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**Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>							
1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				PE 0603582N: <i>Combat System Integration</i>							
<b>COST (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	20.822	24.344	34.157	-	34.157	33.517	33.135	29.961	30.809	Continuing	Continuing
0164: <i>Combat System Integration</i>	20.822	24.344	23.493	-	23.493	22.663	22.133	20.905	21.110	Continuing	Continuing
2865: <i>WIDEBAND OPTICALLY MUTIPLIED BEAMFORMING ARCH</i>	-	-	0.001	-	0.001	-	-	-	-	0.000	0.001
3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>	-	-	0.593	-	0.593	0.596	0.595	0.597	1.093	Continuing	Continuing
9B88: <i>Automated Test and Re-Test</i>	-	-	10.070	-	10.070	10.258	10.407	8.459	8.606	Continuing	Continuing

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

COMNAVSEASYSYSCOM (SEA 05H) is assigned central Navy responsibility for interoperability, directing the development of policy and architecture for Strike Force (SF) warfare systems engineering and implementation of a common warfare systems engineering process. Furthermore, SEA 05H provides top level direction and execution for certification and assessments which support capability and quality for ships and submarines. SEA 05H has developed processes and tools including the establishment of a force-level warfare systems engineering process, stewardship of the introduction of Combat Systems, Command, Control, Computers, Communications and Intelligence (C5I) modernization and improvement into the Fleet Response Plan (FRP), Command & Control, Communications, Computers, & Combat Systems Integration Modernization Process (C5IMP), configuration management and certification processes, and force-level interoperability assessments using the Distributed Engineering Plant (DEP) land-based testing tool. This project funds the core elements required to conduct Test Bed Validation (TBV) and Warfare Systems Integration and Interoperability Testing (WSI2T) in accordance with the Naval Warfare Systems Certification Policy (NWSCP), Joint NAVSEA, NAVAIR, and SPAWAR SYSCOM Instruction.

**Project 0164: Combat System Integration:**

This project funds SF configuration management through the FRP shore based testing and WSI2T certification of operational computer systems in a test environment similar to their ultimate shipboard operational environment, and interoperability assessments (IA) which are a prerequisite for operational certification of the ships in SF configurations prior to deployment. Force certification of deploying ships in SF configurations is accomplished through the utilization of the Navy's DEP, which provides operational configurations for all naval combat systems located at multiple Navy land-based sites located across the country and connected via networking technology. The DEP provides the only opportunity for comprehensive interoperability testing of combat system and C5I configuration items prior to shipboard delivery for operational use in surface combatant platforms and strike group units. It is a U.S. Fleet Forces Command requirement that all SFs undergo IA testing in the DEP prior to deployment. Further, the DEP provides the mechanism to support the Navy's participation in the Joint testing environments as well as the coalition forces through the Combined Forces Battle Laboratories (CFBL) network to allow for assessments of both Joint and Coalition interoperability. Program focus is on new systems and platforms under development.

**Project 3312: Maritime Theater Missile Defense (MTMD):**

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>
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This project funds participation in the MTMD forum to promote interoperability with participating coalition nations. This project funds participation in the Modeling and Simulation (M&S), Battle Management, Command, Control, Communications, Computers and Intelligence (BMC4I), and Coalition Distributed Engineering Plant (CDEP) working groups.

MTMD forum provides protection against the proliferation of short, medium and long-range Ballistic Missile (BM) and Advanced Anti-Ship Cruise Missile (ASCM) threats through the creation of an interoperable sea-based defense capability among coalition nations. Provide protection across the full spectrum of these threats and utilize existing interoperable sea-based systems to protect against current threats while progressively improving and developing systems and system-of-systems to enable evolving threats to be effectively countered.

MTMD supports these eight working groups:

- (1) Battle Management Command, Control, Communications, Computers, and Intelligence (BMC4I) activities define and develop architectures.
- (2) Modeling & Simulation (M&S) performs legacy and future systems simulation testing.
- (3) Coalition Distributed Engineering Plant (CDEP) performs Hardware-in-the-Loop Testing.
- (4) Open Architecture (OA) develops Interface Standards and Data Models.
- (5) Test Planning and Execution (TPEX) develops Test Plans and oversees exercise and post event data analysis.
- (6) Develops the Forum CONOPS and identifies the operational constraints and tactical constructs surrounding MTMD activities.
- (7) Coalition Supersonic Sea-Skimming Targets (CSSST) evaluating the conversion of excess TERRIER Missiles into low cost targets.
- (8) Next Generation Infrared Search and Track (IRST) is evaluating the technologies of the participating nations to develop passive staring IRST sensor system.

Project 9B88: Automated Test and Retest (ATRT):

The Navy, through Automated Test and Re-Test (ATRT) is developing an automated test/analysis capability, which is applicable at phases within system development which provides reproducible and quantitative evaluation of system performance in order to support one of the Navy's priority initiatives of reduction of Total Ownership Cost (TOC). Funding will provide additional work towards ongoing testing and analysis efforts within the AEGIS Combat System Advanced Capability Build (ACB) 12, the Littoral Combat Ship (LCS) Mission Module development, the Ship Self Defense System (SSDS), AN/BYG-1 Submarine Combat System, and other major acquisitions.

