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Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy	DATE: April 2013
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APPROPRIATION/BUDGET ACTIVITY					R-1 ITEM NOMENCLATURE							
1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>					PE 0603582N: <i>Combat System Integration</i>							
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	280.954	48.999	56.551	36.570	-	36.570	41.949	44.351	48.417	49.760	Continuing	Continuing
0164: <i>Combat System Integration</i>	280.954	35.989	41.854	18.040	-	18.040	24.347	26.975	30.621	33.345	Continuing	Continuing
3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>	0.000	3.135	4.561	8.525	-	8.525	9.478	9.140	9.385	7.863	Continuing	Continuing
9B88: <i>Automated Test and Re-Test</i>	0.000	9.875	10.136	10.005	-	10.005	8.124	8.236	8.411	8.552	Continuing	Continuing

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

Chief of Naval Operations (CNO) created the Navy's Strike Force Interoperability (SFI) Program in 1998 in response to critical shortfalls in the introduction of integrated and interoperable system of systems to deploying Strike Forces. Naval Sea Systems Command (NAVSEA) acts as management lead for Joint System Command (SYSCOM) system certification policy and guidance and certifies platforms for interoperability within the platform and throughout the enterprise, in accordance with Commander, US Fleet Forces Command/Commander, Pacific Fleet (COMUSFLTFORCOM/COMPACFLT) Inst. 4720.3B (OCT 2008), C5ISR Modernization Policy. COMUSFLTFORCOM/COMPACFLT Inst. 4720.3B also requires that NAVSEA act as administrative agent for COMNAVNETWARCOM Command and Control, Communications, Computers, and Combat Systems Integration Modernization Process (C5IMP) and execution agent for Navy Command and Control, Communications, Computers, and Combat Systems Integration (C5I) Modernization Conferences (NCMC). This program conducts Interoperability Assessments that are required to certify Aircraft Carriers, Amphibious Assault Ships, and Surface Combatants in accordance with the Naval Warfare System Certification Policy (NWSCP), NAVSEAINST 9410.2A, NAVAIR 5230.20, SPAWAR 5234.1.

The SFI Program ensures overall strike force interoperability is characterized and assessed. NAVSEA is assigned central United States Navy (USN) responsibility for interoperability, directing the development of policy and architecture for Strike Force warfare systems engineering and implementation of a common warfare systems engineering process. There are three priorities within the Strike Force Interoperability Program: 1) Support Fleet As-Is state which includes Navigation System Certification (NAVCERT), Interoperability Capabilities & Limitations, and Interoperability Tactical Information Coordinator Technical Aids (TIC TECHAIDs); 2) Ship system modernization (non-HME) including warfighting capability & other C5I upgrades. This includes C5IMP Baseline Management and Non-Aegis Combat System Integration Testing; and 3) Ship Warfare System Certification & Force Level Assessments. This includes Warfare Systems Certification, Interoperability Certification, Force Level Interoperability Analysis, Assessments, and reports recommending force level interoperability improvements to the program offices for implementation at the systems level.

In addition to these core efforts, this program also aims to improve the efficiency of testing processes through the Automated Test and Re-test (ATRT) program and engages in efforts designed to ensure the U.S. Navy is interoperable with Joint and Coalition forces through the Maritime Theater Missile Defense (MTMD).

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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>
<p>Project 0164 Combat System Integration:</p> <p>This project consist of five key pillars executed within the SFI program, beginning in FY13: 1) Command & Control, Communications, Computer, Combat Systems, and Intelligence Modernization Process (C5IMP) and Fleet Readiness. The C5IMP validates the introduction of new systems into the Fleet and ensures system maturity prior to installation, thereby reducing risk and enhancing readiness and effectiveness of deploying ships and strike groups; 2) Warfare Systems Certification, which is essential to validating the maturity and operational performance of warfare systems prior to fleet delivery and deployment; 3) Navigation Certification (NAVCERT) and Electronic Charting and Display System - Navy (ECDIS-N) certification, which certifies ship electronic charting capability and certifies the accurate transmission of navigation data to combat and weapons systems; 4) Combat Systems Integration Testing (CSIT), formerly known as Warfare Systems Integration and Interoperability Testing (WSI2T), which is essential in the identification of critical integration and interoperability issues. CSIT also provides Objective Quality Evidence (OQE) for warfare system certification decisions for installation and deployment; and 5) Interoperability Certification and Assessment, the independent assessment of Strike Group Warfare Systems operational performance. Interoperability Assessments examine force level engagement threads, aircraft control, air battle-space management, and operational displays. Assessments of deploying ships in Strike Force configurations are accomplished through the utilization of the Navy's Distributed Engineering Plant (DEP), which is the cornerstone for the Distributed Integration & Interoperability Assessment Capability (DIIAC) Concept. It is a U.S. Fleet Forces Command and Commander In Chief, U.S Pacific Fleet (COMPACFLT) requirement that all Strike Forces undergo Interoperability Assessment testing in the DEP prior to deployment. Interoperability Certification results are used to develop fleet tactical tools (Capabilities & Limitations (C&L) and Tactical Information Coordinator Technical Aids (TIC TECHAIDs)), which ensure that operators understand the interoperability capabilities and limitations of their combat systems.</p> <p>Project 3312 Maritime Theater Missile Defense Forum (MTMD):</p> <p>This project funds participation in the Maritime Missile Defense Projects Framework Memorandum of Understanding of 2004 (as amended in 2009). Known as the Maritime Theater Missile Defense (MTMD) forum, it promotes interoperability with the Navies of nine participating nations. This project funds participation in several Project Arrangements and includes maritime contribution to the NATO Active Layered Theater Ballistic Missile Defense (ALTBMD) project.</p> <p>The 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 Integrated Air and Missile Defense (IAMD) capability among coalition nations. This includes protection across the full spectrum of these threats through the enhanced utilization of existing sea-based systems to protect against current threats while progressively improving and developing systems and system-of- systems to effectively counter evolving threats.</p> <p>MTMD supports USN participation in several MTMD related Project Arrangements and Working Groups including:</p> <ul style="list-style-type: none"> (1) Battle Management Command, Control, Communications, Computers, and Intelligence (BMC4I) to define and develop architectures as well as to perform engineering to address coalition capability gaps. (2) Modeling & Simulation (M&S) to establish and maintain a maritime coalition M&S testbed and to perform legacy and future systems simulation testing. (3) Coalition Distributed Engineering Plant (CDEP) to establish and maintain a maritime coalition Hardware-in-the-Loop Testbed and to conduct CDEP testing. (4) Open Architecture (OA) to develop Interface Standards and Data Models. 		

