FY 2010	FY2010 OCO		
Accomplishment/Effort Subtotal Cost		0.771	0.000	0.000	0.000		
RDT&E Articles Qty							
<p>C9A64A - Individual Chemical Alert System - The ChemAlert™ detector, manufactured by Smith's Detection, Inc., is a hand-held electronic detector, designed for portability and rapid detection of chemical vapors. ICAS is a low cost and highly sensitive small lightweight chemical detector capable of monitoring both Chemical Warfare Agents (CWAs) and Toxic Industrial Chemical (TICs) and is suitable for multiple environments.</p>							
COST (\$ in Millions)		FY 2008	FY 2009	FY 2010	FY2010 OCO		
Accomplishment/Effort Subtotal Cost		2.699	0.000	0.000	0.000		
RDT&E Articles Qty							
<p>C9C44A - Automated Identification and Data Capture (AIDC) Solutions Center - To develop an implementation plan for the adoption of AIDC technology to streamline and automate the Marine Corps Logistics Command's (MCLC) equipment accountability processes for wholesale level inventory. The plan will address storage operations of the warehouses and open lot storage for Albany, GA and Barstow, CA, as well as supporting broader Enterprise Distribution Department requirements in serving as the Distribution Process Owner for the Marine Corps.</p>							
COST (\$ in Millions)		FY 2008	FY 2009	FY 2010	FY2010 OCO		
Accomplishment/Effort Subtotal Cost		2.411	0.000	0.000	0.000		
RDT&E Articles Qty							
<p>C9C45A - Chameleon Chemical Detection Armband - Morphix Technologies has developed a hands-free passive chemical detection system named Chameleon for gases and vapors in the air. Chameleon is a system for real time detection of low level chemical exposures to select Toxic Industrial Chemicals (TICs) for U.S. Forces. The Chameleon easily attaches to the forearm for hands-free detection of gases and vapors in the air - no need for a liquid sample. The design also eliminates interferences from smoke or particulates. The Chameleon armband is field-configurable, allowing you to decide which chemical threats you need to detect. The Chameleon armband is designed for easy on/off to fit any forearm; even over turn-out gear. It can be used for one cassette or as many as ten.</p>							

EXHIBIT R-2a, RDT&E Project Justification			DATE:	
			MAY 2009	
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	C9999 Congressional Adds		
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY2010 OCO
Accomplishment/Effort Subtotal Cost	0.000	1.596	0.000	0.000
RDT&E Articles Qty				
C9E06A - Logistics Technology Improvements - funding will be used to update technology that allows for hands free update of inventory files via various automatic identification (AIT) Active Radio Frequency Identification (AFRID), providing Logistics Command with similar warehousing efforts found commercially.				
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY2010 OCO
Accomplishment/Effort Subtotal Cost	0.000	1.596	0.000	0.000
RDT&E Articles Qty				
C9E07A - Global Supply Chain Management - funding is intended to establish a Center for Advanced Logistics Management in Albany, Georgia to facilitate collaboration and assist in fulfilling the needs of military logistical organizations, providing real world knowledge of managing supply chains and logistics in a highly competitive, global				
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010	FY2010 OCO
Accomplishment/Effort Subtotal Cost	1.157	2.393	0.000	0.000
RDT&E Articles Qty				
C9C46A - USMC Logistics Analysis & Optimization - Design and Prototype of IT enablers, for capabilities enhancement and to test solutions prior to infusing technology or replacing USMC logistics tools.				
(U) Total \$	7.038	5.585	0.000	0.000
(U) C. OTHER PROGRAM FUNDING SUMMARY: N/A				
(U) Related RDT&E: N/A				
(U) D. ACQUISITION STRATEGY: N/A				
(U) E. MAJOR PERFORMERS: N/A				

CLASSIFICATION:							
EXHIBIT R-2, RDT&E Budget Item Justification					DATE: May 2009		
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY /				BA-06	R-1 ITEM NOMENCLATURE 0305885N - Tactical Cryptologic Activities		
COST (\$ in Millions)	FY 2008	FY 2009	FY 2010				
Total PE Cost 0305885N 0037 Tact Combat Oper Sys	1.498	1.993	2.464				
Quantity of RDT&E Articles							
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: 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) as envisioned by Chief of Naval Operations (CNO) and 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> <p>(U) JUSTIFICATION FOR BUDGET ACTIVITY: This project support the Chief of Naval Operations vision for implementation of FORCEnet.</p>							