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<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2012 Navy	<b>DATE:</b> February 2011
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>
Previous President's Budget	22.444	24.344	26.181	-	26.181
Current President's Budget	20.822	24.344	34.157	-	34.157
Total Adjustments	-1.622	-	7.976	-	7.976
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-1.000	-			
• SBIR/STTR Transfer	-0.014	-			
• Program Adjustments	-	-	8.627	-	8.627
• Section 219 Reprogramming	-0.600	-	-	-	-
• Rate/Misc Adjustments	-	-	-0.651	-	-0.651
• Congressional General Reductions Adjustments	-0.008	-	-	-	-

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**Exhibit R-2A, RDT&E Project Justification:** PB 2012 Navy **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>	<b>PROJECT</b> 0164: <i>Combat System Integration</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
0164: <i>Combat System Integration</i>	20.822	24.344	23.493	-	23.493	22.663	22.133	20.905	21.110	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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

Project 0164: Combat System Integration: COMNAVSEASYSYSCOM (SEA 05H) is assigned central Navy responsibility for interoperability, directing the development of policy and architecture for Strike Force (SF) warfare systems engineering and implementation of a common warfare systems engineering process. Furthermore, SEA 05H provides top level direction and execution for certification and assessments which support capability and quality for ships and submarines. SEA 05H has developed processes and tools including the establishment of a force-level warfare systems engineering process, stewardship of the introduction of Combat Systems, Command, Control, Computers, Communications and Intelligence (C5I) modernization and improvement into the Fleet Response Plan (FRP), Command & Control, Communications, Computers, & Combat Systems Integration Modernization Process (C5IMP), configuration management and certification processes, and force-level interoperability assessments using the Distributed Engineering Plant (DEP) land-based testing tool. This project funds the core elements required to conduct Test Bed Validation (TBV) and Warfare Systems Integration and Interoperability Testing (WSI2T) in accordance with the Naval Warfare Systems Certification Policy (NWSCP), Joint NAVSEA, NAVAIR, and SPAWAR SYSCOM Instruction.

This project funds SF configuration management through the FRP shore based testing and WSI2T certification of operational computer systems in a test environment similar to their ultimate shipboard operational environment, and interoperability assessments (IA) which are a prerequisite for operational certification of the ships in SF configurations prior to their deployment. Force certification of deploying ships in SF configurations is accomplished through the utilization of the Navy's DEP, which provides operational configurations for all naval combat systems located at multiple Navy land-based sites located across the country and connected via networking technology.

The DEP provides the only opportunity for comprehensive interoperability testing of combat system and C5I configuration items prior to shipboard delivery for operational use in surface combatant platforms and strike group units. It is a U.S. Fleet Forces Command requirement that all SFs undergo interoperability assessment testing in the DEP prior to deployment. Further, the DEP provides the mechanism to support the Navy's participation in the joint testing environments as well as the coalition forces through the Combined Forces Battle Laboratories (CFBL) network to allow for assessments of both Joint and Coalition interoperability. Program focus is on new systems, platforms under development.

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	FY 2010	FY 2011	FY 2012
<b>Title:</b> Platform/Strike Force Certification	11.000	12.117	10.321
<b>Articles:</b>	0	0	0
<b>Description:</b> This program conducts Interoperability Assessments (IA) that are required to certify Aircraft Carriers, Amphibious Assault Ships, and Surface Combatants in accordance with the Naval Warfare System Certification Policy (NWSCP), NAVSEAINST 9410.2, NAVAIR 5230.20, SPAWAR 5234.1 and U.S. Fleet Forces Command instruction 4720.3B. Using the			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Navy		<b>DATE:</b> February 2011		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>	<b>PROJECT</b> 0164: <i>Combat System Integration</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<p>Distribution Engineering Plant (DEP), this effort provides the Navy's only means to test Strike Force combat systems and associated Command, Control, Communications, Computers, and Intelligence (C4I) prior to deployment.</p> <p><b>FY 2010 Accomplishments:</b> Conducted IAs for 13 certification decisions involving the delivery of Aegis Combat System Advance Capability Builder 08 (ACB08) and AWS 7.1.R to Navy Cruisers and Destroyers. Results from this testing formed the basis for operator guidance and procedures in the form of Tactics, Techniques and Procedures (TTPs), Capabilities and Limitations (C&amp;Ls), and instructional materials.</p> <p><b>FY 2011 Plans:</b> Conduct IAs for 26 certification decisions involving Aircraft Carriers, Amphibious Assault Ships and Surface Combatants. In addition to crew support materials, this testing is required to enable early identification of critical interoperability issues involving the Cooperative Engagement Capability (CEC) and LINK 16. This affords the systems engineering community the opportunity to impose software corrections and address design deficiencies prior to fleet delivery.</p> <p><b>FY 2012 Plans:</b> Support 30 certification events, and will validate corrections of CEC/LINK 16 deficiencies prior to their installation in CGs and DDGs. Platform Certification Decision (PCDs) will involve CVN 78, CGs, DDGs, and amphibious assault ships.</p>				
<p><b>Title:</b> Fleet Response Plan (FRP)</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> This program is required to support the fleet C5I Modernization Policy, per Command Fleet Focus Command (CFFC) 4720.3B, providing upfront systems engineering, configuration management, waterfront training and support for the entire surface Navy.</p> <p><b>FY 2010 Accomplishments:</b> The Program funded 6 Strike Force Interoperability Officers (SFIOs) who support 11 Carrier Strike Groups (CSGs) and 9 Amphibious Ready Groups (ARGs) throughout the inter-deployment cycle including successful deployment of 4 CSGs and 4 ARGs. Generated and delivered Strike Group documentation in the form of Interoperability Capabilities and Limitations (C&amp;L) and Tactical Training Aids (TIC TECHAID). TIC TECHAIDs have been delivered for 58 SG ships, 71 independent ships and 4 Land Based Sites. The C&amp;L program currently maintains known interoperability issues for 41 Strike Groups comprised of 237 ships in operationally relevant terms that sailors can employ. The C&amp;L project is an integral part of the toolset and the defacto playbook Joint Interface Control Officers (JICOs) use worldwide to conduct effective Tactical Data Link planning, operations and</p>		4.000 0	4.875 0	7.186 0