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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>
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- (5) Test Planning and Execution (TPEX) to develop Test Plans, oversee exercise participation and conduct post event data analysis and reporting.
- (6) Operational Requirements (OR) to develop a Coalition Maritime Missile Defense Operational Concept Document and to identify operational constraints and tactical constructs surrounding coalition maritime missile defense activities.
- (7) Next Generation Infrared Search and Track (IRST) to evaluate commercial-based technologies to develop a passive IRST sensor system in support of coalition maritime missile defense operations.

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 and integration which provides reproducible and quantitative evaluation of system performance with reduced levels of effort and schedule 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 Combat Systems Integration Testing (CSIT), formerly known as Warfare Systems Integration and Interoperability Testing (WSI2T), AEGIS Combat System Advanced Capability Build (ACB) 12, Antisubmarine Warfare Integrated Common Processor/Acoustic Rapid Commercial Off The Shelf (COTS) Insertion, the Littoral Combat Ship (LCS) Mission Module development and other major acquisition programs. In addition, funding will support the development of standards, specifications, and guidance to facilitate NAVSEA-affiliated programs' adoption of this TOC-reducing discipline and technology.

B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	34.123	56.551	36.592	-	36.592
Current President's Budget	48.999	56.551	36.570	-	36.570
Total Adjustments	14.876	0.000	-0.022	-	-0.022
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	15.536	0.000			
• SBIR/STTR Transfer	-0.660	0.000			
• Program Adjustments	0.000	0.000	0.290	-	0.290
• Rate/Misc Adjustments	0.000	0.000	-0.312	-	-0.312

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy									DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603582N: Combat System Integration				PROJECT 0164: Combat System Integration			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
0164: Combat System Integration	280.954	35.989	41.854	18.040	-	18.040	24.347	26.975	30.621	33.345	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
A. Mission Description and Budget Item Justification												
Project 0164: Combat System Integration:												
This project funds the Strike Force Interoperability Program through the following pillars: 1) Command & Control, Communications, Computer, Combat Systems, and Intelligence Modernization Process (C5IMP) and Fleet Readiness. The C5IMP validates the introduction of new systems into the Fleet and ensures system maturity prior to installation, thereby reducing risk and enhancing readiness and effectiveness of deploying ships and strike groups; 2) Warfare Systems Certification, which is essential to validating the maturity and operational performance of warfare systems prior to fleet delivery and deployment; 3) Navigation Certification (NAVCERT) and Electronic Charting and Display System - Navy (ECDIS-N) certification, which certifies ship electronic charting capability and certifies the accurate transmission of navigation data to combat and weapons systems; 4) Combat Systems Integration Testing (CSIT), formerly known as Warfare Systems Integration and Interoperability Testing (WSI2T), which is essential in the identification of critical integration and interoperability issues. CSIT also provides Objective Quality Evidence (OQE) for warfare system certification decisions for installation and deployment; and 5) Interoperability Certification and Assessment, the independent assessment of Strike Group Warfare Systems operational performance. Interoperability Assessments examine force level engagement threads, aircraft control, air battle-space management, and operational displays. Assessments of deploying ships in Strike Force configurations are accomplished through the utilization of the Navy's Distributed Engineering Plant (DEP), which is the cornerstone for the Distributed Integration & Interoperability Assessment Capability (DIIAC) Concept. It is a U.S. Fleet Forces Command and Commander In Chief, U.S Pacific Fleet (COMPACFLT) requirement that all Strike Forces undergo Interoperability Assessment testing in the DEP prior to deployment. Interoperability Certification results are used to develop fleet tactical tools (Capabilities & Limitations (C&L) and Tactical Information Coordinator Technical Aids (TIC TECHAIDs)), which ensure that operators understand the interoperability capabilities and limitations of their combat systems.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Navigation System Certification (NAVCERT)									0.616	1.762	1.252	
									0	0	0	
Description: NAVSEAINST 9420.4 dated May 02 requires that a Navigation System Certification (NAVCERT) be performed for all initial installation/new construction, major overhaul/modification/repair when it is determined to impact the accuracy of navigation data, changes to the navigation baseline configuration, greater than six months ship availability, or elapsed time of more than five (5) years since previous NAVCERT. These project funds assessments are in support of NAVCERT associated with modernizations and/or new capability upgrades. A												