R-1 SHOPPING LIST - Item No. 154

CLASSIFICATION:			
EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-06	PROGRAM ELEMENT NUMBER AND NAME 0305885N - Tactical Cryptologic Activities	PROJECT NUMBER AND NAME 0037 Tactical Combat Oper Sys	
(U) B. Accomplishments/Planned Program			
	FY 08	FY 09	FY 10
JIIOR Management	1.498	1.993	2.464
RDT&E Articles Quantity			
<p>FY08 PLAN: - System development for the collection of Advanced Electronically Scanning Array (AESAs) radars. - Antenna Technology Development and Advances: To continue to meet changing environmental and technology requirements, NNWC will continue to invest in advanced antenna technology in partnership with NRL, CNO, ONI, DNR, Combatant Fleet Commanders, and National partners.</p>			
<p>FY09 PLAN: Continue development as outlined for FY08.</p>			
<p>FY10 PLAN: Continue development as outlined for FY08.</p>			
R-1 SHOPPING LIST - Item No. 154			

CLASSIFICATION:			
EXHIBIT R-2a, RDT&E Project Justification			DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME	
RDT&E, N / BA-6	0305885N - Tactical Cryptologic Activities	0037 Tactical Combat Oper Sys	
(U) C. PROGRAM CHANGE SUMMARY:			
(U) Funding:	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
PresBud 09	1.498	1.998	2.500
PresBud 10	1.498	1.993	2.464
Total Adjustments	0.000	(0.005)	(0.036)
Summary of Adjustments:			
	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>
Congressional Adjustments	0.000	(0.005)	0.000
Rate/Misc. Adjustments	0.000	0.000	(0.036)
Total Adjustments	0.000	(0.005)	(0.036)
(U) Schedule:			
Not Applicable			
(U) Technical:			
Not Applicable			
R-1 SHOPPING LIST - Item No. 154			

UNCLASSIFIED
FY2009 PRESIDENT'S BUDGET ESTIMATES

CLASSIFICATION:								
EXHIBIT R-2, RDT&E Budget Item Justification							DATE:	
							May 2009	
APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE			
Research Development Test & Evaluation, Navy					Service Support To JFCOM, JNTC - 0804758N			
Cost (\$ in Millions)	FY 2008	FY 2009	FY 2010					
Total PE Cost	4.932	5.134	4.197					
Project 3152 Service Support to JFCOM, JNTC	4.932	5.134	4.197					

(U) A. Mission Description and Budget Item Justification:

In accordance with the FY 2005 National Defense Authorization Act, in FY 2008, JNTC RDT&E managed by Joint Forces Command (JFCOM) transferred from Navy P/E 0804758N to Defense-Wide P/E 0804758D. To maintain execution control, Navy maintained it's JNTC RDT&E for Service Support to JFCOM in P/E 0804758N. This management change reflects the decentralized execution of JNTC RDT&E from JFCOM to Navy. In FY 2009, these funds will continue to be managed and executed by United States Fleet Forces Command (USFF) Fleet Training and Technology Branch.

The Navy continues to develop joint training technologies that will play a crucial role in its ability to address current and future joint operational training requirements. Navy program activities 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, Joint Semi-Automated Forces (JSAF), JNTC JLVC FOM Interoperabilities, Remote Interface Control, Virtual Communications Multi-Modal Interface, and Coalition / Inter-Agency integration requirements.

The 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.

The Navy JNTC RDT&E Program efforts directly support the Unified Command Plan (UCP) series and is aligned with the DoD Information Operations (IO) Roadmap