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<p>data exchanges across the fleet. This support is critical given known shortfalls in training resources and is necessary to ensure proficiencies of sailors operating newly upgraded system capabilities.</p> <p><b>FY 2011 Plans:</b> Provide waterfront support for all CSGs and ARGs throughout the inter-deployment cycle, including preparations for deployment of 6 CSGs, 3 ARGs and about 40 independent deployers during FY11. Facilitate completion of C5I installations during approximately 100 Chief of Naval Operation (CNO) availabilities in FY 11. Provide C&amp;L documents for 65 Strike Groups and 110 Naval Air Squadrons (covering F/A-18s, E-2Cs, MH-60s, EA-6Bs and P-3s). TIC TECHAIDs will be delivered for 70 SG ships and 100 independent ships.</p> <p><b>FY 2012 Plans:</b> Provide waterfront support for all CSGs and ARGs throughout the inter-deployment cycle, including preparations for deployment of 6 CSGs, 4 ARGs and about 35 independent deployers during FY12. Facilitate completion of C5I installations during approximately 100 CNO availabilities in FY 12. Provide C&amp;L documents for 65 Strike Groups comprised of 237 ships and 110 Naval Air Squadrons (covering F/A-18s, E-2Cs, MH-60s, EA-6Bs and P-3s). TIC TECHAIDs will be delivered for 70 SG ships, 100 independent deploying ships and 4 Land Based Sites.</p>				
<p><b>Title:</b> Combat Systems Certification Support of Platform Certification</p> <p align="right"><b>Articles:</b></p> <p><b>Description:</b> This program funds Land-based Test Sites to conduct integration testing of Combat Systems for purposes of characterizing, certifying and deploying Combat Systems on Carriers and Large Deck Amphibious naval platforms.</p> <p><b>FY 2010 Accomplishments:</b> Tested Combat System baselines for LHD 3, LHD 4, CVN 69, CVN 73, CVN 74, CVN 76, LSD 41/49, LPD 17-18, providing early identification, correction and characterization of combat system integration issues prior to installation and certification for deployment. Ships will field uncertified combat and Command, Control, Communications, Computers, &amp; Intelligence (C4I) systems with major incompatibilities, and incur mission critical errors in radars, command and control and weapon systems that will jeopardize ships ability to provide air defense against known threats to Strike Groups. Testing to date has identified over 115 high severity issues against these Combat Systems baselines that if not resolved would have prevented accomplishment of critical mission capabilities. CVN 75 and LPD 19-20 Integration Testing is scheduled for the remainder of FY 10.</p> <p><b>FY 2011 Plans:</b> Program plans to conduct integration and interoperability testing for one major platform, CVN 75.</p> <p><b>FY 2012 Plans:</b></p>		2.000 0	2.440 0	1.618 0