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013
<p>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. A NAVCERT certifies: (1) Ship electronic charting display capability ensuring safety at sea. (2) Accurate transmission of navigation data to combat and weapons systems ensuring ordnance is delivered on target. (3) Aircraft inertial alignment system which is critical for returning aircraft. A successful NAVCERT is required for Warfare Systems Certification Decisions (WSCD), TOMAHAWK Weapons System (TTWCS) Certifications, Precision Approach Landing Systems (PALS) Certifications, and Electronic Charting and Display System-Navy (ECDIS-N) Certification.</p> <p>FY 2012 Accomplishments: Performed 28 NAVCERTs on cruisers, destroyers, carriers, and amphibis.</p> <p>FY 2013 Plans: Plans are to perform 24 NAVCERTs on cruisers, destroyers, carriers, and amphibis based on the finding of the Flag Certification Task Force. Initiate update of NAVSEA Instruction 9420.4A to incorporate fleet input and lessons learned.</p> <p>FY 2014 Plans: Plans are to perform 18 NAVCERTs on cruisers, destroyers, carriers, and amphibis based on the finding of the Flag Certification Task Force. Issue update of NAVSEA Instruction 9420.4A.</p>			
<p>Title: Command, Control, Communications, Computer, Combat Systems, and Intelligence Modernization Process (C5IMP) and Fleet Readiness (C5ISR)</p> <p align="right">Articles:</p> <p>Description: This program is required to support the fleet C5I Modernization Policy (per COMUSFLTFORCOM/COMPACFLT Inst. 4720.3B), perform engineering analysis for the introduction of each proposed C5IMP capability improvement (Baseline Change), develop installation recommendations of C5I system upgrades for the Fleet Commanders, and research and analyze installation or operating problems. This is done through close coordination with the FLTCDRs and TYCOMs as well as other members of the C5IMP community to address, coordinate, and resolve C5IMP modernization issues thereby reducing risk and enhancing readiness and effectiveness of deploying ships and strike groups.</p> <p>Strike Group Engineers (SGEs) analyze planned C5I configurations of ships and Strike Groups; identify and analyze capability, interoperability, and modernization issues in a Strike Group context; assess impacts against requirements; and provide recommendations for resolution.</p> <p>Funded under Fleet Response Plan (FRP) in prior years.</p>		3.749 0	2.420 0
		1.842 0	

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)			FY 2012	FY 2013	FY 2014
<i>FY 2012 Accomplishments:</i> This program is required to support the fleet C5I Modernization Policy (per COMUSFLTFORCOM/COMPACFLT Inst. 4720.3B), perform engineering analysis for the introduction of each proposed C5IMP capability improvement (Baseline Change), develop installation recommendations of C5I system upgrades for the Fleet Commanders, and research and analyze installation or operating problems. This is done through close coordination with the FLTCDRs and TYCOMs as well as other members of the C5IMP community to address, coordinate, and resolve C5IMP modernization issues thereby reducing risk and enhancing readiness and effectiveness of deploying ships and strike groups. Strike Group Engineers (SGEs) analyze planned C5I configurations of ships and Strike Groups; identify and analyze capability, interoperability, and modernization issues in a Strike Group context; assess impacts against requirements; and provide recommendations for resolution.					
<i>FY 2013 Plans:</i> Provide C5IMP and Strike Group Engineering support for all CSGs, ARGs, and independent deployers throughout the inter-deployment cycle, including preparations for deployment of 6 CSGs, 3 ARGs and about 40 independent deployers during FY13. Facilitate review, assessment, and execution of C5I installations during approximately 100 CNO availabilities in FY 13. Support 2 NCMCs and 12 monthly baselining events. Risk Assessment & Mitigation: Review the MH-60R LAMPS helicopter interoperability with the AEGIS Combat System (ACS).					
<i>FY 2014 Plans:</i> Provide C5IMP and Strike Group Engineering support for all CSGs, ARGs, and independent deployers throughout the inter-deployment cycle, including preparations for deployment of 4 CSGs, 3 ARGs and about 30 independent deployers during FY 14. Facilitate review, assessment, and execution of C5I installations during approximately 100 CNO Availabilities in FY 14. Support 2 NCMCs and 12 monthly baselining events.					
<i>Title:</i> Combat System Integration Testing (CSIT)			2.300	2.560	0.000
<i>Articles:</i>			0	0	
<i>Description:</i> This program funds Land-Based Test Sites to conduct integration testing for the Ship Self Defense Mark 1/2 Integrated Combat Systems at NSWC Dahlgren, VA and at Wallops Island, VA as well as the Advanced Combat Direction System (ACDS) Block 0/1 and FFG Combat Direction System testing at Combat Direction Systems Activity Dam Neck, VA. Combat System Testing (formerly known as SEA05H Warfare Systems Integration and Interoperability Testing (WSI2T)), is essential in the identification of critical combat systems integration issues. CST also provides Objective Quality Evidence (OQE) for warfare certification decisions to support installation and deployment approvals. OPN/OMN funds support the maintenance and upgrade of the test labs to provide an integrated test environment similar to shipboard configurations in the Fleet.					
Funded under Combat Systems Certification Support of Platform Certification in prior years.					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Program Combat Systems integration planning/conduct/execution/OQE reporting for the following platforms: FFG 7 Class, LHD 7/8, CVN 69, LPD 20/24/25, LPD 17-19 and LPD 21-23 & CVN 73/74.				
FY 2013 Plans: Program Combat Systems integration planning/conduct/execution/OQE reporting for the following platforms: LHD 1, SSDS MOD 5C (LSD 50/52) & CVN 75/76.				
Title: Warfare Systems Certification		11.798	14.700	5.042
Articles:		0	0	0
Description: As directed by COMUSFLTFORCOM/COMPACFLT Inst. 4720.3B, C5ISR Modernization Policy, and in accordance with NAVSEAINST 9410.2, Naval Warfare System Certification Policy (NWSCP), NAVSEA will conduct Warfare Systems Certification against set criteria that includes operational risk assessments, using Objective Quality Evidence (OQE) to ensure installation readiness and deployment readiness of warfare systems and Navy surface platforms. OQE is obtained through testimony of subordinate activities and/or independent testing.				
NAVSEA accomplishes these efforts through Warfare Systems Certification Readiness Reviews (WSCRR), Warfare Systems Installation Authorizations (WSIA), and Warfare Systems Certification Decisions (WSCD) to support the installation and deployment of warfare systems in Navy surface platforms. The purpose of the WSCRR is to review and approve the Warfare System Certification Plan (WSCP), monitor warfare systems against the WSCP and monitor satisfaction of established criteria to facilitate a WSIA and WSCD. The purpose of the WSIA is to provide an early assessment of risk and characterization of the warfare systems maturity and readiness to support sail-away and any shipboard test and training events for New Construction (NC) phase, Refueling Complex Overhaul (RCOH) or lead ships that are test platforms for major modernization effort and/or an assessment to support an authorization for installation of the warfare system(s) for in-service platforms. The purpose of the WSCD is to provide warfare systems certification including an assessment of risk and characterization of the warfare systems maturity and readiness to support deployment. A NAVSEA certification decision message is released following the WSCD, which includes an operational risk assessment characterizing warfare systems maturity and readiness to support the subject ship's deployment. This program is also required to ensure that aggregate deficiencies and workarounds do not render the operator ineffective by conducting land based interoperability, at-sea interoperability and stressful endurance test and documenting issues such as trouble reports (TRs). TRs that cannot be resolved are assessed by the Interoperability Certification Assessment Group (ICAG) and are documented in Tactics, Techniques & Procedures (TTPs), Strike Group Capabilities & Limitations (SGI C&L), and Tactical Information Coordinator Technical Aids (TIC TECHAIDS).				