Exhibit R-2, RDTEN Budget Item Justification

CLASSIFICATION:																																							
EXHIBIT R-2, RDT&E Budget Item Justification			DATE: May 2009																																				
APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE																																					
Research Development Test & Evaluation, Navy																																							
Project 3152 Service Support to JFCOM	BA 6	Service Support To JFCOM, JNTC - 0804758N																																					
<p>(U) B. Program Change Summary:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">(U) Funding:</th> <th style="text-align: right;">FY 2008</th> <th style="text-align: right;">FY 2009</th> <th style="text-align: right;">FY 2010</th> </tr> </thead> <tbody> <tr> <td>Previous PRESBUD 09</td> <td style="text-align: right;">\$ 4.970</td> <td style="text-align: right;">\$ 5.148</td> <td style="text-align: right;">\$ 5.258</td> </tr> <tr> <td>Current PREBUD Budget / PPBS Baseline PB09</td> <td style="text-align: right;"><u>\$ 4.932</u></td> <td style="text-align: right;"><u>\$ 5.134</u></td> <td style="text-align: right;"><u>\$ 4.197</u></td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right;">\$ 0.038</td> <td style="text-align: right;">\$ 0.014</td> <td style="text-align: right;">\$ 1.061</td> </tr> <tr> <td colspan="4">Summary of Adjustments</td> </tr> <tr> <td style="padding-left: 20px;">Congressional Adjustments</td> <td></td> <td style="text-align: right;">(\$0.014)</td> <td></td> </tr> <tr> <td style="padding-left: 20px;">Program Adjustments</td> <td></td> <td></td> <td style="text-align: right;">(\$1.000)</td> </tr> <tr> <td style="padding-left: 20px;">Rate/Misc. Adjustments</td> <td style="text-align: right;"><u>(\$0.038)</u></td> <td style="text-align: right;"><u>\$0.000</u></td> <td style="text-align: right;"><u>(\$0.061)</u></td> </tr> <tr> <td></td> <td style="text-align: right;">\$4.932</td> <td style="text-align: right;">\$5.134</td> <td style="text-align: right;">\$4.197</td> </tr> </tbody> </table> <p>Schedule: N/A Technical: N/A</p> <p>(U) C. Other Program Funding Summary: N/A</p> <p>(U) D. Acquisition Strategy: N/A</p> <p>(U) E. Performance Metrics:</p> <p>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.</p>				(U) Funding:	FY 2008	FY 2009	FY 2010	Previous PRESBUD 09	\$ 4.970	\$ 5.148	\$ 5.258	Current PREBUD Budget / PPBS Baseline PB09	<u>\$ 4.932</u>	<u>\$ 5.134</u>	<u>\$ 4.197</u>	Total Adjustments	\$ 0.038	\$ 0.014	\$ 1.061	Summary of Adjustments				Congressional Adjustments		(\$0.014)		Program Adjustments			(\$1.000)	Rate/Misc. Adjustments	<u>(\$0.038)</u>	<u>\$0.000</u>	<u>(\$0.061)</u>		\$4.932	\$5.134	\$4.197
(U) Funding:	FY 2008	FY 2009	FY 2010																																				
Previous PRESBUD 09	\$ 4.970	\$ 5.148	\$ 5.258																																				
Current PREBUD Budget / PPBS Baseline PB09	<u>\$ 4.932</u>	<u>\$ 5.134</u>	<u>\$ 4.197</u>																																				
Total Adjustments	\$ 0.038	\$ 0.014	\$ 1.061																																				
Summary of Adjustments																																							
Congressional Adjustments		(\$0.014)																																					
Program Adjustments			(\$1.000)																																				
Rate/Misc. Adjustments	<u>(\$0.038)</u>	<u>\$0.000</u>	<u>(\$0.061)</u>																																				
	\$4.932	\$5.134	\$4.197																																				
Exhibit R-2, RDTE Budget Item Justification																																							

UNCLASSIFIED
FY2009 PRESIDENT'S BUDGET ESTIMATES

CLASSIFICATION:		
EXHIBIT R-2, RDT&E Budget Item Justification		DATE: May 2009
APPROPRIATION/BUDGET ACTIVITY Research Development Test & Evaluation, Navy	BA 6	R-1 ITEM NOMENCLATURE Service Support To JFCOM, JNTC - 0804758N
<p>(U) E. Performance Metrics:</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>		
Exhibit R-2, RDTE Budget Item Justification		