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>		<b>PROJECT</b> 0164: <i>Combat System Integration</i>
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>				
				<b>FY 2010</b>
				<b>FY 2011</b>
				<b>FY 2012</b>
Program plans to conduct integration and interoperability testing for two major platforms, LHD 8 and CVN 69 Combat Systems.				
<b>Title:</b> Navigation System Certification (NAVCERT)				
				<b>Articles:</b>
				1.500
				0
				1.500
				0
				0.808
				0
<b>Description:</b> NAVSEAINST 9420.4 dated May 02 requires that a Navigation System Certification (NAVCERT) be performed for all initial installation/new construction, major overhaul/medication/repair when it is determined to impact the accuracy of navigation data, changes to the navigation baseline configuration, or elapsed time of more than five (5) years since previous NAVCERT. A NAVCERT certifies to NAVSEA, Ship Program Managers (SPMs), Type Commanders (TYCOMs), and the Fleet that shipboard navigation systems are: properly installed and in good physical condition, operating to specified accuracy and requirements.				
<b>FY 2010 Accomplishments:</b> Completed 62 NAVCERTs through 27 May 2010. Plan to complete a total of 72 NAVCERTs by the end of FY 2010. These include cruisers, destroyers, carriers, Amphibious, and submarines. A successful NAVCERT is required for Platform Certification Decisions (PCDs), TOMAHAWK Weapons System (TTWCS) certifications, Precision Approach Landing Systems certifications (PALS) Certifications, and Electronic Charting and Display System-Navy (ECDIS-N) Authorization.				
<b>FY 2011 Plans:</b> Plans are to perform 68 NAVCERTs on cruisers, destroyers, carriers, Amphibious, and submarines and will update NAVSEA Instruction 9420.4A to incorporate fleet input and lessons learned in FY2010. A successful NAVCERT is required for Platform Certification Decisions (PCDs), TOMAHAWK Weapons System (TTWCS) certifications, Precision Approach Landing Systems certifications (PALS) Certifications, and Electronic Charting and Display System-Navy (ECDIS-N) Authorization.				
<b>FY 2012 Plans:</b> Plans are to perform 63 NAVCERTs on cruisers, destroyers, carriers, Amphibious, and submarines. A successful NAVCERT is required for Platform Certification Decisions (PCDs), TOMAHAWK Weapons System (TTWCS) certifications, Precision Approach Landing Systems certifications (PALS) Certifications, and Electronic Charting and Display System-Navy (ECDIS-N) Authorization.				
<b>Title:</b> DEP Engineering and Operations				
				<b>Articles:</b>
				2.322
				0
				3.412
				0
				3.560
				0
<b>Description:</b> Distributed Engineering Plant (DEP) Engineering and Operations performs systems engineering, and operations functions to ensure DEP infrastructure supports testing of combat system baselines. The program conducts systems engineering to identify simulation/stimulation requirements necessary to achieve required fidelity for DEP testing at Navy laboratory sites through Verification, Validation and Accreditation (VV&A).				
<b>FY 2010 Accomplishments:</b>				

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<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>	<b>PROJECT</b> 0164: <i>Combat System Integration</i>
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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	FY 2010	FY 2011	FY 2012
<p>Ship Self Defense System (SSDS) IA (05.09) included Joint Range Extension Application Protocol (JREAP) testing as part of the event. It was successfully executed in February of 2010. System Engineering Event (SEE) 10-1 Identification (ID) Management, a test conducted for the Cooperative Engagement Capability (CEC) program office, successfully proved four potential CEC corrections to improve Strike Force Interoperability. Data was successfully collected and the CEC program office applied the results for incorporation to their baseline update. Verification, Validation &amp; Accreditation (VV&amp;A) 10-1 for Mode V/S simulation assessments in the plant was executed in January 2010. Purpose was to assess the incorporation of the Mode V simulation capability in Aegis Simulation, Test and Training System (ASTATS) and Wrap Around Simulation Program (WASP) to ensure Institute of Electrical &amp; Electronics Engineer (IEEE) standards. Two SEE events 10-2 Ship Gridlock System (SGS) and 10-3 (Fleet Requirements) testing will be conducted in July through August timeframe prior to the Secure Defense Research and Engineering Network (SDREN) transition which will be followed by two VV&amp;A events for lab node network checkout. A second Interoperability Assessments (IA) (SSDS 08.06.01) was originally scheduled for August FY10 but has been moved to the right into FY11 due to availability of the baseline for testing.</p> <p><b>FY 2011 Plans:</b> Program plans to conduct one Interoperability Assessments (IA): (SSDS O8.06.X) along with two(2) System Engineering Events (SEEs) in order to facilitate development testing for Aegis ACB 12 and validation of Surface Warfare Development Group Tactics, Techniques, and Procedures for deploying Carrier Strike Groups. Plan is to conduct improvements and updates to the DEP plant via two (2) Verification, Validation, and Accreditation (VV&amp;A) events: Gateway Terminal Emulator/Common Connectivity Device/ Distributed Interactive Simulation(GTE/CCD/DIS) updates and associated VV&amp;A to support U.S. and coalition requirements.</p> <p><b>FY 2012 Plans:</b> Program plans to support three (3) IAs as determined by Interoperability Certification Committee (ICC) and three (3) SEEs in support of CVN-78 and Joint Interoperability in support of combat system developmental testing and validation of Fleet operational and training requirements.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	20.822	24.344	23.493

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPN 2960: (ICSTD/DEP): <i>Integrated Combat System Test</i>	4.409	4.445	4.441	0.000	4.441	4.501	4.551	4.616	4.695	Continuing	Continuing

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**C. Other Program Funding Summary (\$ in Millions)**

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
<i>Division/Distributed Engineering Plant</i>											

**D. Acquisition Strategy**

RD TEN funding under this line supports independent certification of the integration of major capability upgrades acquired by Program Executive Offices (PEOs) into host Navy Platforms and Strike Forces. The RD TEN engineering and certification activities at field sites do not involve direct procurement of equipment or engineering services, and hence no acquisition strategy is required. The major capability upgrades evaluated under this program fall under their associated PEOs' acquisition strategies.