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013
Warfare Systems Certification funded under Platform/Strike Force Certification in prior years.			
<p>FY 2012 Accomplishments: Supported 110 certification events, and validated corrections of CEC/LINK 16 deficiencies prior to their installation in CGs and DDGs. Platform Certification Decision (PCDs) involved CVNs, CGs, DDGs, and amphibious assault ships. Documented TTPs, workarounds, limitations & restrictions and conducted 4 AEGIS & 1 SSDS baseline assessments of interoperability issues impacting ship mission areas. Transitioned to NAVSEAINST 9410.2A.</p> <p>FY 2013 Plans: Support approximately 110 Warfare Systems Certification Events (WSCRRs, WSIAAs, and WSCDs). Warfare Systems Certification Decision will involve CG 47, DDG 51/1000, CVN 65/68/78, LHA 1/6, LHD 1, LPD 17, LSD 41/49 and LCS Ship Class and amphibious assault ships. Support increase in number of Warfare System Certification criteria from 17 to 20, requiring review of Trouble Reports, Tactics, Techniques, and Procedures (TTP) aggregate workload assessment, and mission area assessment. Support stressful endurance test results. Develop an Integrated Product Data Management Tool for a unified data environment, classified to secret level. Conduct Accelerated Mid-Term Interoperability Improvement Project (AMIIP) interoperability assessment, and conduct two at-sea interoperability tests, data analysis and assessment.</p> <p>FY 2014 Plans: Support approximately 120 Warfare Systems Certification Events and pilot certification efforts for Patrol Coastal and Mine Countermeasure ships.</p>			
<p>Title: Interoperability Certification and Assessment</p> <p align="right">Articles:</p> <p>Description: To ensure NAVSEA/PEOs are delivering mature and interoperable warfare systems at the platform and strike group level, NAVSEA provides strike force interoperability certification and assessments. This program focuses on new systems and platforms under development. Interoperability Assessments of deploying ships in Strike Force configurations is accomplished through the utilization of the Navy's Distributed Engineering Plant (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. It is a U.S. Fleet Forces Command requirement that all Strike Forces undergo Interoperability Assessment testing in the DEP prior to deployment. 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. Further, the DEP provides the mechanism to support the surface Navy's participation in the Joint testing environments as well as the MTMD Coalition forces interoperability testing. The Distributed Integration & Interoperability Assessment Capability (DIIAC) will leverage the existing DEP (facilities, skilled resources, live assets, and network connectivity) and ATRT applications to test and assess battle force interoperability. The results of DEP testing is to feed into the development of fleet tactical tools (Capabilities &</p>		17.526 0	20.412 0
			9.904 0