UNCLASSIFIED
FY2009 PRESIDENT'S BUDGET ESTIMATES

CLASSIFICATION:								
EXHIBIT R-2a, RDT&E Project Justification						DATE:		
						May 2009		
APPROPRIATION/BUDGET ACTIVITY				Project Name and Number				
Research Development Test & Evaluation, Navy				JSAF Improvement Program (JIP)				
				Project 3152 Service Support to JFCOM				
Cost (\$ in Millions)	FY 2008	FY 2009	FY 2010					
JSAF Improvement Program	\$ 2.678	\$ 2.787	\$ 2.364					
RDT&E Articles Quantity	n/a	n/a	n/a					
<p>(U) A. Mission Description and Budget Item Justification:</p> <p>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 multiple releases / updates to JSAF. In FY 2008, NWDC supported user acceptance testing and opchecks in seven major Navy Carrier / Expeditionary Strike Group exercises (FST-J 08-1, 08-2, 08-3, 08-4, 08-5, RIMPAC and PC-FST).</p> <p>FY 2009 Plan: 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&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 2009 include two JSAF software releases and coordination and facilitation of Navy JSAF Users Group Meetings during the year. In FY 2009, NWDC plans to support user acceptance testing and opchecks in ten major Navy Carrier / Expeditionary Strike Group exercises (FST-J 09-1, 09-2, 09-3, 09-6, 09-71, 09-72, 09-8, PC-FST, FST-GC BAT, and FST-GC HST).</p> <p>FY 2010 Plan: In FY 2010, funding for the maintenance of established JSAF baseline efforts migrates to the FST/NCTE P/E 0204219N. In FY 2010, the JSAF RDT&E development effort focus incorporates changes required to begin incorporating the program of records that the JNTC/Navy Training FOM effort below has focused upon. FY 2010 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 & Joint Training system.</p>								
Exhibit R-2, RD TEN Budget Item Justification								

UNCLASSIFIED
FY2009 PRESIDENT'S BUDGET ESTIMATES

CLASSIFICATION:															
EXHIBIT R-2a, RDT&E Project Justification			DATE: May 2009												
APPROPRIATION/BUDGET ACTIVITY		Project Name and Number													
Research Development Test & Evaluation, Navy		JSAF Improvement Program (JIP)													
BA 6		Project 3152 Service Support to JFCOM													
<p>(U) B. Accomplishments / Planned Program:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%; text-align: center;">FY 2008</th> <th style="width: 10%; text-align: center;">FY 2009</th> <th style="width: 10%; text-align: center;">FY 2010</th> </tr> </thead> <tbody> <tr> <td>Accomplishment / Effort / Subtotal Cost</td> <td style="text-align: right;">\$ 2.678</td> <td style="text-align: right;">\$ 2.787</td> <td style="text-align: right;">\$ 2.364</td> </tr> <tr> <td>RDT&E Articles Quantity - N/A</td> <td style="text-align: center;">n/a</td> <td style="text-align: center;">n/a</td> <td style="text-align: center;">n/a</td> </tr> </tbody> </table> <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> <p>(U) C. Other Program Funding Summary:</p> <p>P1 Procurement Line: N/A C-1 MILCON Project Number: N/A Related RDT&E: N/A</p> <p>(U) D. Acquisition Strategy: N/A</p>					FY 2008	FY 2009	FY 2010	Accomplishment / Effort / Subtotal Cost	\$ 2.678	\$ 2.787	\$ 2.364	RDT&E Articles Quantity - N/A	n/a	n/a	n/a
	FY 2008	FY 2009	FY 2010												
Accomplishment / Effort / Subtotal Cost	\$ 2.678	\$ 2.787	\$ 2.364												
RDT&E Articles Quantity - N/A	n/a	n/a	n/a												

Exhibit R-2, RDTE Budget Item Justification

UNCLASSIFIED
FY2009 PRESIDENT'S BUDGET ESTIMATES

CLASSIFICATION:							
EXHIBIT R-2a, RDT&E Project Justification						DATE: May 2009	
APPROPRIATION/BUDGET ACTIVITY				Project Name and Number			
Research Development Test & Evaluation, Navy				JNTC/JLVC Navy Training FOM Support			
				Project 3152 Service Support to JFCOM			
Cost (\$ in Millions)	FY 2008	FY 2009	FY 2010				
JNTC/JLVC Navy Training FOM Support	\$ 1.098	\$ 1.582	\$ 1.353				
RDT&E Articles Quantity	n/a	n/a	n/a				
<p>(U) A. Mission Description and Budget Item Justification: 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) releases 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 2009 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 2009 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 2010 JNTC-JLVC/NAVY TRAINING FOM Plan: FY 2010 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 from FY 2008 and the maturation of the process beginning in FY 2009.</p>							
Exhibit R-2, RDTE Budget Item Justification							