**E. Performance Metrics**

Program Review

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>	<b>PROJECT</b> 0164: <i>Combat System Integration</i>
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<b>Product Development (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
SF Requirements Engineering & Analysis	WR	NSWC:DN/PHD/Corona	5.157	-		-		-		-	0.000	5.157	
SF Requirements Engineering & Analysis	WR	Non-NSWCs:Various	5.295	-		-		-		-	0.000	5.295	
Platform/Strike Force Certification	WR	NSWC:DD/ICSTD/DN/Corona	33.332	6.400	Nov 2010	4.700	Dec 2011	-		4.700	Continuing	Continuing	Continuing
Platform/Strike Force Certification	WR	Non-NSWCs:Various	23.432	4.411	Dec 2010	4.000	Dec 2011	-		4.000	Continuing	Continuing	Continuing
Fleet Response Plan (FRP)	WR	NSWC:DD/PHD/DN	24.050	2.980	Nov 2010	6.215	Dec 2011	-		6.215	Continuing	Continuing	Continuing
Fleet Response Plan (FRP)	WR	Non-NSWCs:Various	2.793	1.000	Dec 2010	0.350	Dec 2011	-		0.350	Continuing	Continuing	Continuing
Combat Systems Cert ISO Platform Cert	WR	NSWC:DN/DD/PHD/Corona	22.200	2.440	Jan 2011	1.570	Jan 2012	-		1.570	Continuing	Continuing	Continuing
Combat Systems Cert ISO Platform Cert	WR	Non-NSWCs:Various	1.853	-		-		-		-	0.000	1.853	
Navigation System Certification	WR	SPAWAR:Charleston	2.964	1.500	Jan 2011	0.808	Jan 2012	-		0.808	Continuing	Continuing	Continuing
DEP Engineering and Operations	WR	NSWC:DD/SPAWAR/San Diego/SCSC/Wallops	15.629	1.500	Apr 2011	1.500	Apr 2012	-		1.500	Continuing	Continuing	Continuing
DEP Engineering and Operations	WR	Non-NSWCs:Various	11.410	1.213	May 2011	1.000	May 2012	-		1.000	Continuing	Continuing	Continuing
CNI/Design Agent	SS/CPAF	General Dynamics:Not Specified	47.926	-		-		-		-	0.000	47.926	
CNI/Software Engineering	WR	NSWC:Dahlgren	8.383	-		-		-		-	0.000	8.383	
CNI/Test and Evaluation	WR	CDSA:Not Specified	3.922	-		-		-		-	0.000	3.922	
CNI/Systems Engineering	WR	NSWC:PHD	2.645	-		-		-		-	0.000	2.645	
CNI/Miscellaneous	WR	Various:Various	7.529	-		-		-		-	0.000	7.529	
OA Automated Test and Retest	WR	NSWCs:Various	17.500	-		-		-		-	0.000	17.500	
Contract Engineering Support	C/CPFF	Gryphon Technology:VA	11.159	1.100	Dec 2010	1.700	Dec 2011	-		1.700	Continuing	Continuing	Continuing

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2012 Navy</b>		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>	<b>PROJECT</b> 0164: <i>Combat System Integration</i>

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<b>Proj 0164</b>																												
AEGIS BMD 3.6.1 X 08 Test Event	■																											
AEGIS ACB 08 Test Event	■																											
AEGIS BMD 4.0.1 FTX-06 @NSWC/DD	■																											
AEGIS BMD 4.0.1 MEIT (CSEDS) ETE (CSEDS) @NSWC/DD	■	■	■	■																								
CVN 69 CLDMS 3,6 WSI2T/Final S&E Test	■																											
LPD 17 IOP Dev/Cert Test @ ICSTF	■																											
LPD 21 TBV/WSI2T @ ICSTF	■																											
LHD 4 WSI2T @ ICSTF	■																											
LSD 41 TBV/WSI2T (SLQ.32 V B1) (B2)1.1.1.1) @ Wallops Island	■																											
LSD 49 TBV/WSI2T (SLQ.32 B B1A1.13.2) @ Wallops Island	■																											
LHD 4 TBV/WSI2T (GCCCS-M 4.0.3/USQ-172(V)1) USQ)@ ICSTF	■																											
LPD 20 TBV/WSI2T @ ICSTF	■																											
CVN 74 TBV/WSI2T @ ICSTF	■	■	■	■																								
CVN 74 IOP Dev Test 6.05.09 @ ICSTF	■	■	■	■																								
LCS 1 IOP Test (AD-5)	■	■	■	■																								
AEGIS Integrated Testing (81) @NSWC/DD	■	■	■	■																								
LHD 4 TBV/WSI2T (GCCCS-M 4.0.3/USQ-172(V)1) @ ICSTF		■																										
CVN 73TBV/WSI2T @ ICSTF		■																										