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013
<p>Limitations (C&L) and Tactical Information Coordinator Technical Aids (TIC TECHAIDs)), which ensure that operators understand the interoperability capabilities and limitations of their combat systems. C&L are delivered for Strike Groups and their Coalition and Joint partners. Program was funded under Platform/Strike Force Certification, Fleet Response Plan (FRP), and DEP Engineering and Operations in prior years.</p> <p>FY 2012 Accomplishments: Conducted three DEP tests, (ACS 6.3, 7.1R, the 8.1 certification; ACS 5.3.9 and SSDS Baseline 6 certification; ACB 12 ACS baseline 9A development) and reconstruction with data analyses. Conducted two interoperability assessments, (ACS 6.3, 7.1R, 8.1; ACS 5.3.9 and SSDS Baseline 6) as determined by Interoperability Certification Assessment Group (ICAG). Conducted one Verification, Validation, and Accreditation (VV&A) test and facilitated the completion of C5I installations during approximately 100 CNO availabilities in FY 12. Provided C&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 35 SG ships, 30 independent deploying ships and 4 Land Based Sites.</p> <p>FY 2013 Plans: Conduct four DEP tests (SSDS 8.07 DEP certifications; AMIIP certification; ACB 12 ACS baseline 9A certification; ACS 7.2 DEP certification) and reconstruction with data analyses. Conduct three interoperability assessments, (AMIIP; ACB 12 ACS baseline 9A; ACS 7.2) as determined by Interoperability Certification Assessment Group (ICAG). Conduct two VV&As and two System Engineering Events (SEEs). Provide C&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). Conduct analysis of force level engagement threads, aircraft control, air battle-space management, and operational displays, focusing on deploying Strike Groups and new systems and platforms under development. TIC TECHAIDs will be delivered for 35 SG ships, 30 independent deploying ships, and 4 Land Based Sites.</p> <p>FY 2014 Plans: Conduct four DEP tests (ACB 12 ACS baseline 9C development; SSDS baseline 9 certification; SSDS 8.07 certification; AMIIP certification) and reconstruction with data analysis. Conduct three interoperability assessments (SSDS baseline 9; ACB 12 ACS baseline 9C; LCS) as determined by Interoperability Certification Assessment Group (ICAG). Conduct two VV&As and two System Engineering Events (SEEs). Provide C&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 35 SG ships, 30 independent deploying ships, and 4 Land Based Sites.</p>			
Accomplishments/Planned Programs Subtotals		35.989	41.854
		18.040	