UNCLASSIFIED
FY2009 PRESIDENT'S BUDGET ESTIMATES

CLASSIFICATION:														
EXHIBIT R-2a, RDT&E Project Justification		DATE: May 2009												
APPROPRIATION/BUDGET ACTIVITY Research Development Test & Evaluation, Navy	BA 6	Project Name and Number JNTC/JLVC Navy Training FOM Support Project Service Support to JFCOM												
<p>(U) B. Accomplishments / Planned Program:</p> <table border="0" style="width:100%;"> <thead> <tr> <th></th> <th align="center"><u>FY 2008</u></th> <th align="center"><u>FY 2009</u></th> <th align="center"><u>FY 2010</u></th> </tr> </thead> <tbody> <tr> <td>Accomplishment / Effort / Subtotal Cost</td> <td align="right">\$ 1.098</td> <td align="right">\$ 1.582</td> <td align="right">\$ 1.353</td> </tr> <tr> <td>RDT&E Articles Quantity -</td> <td align="center">n/a</td> <td align="center">n/a</td> <td align="center">n/a</td> </tr> </tbody> </table> <p>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.</p> <p>(U) C. Other Program Funding Summary:</p> <p>P1 Procurement Line: N/A C-1 MILCON Project Number: N/A Related RDT&E: N/A</p> <p>(U) D. Acquisition Strategy: N/A</p>				<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	Accomplishment / Effort / Subtotal Cost	\$ 1.098	\$ 1.582	\$ 1.353	RDT&E Articles Quantity -	n/a	n/a	n/a
	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>											
Accomplishment / Effort / Subtotal Cost	\$ 1.098	\$ 1.582	\$ 1.353											
RDT&E Articles Quantity -	n/a	n/a	n/a											
Exhibit R-2, RDTEN Budget Item Justification														

UNCLASSIFIED
FY2009 PRESIDENT'S BUDGET ESTIMATES

CLASSIFICATION:												
EXHIBIT R-3, RDT&E Project Cost Analysis										DATE:		
										May 2009		
APPROPRIATION/BUDGET ACTIVITY							Project Name and Number					
Research Development Test & Evaluation, Navy / BA 6							Project 3152 Service Support to JFCOM					
Cost Categories	Contract	Performing	FY 2009		FY 2010							
(Taylor to WBS, or System/Item Requirements)	Method & Type	Activity & Location	Award	Date	Award	Date						
			FY 2009	Date	FY 2010	Date						
Product Development												
Primary Hardware Development			\$ -		\$ -							
Ancillary Hardware Development			\$ -		\$ -							
Systems Engineering *	Various	Various	\$ 5.134	Oct-08	\$ 4.197	Oct-09						
Licenses			\$ -		\$ -							
Tooling			\$ -		\$ -							
GFE			\$ -		\$ -							
Award Fees			\$ -		\$ -							
Sub-Total:			\$ 5.134		\$ 4.197							
Remarks												
* Training Systems Integration												
** Continuing in FY2009 and beyond, United States Fleet Forces (USFF) Command Code N71 manages the execution of Navy JNTC RDT&E funding.												
Support												
Development Support			\$ -		\$ -							
Software Development			\$ -		\$ -							
Training Development			\$ -		\$ -							
Integrated Logistics Support			\$ -		\$ -							
Configuration Management			\$ -		\$ -							
Technical Data			\$ -		\$ -							
GFE			\$ -		\$ -							
Sub-Total:			\$ -		\$ -							
Remarks												

Exhibit R-3, RDTEEN Project Cost Analysis

UNCLASSIFIED
FY2009 PRESIDENT'S BUDGET ESTIMATES

CLASSIFICATION:												
EXHIBIT R-3, RDT&E Project Cost Analysis										DATE:		
										May 2009		
APPROPRIATION/BUDGET ACTIVITY								Project Name and Number				
Research Development Test & Evaluation, Navy / BA 6								Project 3152 Service Support to JFCOM				
Cost Categories	Contract	Performing		FY 2009		FY 2010						
(Taylor to WBS, or System/Item Requirements)	Method & Type	Activity & Location		Award	Date	Award	Date					
				FY 2009		FY 2010						
Test and Evaluation												
Developmental Test & Evaluation				\$ -		\$ -						
Operational Test & Evaluation				\$ -		\$ -						
Tooling				\$ -		\$ -						
GFE				\$ -		\$ -						
Sub-Total:				\$ -		\$ -						
Remarks												
Management Services												
Contractor Engineering Services				\$ -		\$ -						
Government Engineering Services				\$ -		\$ -						
Program Management Support				\$ -		\$ -						
Program Management Personnel				\$ -		\$ -						
Travel				\$ -		\$ -						
Labor (Research Personnel)				\$ -		\$ -						
Overhead				\$ -		\$ -						
Sub-Total:				\$ -		\$ -						
Remarks												
Total Cost												
Grand Total:				\$ 5.134	Oct-08	\$ 4.197	Oct-09					
Remarks												

Exhibit R-3, RDTE Project Cost Analysis