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**Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>	<b>PROJECT</b> 0164: <i>Combat System Integration</i>
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	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
CVN 76 CDLMS 3.4 Fallback Test @ Wallops Island																												
CVN 69 TBV/WSI2T Phase I @ Wallops Isl (WI)		■	■																									
CVN 68 TBV/WSI2T Phase II @ Wallops Island (WI)			■																									
LHD 3 TBV/WSI2T @ ICSTF			■																									
CVN 75 TBV/WSI2T Phase III @ Wallops Island (WI)			■	■	■	■	■																					
CVN 71TBV @ Wallops Island						■																						
LHD 8 TBV/WSI2T @ NSWC/DD									■	■	■																	
AEGIS ACB12 Integrated Testing DEMO #1 @NSWC/DD										■																		
CVN 69 TBV/WSI2T Notional @ Wallops Island (WI)												■	■															
AEGIS ACB12 Integrated Testing DEMO #2 @NSWC/DD															■													
CVN 78 TBV/WSI2T 1 @ Wallops Island																												
LPD 19 IOP Dev/Cert Test @ ICSTF																												
CVN 78 IOP Dev Test 1 @ Wallops Island																												
CVN 78 IOP Dev Test 2 @ Wallops Island																												
LPD 18 IOP Dev/Cert Test @ ICSTF																												
CVN 78 TBV/WSI2T 2 @ Wallops Island																												
AEGIS BMD 4.01 FTX-16@NSWC/DD							■																					
AEGIS BMD 4.01 FTX-16 WIT@NSWC/DD								■																				

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>	<b>PROJECT</b> 0164: <i>Combat System Integration</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 0164</b>				
AEGIS BMD 3.6.1 X 08 Test Event	1	2010	1	2010
AEGIS ACB 08 Test Event	1	2010	1	2010
AEGIS BMD 4.0.1 FTX-06 @NSWC/DD	1	2010	1	2010
AEGIS BMD 4.0.1 MEIT (CSEDS) ETE (CSEDS) @NSWC/DD	1	2010	3	2010
CVN 69 CLDMS 3,6 WSI2T/Final S&E Test	1	2010	1	2010
LPD 17 IOP Dev/Cert Test @ ICSTF	1	2010	1	2010
LPD 21 TBV/WSI2T @ ICSTF	1	2010	1	2010
LHD 4 WSI2T @ ICSTF	1	2010	1	2010
LSD 41 TBV/WSI2T (SLQ.32 V B1) (B2)1.1.1.1) @ Wallops Island	1	2010	1	2010
LSD 49 TBV/WSI2T (SLQ.32 B B1A1.13.2) @ Wallops Island	1	2010	1	2010
LHD 4 TBV/WSI2T (GCCCS-M 4.0.3/USQ-172(V)1) USQ)@ ICSTF	1	2010	1	2010
LPD 20 TBV/WSI2T @ ICSTF	1	2010	1	2010
CVN 74 TBV/WSI2T @ ICSTF	1	2010	2	2010
CVN 74 IOP Dev Test 6.05.09 @ ICSTF	1	2010	2	2010
LCS 1 IOP Test (AD-5)	1	2010	2	2010
AEGIS Integrated Testing (81) @NSWC/DD	1	2010	2	2010
LHD 4 TBV/WSI2T (GCCCS-M 4.0.3/USQ-172(V)1) @ ICSTF	2	2010	2	2010
CVN 73TBV/WSI2T @ ICSTF	2	2010	2	2010
CVN 76 CDLMS 3.4 Fallback Test @ Wallops Island	2	2010	2	2010
CVN 69 TBV/WSI2T Phase I @ Wallops Isl (WI)	2	2010	3	2010
CVN 68 TBV/WSI2T Phase II @ Wallops Island (WI)	3	2010	3	2010

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>	<b>PROJECT</b> 0164: <i>Combat System Integration</i>