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C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPN 2960: <i>(ICSTD/DEP): Integrated Combat System Test Division/Distributed Engineering Plant</i>	4.430	4.495	4.963		4.963	5.073	5.141	5.254	5.321	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
<p>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.</p>											
E. Performance Metrics											
<p>Quarterly Program Reviews and Baseline Assessments</p>											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)						R-1 ITEM NOMENCLATURE PE 0603582N: Combat System Integration				PROJECT 0164: Combat System Integration					
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SF Requirements Engineering & Analysis	WR	NSWCs:DN/PHD/Corona	5.157	0.000		0.000		0.000		-		0.000	0.000	5.157	
SF Requirements Engineering & Analysis	WR	Non-NSWCs:Various	5.295	0.000		0.000		0.000		-		0.000	0.000	5.295	
Platform/Strike Force Certification	WR	NSWCs:DD/ICSTD/DN/Corona	39.732	0.000		0.000		0.000		-		0.000	0.000	39.732	
Platform/Strike Force Certification	WR	Non-NSWCs:Various	27.843	0.000		0.000		0.000		-		0.000	0.000	27.843	
Fleet Response Plan (FRP)	WR	NSWCs:DD/PHD/DN	27.030	0.000		0.000		0.000		-		0.000	0.000	27.030	
Fleet Response Plan (FRP)	WR	Non-NSWCs:Various	3.793	0.000		0.000		0.000		-		0.000	0.000	3.793	
Combat Systems Cert ISO Platform Cert	WR	NSWCs:DN/DD/PHD/Corona	24.640	0.000		0.000		0.000		-		0.000	0.000	24.640	
Combat Systems Cert ISO Platform Cert	WR	Non-NSWCs:Various	1.853	0.000		0.000		0.000		-		0.000	0.000	1.853	
Navigation System Certification	WR	SPAWAR:Charleston	4.464	0.616	Dec 2011	1.650	Dec 2012	1.252	Sep 2014	-		1.252	Continuing	Continuing	Continuing
C5IMP & Fleet Readiness	WR	NSWCs:DD/PHD/DN	0.000	3.440	Dec 2011	1.200	Dec 2012	1.190	Sep 2014	-		1.190	Continuing	Continuing	Continuing
C5IMP & Fleet Readiness	WR	Non-NSWCs:Various	0.000	0.000		0.000	Dec 2012	0.000		-		0.000	Continuing	Continuing	Continuing
Warfare Systems Certification	WR	NSWCs:DD//DN/Corona	0.000	4.154	Dec 2011	12.000	Dec 2012	3.500	Sep 2014	-		3.500	0.000	19.654	
Warfare Systems Certification	WR	NSWCs:Various	0.000	3.000	Dec 2011	0.500	Dec 2012	0.490	Sep 2014	-		0.490	0.000	3.990	
CNI/Design Agent	SS/CPAF	General Dynamics:Not Specified	47.926	0.000		0.000		0.000		-		0.000	0.000	47.926	
CNI/Software Engineering	WR	NSWC:Dahlgren	8.383	0.000		0.000		0.000		-		0.000	0.000	8.383	
CNI/Test and Evaluation	WR	CDSA:Not Specified	3.922	0.000		0.000		0.000		-		0.000	0.000	3.922	
CNI/Systems Engineering	WR	NSWC:PHD	2.645	0.000		0.000		0.000		-		0.000	0.000	2.645	
CNI/Miscellaneous	WR	Various:Various	7.529	0.000		0.000		0.000		-		0.000	0.000	7.529	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY						R-1 ITEM NOMENCLATURE				PROJECT					
1319: Research, Development, Test & Evaluation, Navy						PE 0603582N: Combat System Integration				0164: Combat System Integration					
BA 4: Advanced Component Development & Prototypes (ACD&P)															
Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
OA Automated Test and Retest	WR	NSWCs:Various	17.500	0.000		0.000		0.000		-		0.000	0.000	17.500	
Contract Engineering Support	C/CPFF	Gryphon Technology:VA	12.259	4.778	Dec 2011	7.604	Dec 2012	3.500	Sep 2014	-		3.500	Continuing	Continuing	Continuing
Contract Program Management Support	C/CPFF	Delta Resources Inc.:VA	8.141	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Travel	Allot	NAVSEA HQ:Washington, DC	1.590	0.300	Dec 2011	0.400	Dec 2012	0.100	Sep 2014	-		0.100	Continuing	Continuing	Continuing
Interoperability Fixes	WR	NSWCs:Various	1.500	0.000		0.000		0.000		-		0.000	0.000	1.500	
Subtotal			251.202	16.288		23.354		10.032		0.000		10.032			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Combat System Integration Testing (CSIT)	WR	NSWCs:DD/ICSTF	0.000	3.475	Dec 2011	2.500	Dec 2012	0.000		-		0.000	0.000	5.975	
Interoperability Certification Assessment	WR	NSWCs:DD/ SPAWAR/San Diego	0.000	16.226	Dec 2011	16.000	Dec 2012	8.008	Sep 2014	-		8.008	0.000	40.234	
DEP Engineering and Operations	WR	NSWCs:DD/ SPAWAR/San	17.129	0.000	Dec 2011	0.000		0.000		-		0.000	0.000	17.129	
DEP Engineering and Operations	WR	NSWCs:Various	12.623	0.000	Dec 2011	0.000		0.000		-		0.000	0.000	12.623	
Subtotal			29.752	19.701		18.500		8.008		0.000		8.008	0.000	75.961	
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			280.954	35.989		41.854		18.040		0.000		18.040			
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>		
			PROJECT 0164: <i>Combat System Integration</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
COMBAT SYSTEM INTEGRATION																												
LHD 7/8 TBV/CSIT																												
FY 12 LPD 22/23 CSIT																												
FY14 NAVCERTs (DDGs 58, 76, 106; CG 55; LPD 18)																												
FY14 NAVCERTs (DDGs 64, 57, 90; LHD 4, 5; CVN 68, 75)																												
FY14 NAVCERTs (DDGs 59, 73, 74, 95, 103, 108; LHD 1)																												
FY14 NAVCERTs (DDGs 67, 105; LHD 8; CG 52, 59; LPD 21; CVN 70)																												
FY15 NAVCERTs (DDGs 86, 87, 92; LHD 2; CG 71)																												
FY15 NAVCERTs (LCS 1; CVNs 72, 77)																												
FY15 NAVCERTs (DDGs 93, 94, 96, 109; CG 53, 58; CVN 76)																												
FY15 NAVCERTs (DDGs 52, 62, 77, 88, 107; CG 63, 73; CVN 65)																												
FY16 NAVCERTs (DDGs 89, 91)																												
FY16 NAVCERTs (DDG 70; MCMs 5, 7, 11; CVN 74; CG 54)																												
FY16 NAVCERTs (DDGs 51, 53, 111; CG 66; MCM 2)																												
FY16 NAVCERTs (DDGs 65, 97; CVN 69, 73; CG 72; MCM 4; LHD 6)																												
FY17 NAVCERTs (DDGs 63, 98, 99; LPD 17, 22; LHD 7; LCC 19)																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy																		DATE: April 2013										
APPROPRIATION/BUDGET ACTIVITY										R-1 ITEM NOMENCLATURE										PROJECT								
1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)										PE 0603582N: Combat System Integration										0164: Combat System Integration								
	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
FY17 NAVCERTs (DDGs 60, 79, 81, 102, 112; LHA 5; LHD 3; CG 60, 68, 70)																												
FY17 NAVCERTs (CG 65, 67; CVNs 73, 75; DDGs 71, 85, 101)																												
FY17 NAVCERTs (LHD 4, 5; DDG 68)																												
FY18 NAVCERTs (DDGs 63, 64, 82, 83, 100; CVNs 71, 76, 77)																												
FY18 NAVCERTs (DDGs 75, 71, 72, 80, 85, 94; CGs 69, 52)																												
FY18 NAVCERTs (LPD 18, DDG 104)																												
FY18 NAVCERTs (LHD 7; DDG 76, 78)																												
C5IMP Monthly Baselining (12/Year)																												
FY14 NCMC - 1																												
FY14 NCMC - 2																												
FY15 NCMC - 1																												
FY15 NCMC - 2																												
FY16 NCMC - 1																												
FY16 NCMC - 2																												
FY17 NCMC - 1																												
FY17 NCMC - 2																												
FY18 NCMC - 1																												
FY18 NCMC - 2																												
AEGIS ACB 12 Integrated Testing DEMO #2 @ NSWC/DD																												
SSDS Interoperability Test & Analysis																												
SSDS Interoperability Assessment																												
AMIIP Interoperability Test & Analysis																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy																	DATE: April 2013											
APPROPRIATION/BUDGET ACTIVITY										R-1 ITEM NOMENCLATURE								PROJECT										
1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)										PE 0603582N: Combat System Integration								0164: Combat System Integration										
	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
AMIIP Interoperability Assessment																												
Verification, Validation & Analysis (13-1)																												
CVN 68 CSIT																												
Systems Engineering Event (13-1)																												
ACB 12 (B/L 9A) Interoperability Test & Analysis																												
ACB 12 (B/L 9A) Interoperability Assessment																												
AWS 7.2 Interoperability Test & Analysis																												
AWS 7.2 Interoperability Assessment																												
Verification, Validation & Analysis (13-2)																												
Systems Engineering Event (13-2)																												
CVN 69 CSIT																												
LCS 2 CSIT																												
LHD 2 CSIT																												
LPD 22 CSIT																												
LSD 41 Class CSIT																												
CVN 75 CSIT																												
FY13 DDG 1000 CSIT																												
FY13 CVN 69 Interoperability Assessment																												
LPD 22 Interoperability Assessment																												
ACB 12 Interoperability Assessment																												
FY13 AWS 8.1.0.0 Interoperability Assessment																												
FY14 LHD 7 Interoperability Assessment																												
FY14 ACB 12 Interoperability Assessment																												
CVN 75 Interoperability Assessment																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy														DATE: April 2013															
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)										R-1 ITEM NOMENCLATURE PE 0603582N: Combat System Integration										PROJECT 0164: Combat System Integration									
	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				
	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	
DDG 1000 Interoperability Assessment																													
FY16 ACB 12 Interoperability Assessment																													
FY16 AWS 8 Interoperability Assessment																													
CVN 78 Interoperability Assessment																													
CVN 69 Interoperability Assessment																													
FY18 ACB 12 Interoperability Assessment																													
FY18 AWS 7.1 Interoperability Assessment																													

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 0164: <i>Combat System Integration</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
COMBAT SYSTEM INTEGRATION				
LHD 7/8 TBV/CSIT	1	2012	2	2012
FY 12 LPD 22/23 CSIT	1	2012	2	2012
FY14 NAVCERTs (DDGs 58, 76, 106; CG 55; LPD 18)	1	2014	1	2014
FY14 NAVCERTs (DDGs 64, 57, 90; LHD 4, 5; CVN 68, 75)	2	2014	2	2014
FY14 NAVCERTs (DDGs 59, 73, 74, 95, 103, 108; LHD 1)	3	2014	3	2014
FY14 NAVCERTs (DDGs 67, 105; LHD 8; CG 52, 59; LPD 21; CVN 70)	4	2014	4	2014
FY15 NAVCERTs (DDGs 86, 87, 92; LHD 2; CG 71)	1	2015	1	2015
FY15 NAVCERTs (LCS 1; CVNs 72, 77)	2	2015	2	2015
FY15 NAVCERTs (DDGs 93, 94, 96, 109; CG 53, 58; CVN 76)	3	2015	3	2015
FY15 NAVCERTs (DDGs 52, 62, 77, 88, 107; CG 63, 73; CVN 65)	4	2015	4	2015
FY16 NAVCERTs (DDGs 89, 91)	1	2016	1	2016
FY16 NAVCERTs (DDG 70; MCMs 5, 7, 11; CVN 74; CG 54)	2	2016	2	2016
FY16 NAVCERTs (DDGs 51, 53, 111; CG 66; MCM 2)	3	2016	3	2016
FY16 NAVCERTs (DDGs 65, 97; CVN 69, 73; CG 72; MCM 4; LHD 6)	4	2016	4	2016
FY17 NAVCERTs (DDGs 63, 98, 99; LPD 17, 22; LHD 7; LCC 19)	1	2017	1	2017
FY17 NAVCERTs (DDGs 60, 79, 81, 102, 112; LHA 5; LHD 3; CG 60, 68, 70)	2	2017	2	2017
FY17 NAVCERTs (CG 65, 67; CVNs 73, 75; DDGs 71, 85, 101)	3	2017	3	2017
FY17 NAVCERTs (LHD 4, 5; DDG 68)	4	2017	4	2017
FY18 NAVCERTs (DDGs 63, 64, 82, 83, 100; CVNs 71, 76, 77)	1	2018	1	2018
FY18 NAVCERTs (DDGs 75, 71, 72, 80, 85, 94; CGs 69, 52)	2	2018	2	2018
FY18 NAVCERTs (LPD 18, DDG 104)	3	2018	3	2018