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
LHD 3 TBV/WSI2T @ ICSTF	3	2010	3	2010
CVN 75 TBV/WSI2T Phase III @ Wallops Island (WI)	3	2010	4	2011
CVN 71TBV @ Wallops Island	2	2011	2	2011
LHD 8 TBV/WSI2T @ NSWC/DD	1	2012	3	2012
AEGIS ACB12 Integrated Testing DEMO #1 @NSWC/DD	4	2011	4	2011
CVN 69 TBV/WSI2T Notional @ Wallops Island (WI)	3	2012	4	2012
AEGIS ACB12 Integrated Testing DEMO #2 @NSWC/DD	1	2013	1	2013
CVN 78 TBV/WSI2T 1 @ Wallops Island	1	2015	4	2016
LPD 19 IOP Dev/Cert Test @ ICSTF	1	2015	1	2015
CVN 78 IOP Dev Test 1 @ Wallops Island	1	2015	1	2015
CVN 78 IOP Dev Test 2 @ Wallops Island	1	2015	1	2015
LPD 18 IOP Dev/Cert Test @ ICSTF	1	2015	1	2015
CVN 78 TBV/WSI2T 2 @ Wallops Island	1	2015	1	2015
AEGIS BMD 4.01 FTX-16@NSWC/DD	1	2011	1	2011
AEGIS BMD 4.01 FTX-16 WIT@NSWC/DD	2	2011	2	2011

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**Exhibit R-2A, RDT&E Project Justification:** PB 2012 Navy **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>	<b>PROJECT</b> 2865: <i>WIDEBAND OPTICALLY MUTIPLIED BEAMFORMING ARCH</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
2865: <i>WIDEBAND OPTICALLY MUTIPLIED BEAMFORMING ARCH</i>	-	-	0.001	-	0.001	-	-	-	-	0.000	0.001
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**Note**

These funds will be executed within Project 0164.

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

N/A

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	FY 2010	FY 2011	FY 2012
<b>Title:</b> New Accomplishment/Planned Program Entry	-	-	0.001
<b>Articles:</b>			0
<b>FY 2012 Plans:</b> N/A			
<b>Accomplishments/Planned Programs Subtotals</b>	-	-	0.001

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**D. Acquisition Strategy**

N/A

**E. Performance Metrics**

N/A

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Navy									<b>DATE:</b> February 2011		
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>				<b>PROJECT</b> 3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>	-	-	0.593	-	0.593	0.596	0.595	0.597	1.093	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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

This project funds participation in the Maritime Theater Missile Defense (MTMD) forum to promote interoperability with participating coalition nations. This project funds participation in the Modeling and Simulation (M&S), Battle Management, Command, Control, Communications, Computers and Intelligence (BMC4I), and Coalition Distributed Engineering Plant (CDEP) working groups.

MTMD forum provides protection against the proliferation of short, medium and long-range Ballistic Missile (BM) and Advanced Anti-Ship Cruise Missile (ASCM) threats through the creation of an interoperable sea-based defense capability among coalition nations. Provide protection across the full spectrum of these threats and utilize existing interoperable sea-based systems to protect against current threats while progressively improving and developing systems and system-of- systems to enable evolving threats to be effectively countered.

MTMD supports these eight working groups:

- (1) Battle Management Command, Control, Communications, Computers, and Intelligence (BMC4I) activities define and develop architectures.
- (2) Modeling & Simulation (M&S) performs legacy and future systems simulation testing.
- (3) Coalition Distributed Engineering Plant (CDEP) performs Hardware-in-the-Loop Testing.
- (4) Open Architecture (OA) develops Interface Standards and Data Models.
- (5) Test Planning and Execution (TPEX) develops Test Plans and oversees exercise and post event data analysis.
- (6) Develops the Forum CONOPS and identifies the operational constraints and tactical constructs surrounding MTMD activities.
- (7) Coalition Supersonic Sea-Skimming Targets (CSSST) evaluating the conversion of excess TERRIER Missiles into low cost targets.
- (8) Next Generation Infrared Search and Track (IRST) is evaluating the technologies of the participating nations to develop passive staring IRST sensor system.

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Title:</b> Maritime Theater Missile Defense Forum (MTMD)	-	-	0.593
<b>Articles:</b>			0
<b>Description:</b> This project funds participation in the MTMD forum to promote interoperability with participating coalition nations. This project funds participation in the Modeling and Simulation (M&S), Battle Management, Command, Control, Communications, Computers and Intelligence (BMC4I), and Coalition Distributed Engineering Plant (CDEP) working groups.			
<b>FY 2012 Plans:</b>			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Navy		<b>DATE:</b> February 2011			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>		<b>PROJECT</b> 3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>		
<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>			<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
To participate in the Modeling and Simulation (M&S), Battle Management, Command, Control, Communications, Computers and Intelligence (BMC4I), and Coalition Distributed Engineering Plant (CDEP) working groups.					
<b>Accomplishments/Planned Programs Subtotals</b>			-	-	0.593
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A					
<b>D. Acquisition Strategy</b> N/A					
<b>E. Performance Metrics</b> Program Review					

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>	<b>PROJECT</b> 3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>
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<b>Support (\$ in Millions)</b>				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Maritime Theater Missile Defense Forum	WR	Various NWCSs:Not Specified	-	-		0.593	Dec 2011	-		0.593	Continuing	Continuing	Continuing
<b>Subtotal</b>			-	-		0.593		-		0.593			
<b>Project Cost Totals</b>			-	-		0.593		-		0.593			

**Remarks**

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**Exhibit R-2A, RDT&E Project Justification:** PB 2012 Navy **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>	<b>PROJECT</b> 9B88: <i>Automated Test and Re-Test</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
9B88: <i>Automated Test and Re-Test</i>	-	-	10.070	-	10.070	10.258	10.407	8.459	8.606	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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

The Navy, through Automated Test and Re-Test (ATRT) is developing an automated test/analysis capability, which is applicable at phases within system development which provides reproducible and quantitative evaluation of system performance in order to support one of the Navy's priority initiatives of reduction of Total Ownership Cost (TOC). Funding will provide additional work towards ongoing testing and analysis efforts within the AEGIS Combat System Advanced Capability Build (ACB) 12, the Littoral Combat Ship (LCS) Mission Module development, the Ship Self Defense System (SSDS), AN/BYG-1 Submarine Combat System, and other major acquisitions. In addition, funding will support work towards the development of standards, specifications, and guidance to facilitate NAVSEA-affiliated programs' adoption of this TOC-reducing discipline and technology.

**B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)**

	FY 2010	FY 2011	FY 2012
<p><b>Title:</b> Automated Test and Re-Test</p> <p align="right"><b>Articles:</b></p>	-	-	10.070 0
<p><b>Description:</b> The Navy, through Automated Test and Re-Test (ATRT) is developing an automated test/analysis capability, which is applicable at phases within system development which provides reproducible and quantitative evaluation of system performance in order to support one of the Navy's priority initiatives of reduction of Total Ownership Cost (TOC). The funding would provide additional work towards ongoing testing and analysis efforts within the AEGIS Combat System Advanced Capability Build (ACB) 12, the Littoral Combat Ship (LCS) Mission Module development, the Ship Self Defense System (SSDS), AN/BYG-1 Submarine Combat System, and other major acquisitions. In addition, funding will also provide work towards the development of standards, specifications, and guidance to facilitate NAVSEA-affiliated programs adoption of this TOC-reducing discipline and technology.</p> <p><b>FY 2012 Plans:</b> Re-establish the Auto Test Re-Test (ATRT) working group for continued development of ATRT requirement specifications. Provide guidance to startup projects for the implementation of the ATRT capability. Develop training modules and lessons learned for ATRT. Conduct outreach efforts to NAVSEA programs and industry for ATRT implementation across ship platforms.</p>			
<b>Accomplishments/Planned Programs Subtotals</b>	-	-	10.070

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>	<b>PROJECT</b> 9B88: <i>Automated Test and Re-Test</i>

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**D. Acquisition Strategy**

The Program Strategy for the ATRT program includes the following:

- Investigation of applicable similarities of industry standards, specifications, and architectures that are the relevant to ATRT program to recognize best practice characteristics and participate on Standards Boards
- Development of standards and specifications for ATRT tools/processes
- Funding and execution of ATRT startups within acquisition programs per submission of proposals and Business Case Analyses (BCA)
- Development of training and outreach efforts to promote awareness of automated testing and analysis body of knowledge and available tools/processes
- Setup and maintain an ATRT portal for the collection and dissemination of body of knowledge
- Produce Contract Management and Open Architecture Guidebook for ATRT

**E. Performance Metrics**

Progress towards meeting the objectives of the ATRT efforts will be monitored via the following:

- Progress Briefs at Quarterly ATRT Stakeholders Meetings
- Program Technical Reviews
- Return on Investment Metrics based on work hours for test process execution - before and after automation



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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>	<b>PROJECT</b> 9B88: <i>Automated Test and Re-Test</i>

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
<b>Proj 9B88</b>																												
Development of ATRT Reference Model									■																			
Startup Projects for ATRT Implementation									■																			
Development of ATRT standards and specifications									■																			
Participation in Existing Government and Industrial Standards Boards									■																			
Evaluation of Business Case Analyses (BCA) of potential ATRT investments									■																			
Development of training and lessons learned for ATRT									■																			
Development of guidance for contract and requirements language pertaining to ATRT									■																			
Conduct of outreach efforts to NAVSEA programs and industry									■																			
ATRT Portal for Body of Knowledge									■																			

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<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2012 Navy</b>		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 4: <i>Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0603582N: <i>Combat System Integration</i>	<b>PROJECT</b> 9B88: <i>Automated Test and Re-Test</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 9B88</b>				
Development of ATRT Reference Model	1	2012	1	2012
Startup Projects for ATRT Implementation	1	2012	4	2016
Development of ATRT standards and specifications	1	2012	4	2016
Participation in Existing Government and Industrial Standards Boards	1	2012	4	2016
Evaluation of Business Case Analyses (BCA) of potential ATRT investments	1	2012	4	2016
Development of training and lessons learned for ATRT	1	2012	4	2016
Development of guidance for contract and requirements language pertaining to ATRT	1	2012	4	2016
Conduct of outreach efforts to NAVSEA programs and industry	1	2012	4	2016
ATRT Portal for Body of Knowledge	1	2012	4	2016