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 ITEM NOMENCLATURE PE 0603582N: Combat System Integration		PROJECT 0164: Combat System Integration
		Start		End
Events by Sub Project		Quarter	Year	Quarter Year
FY18 NAVCERTs (LHD 7; DDG 76, 78)		4	2018	4 2018
C5IMP Monthly Baselineing (12/Year)		1	2014	4 2018
FY14 NCMC - 1		1	2014	1 2014
FY14 NCMC - 2		3	2014	3 2014
FY15 NCMC - 1		1	2015	1 2015
FY15 NCMC - 2		3	2015	3 2015
FY16 NCMC - 1		1	2016	1 2016
FY16 NCMC - 2		3	2016	3 2016
FY17 NCMC - 1		1	2017	1 2017
FY17 NCMC - 2		3	2017	3 2017
FY18 NCMC - 1		1	2018	1 2018
FY18 NCMC - 2		3	2018	3 2018
AEGIS ACB 12 Integrated Testing DEMO #2 @ NSWC/DD		1	2013	1 2013
SSDS Interoperability Test & Analysis		1	2013	2 2013
SSDS Interoperability Assessment		2	2013	2 2013
AMIIP Interoperability Test & Analysis		2	2013	3 2013
AMIIP Interoperability Assessment		3	2013	3 2013
Verification, Validation & Analysis (13-1)		2	2013	2 2013
CVN 68 CSIT		2	2013	3 2013
Systems Engineering Event (13-1)		2	2013	2 2013
ACB 12 (B/L 9A) Interoperability Test & Analysis		2	2013	3 2013
ACB 12 (B/L 9A) Interoperability Assessment		3	2013	3 2013
AWS 7.2 Interoperability Test & Analysis		3	2013	4 2013
AWS 7.2 Interoperability Assessment		4	2013	4 2013
Verification, Validation & Analysis (13-2)		4	2013	4 2013

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>		PROJECT 0164: <i>Combat System Integration</i>
		Start		End
Events by Sub Project		Quarter	Year	Quarter
				Year
Systems Engineering Event (13-2)		4	2013	4
CVN 69 CSIT		2	2013	3
LCS 2 CSIT		1	2013	3
LHD 2 CSIT		4	2013	1
LPD 22 CSIT		3	2013	4
LSD 41 Class CSIT		2	2013	3
CVN 75 CSIT		2	2013	3
FY13 DDG 1000 CSIT		3	2013	4
FY13 CVN 69 Interoperability Assessment		1	2013	1
LPD 22 Interoperability Assessment		2	2013	2
ACB 12 Interoperability Assessment		3	2013	3
FY13 AWS 8.1.0.0 Interoperability Assessment		4	2013	4
FY14 LHD 7 Interoperability Assessment		1	2014	1
FY14 ACB 12 Interoperability Assessment		2	2014	2
CVN 75 Interoperability Assessment		1	2015	1
DDG 1000 Interoperability Assessment		2	2015	2
FY16 ACB 12 Interoperability Assessment		1	2016	1
FY16 AWS 8 Interoperability Assessment		2	2016	2
CVN 78 Interoperability Assessment		1	2017	1
CVN 69 Interoperability Assessment		2	2017	2
FY18 ACB 12 Interoperability Assessment		1	2018	1
FY18 AWS 7.1 Interoperability Assessment		2	2018	2

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603582N: Combat System Integration				PROJECT 3312: MTMD-Maritime Theater Missile Defense Forum			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
3312: MTMD-Maritime Theater Missile Defense Forum	0.000	3.135	4.561	8.525	-	8.525	9.478	9.140	9.385	7.863	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
A. Mission Description and Budget Item Justification												
This project funds participation in the Maritime Missile Defense Projects Framework Memorandum of Understanding of 2004 (as amended in 2009). Known as the Maritime Theater Missile Defense (MTMD) forum, it promotes interoperability with the Navies of nine participating nations. This project funds participation in several Project Arrangements and includes maritime contribution to the NATO Active Layered Theater Ballistic Missile Defense (ALTBMD) project.												
The 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 Integrated Air and Missile Defense (IAMD)capability among coalition nations. This includes protection across the full spectrum of these threats through the enhanced utilization of existing sea-based systems to protect against current threats while progressively improving and developing systems and system-of- systems to effectively counter evolving threats.												
MTMD supports USN participation in several MTMD related Project Arrangements and Working Groups including:												
(1) Battle Management Command, Control, Communications, Computers, and Intelligence (BMC4I) to define and develop architectures as well as to perform engineering to address coalition capability gaps.												
(2) Modeling & Simulation (M&S) to establish and maintain a maritime coalition M&S testbed and to perform legacy and future systems simulation testing.												
(3) Coalition Distributed Engineering Plant (CDEP) to establish and maintain a maritime coalition Hardware-in-the-Loop Testbed and to conduct CDEP testing.												
(4) Open Architecture (OA) to develop Interface Standards and Data Models.												
(5) Test Planning and Execution (TPEX) to develop Test Plans, oversee exercise participation and conduct post event data analysis and reporting.												
(6) Operational Requirements (OR) to develop a Coalition Maritime Missile Defense Operational Concept Document and to identify operational constraints and tactical constructs surrounding coalition maritime missile defense activities.												
(7) Next Generation Infrared Search and Track (IRST) to evaluate commercial-based technologies to develop a passive IRST sensor system in support of coalition maritime missile defense operations.												
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)									FY 2012	FY 2013	FY 2014	
Title: Maritime Theater Missile Defense Forum (MTMD)									3.135	4.561	8.525	
									Articles: 0	0	0	

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>		R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013
<p>Description: 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), Test Planning and Execution (TPEX), Open Architecture (OA), Operational Requirements (OR) and Next Generation Infrared Search and Track (IRST) Project Arrangements and working groups.</p> <p>FY 2012 Accomplishments: MTMD participated in the Modeling and Simulation (M&S), Battle Management, Command, Control, Communications, Computers and Intelligence (BMC4I), and Coalition Distributed Engineering Plant (CDEP), Test Planning and Execution (TPEX), Open Architecture (OA), Operational Requirements (OR) and Next Generation Infrared Search and Track (IRST) Project Arrangements and working groups. Funding was used for collaborative development of architectures, engineering, test and evaluation to improve key allies' maritime missile defense interoperability with U.S. Forces and included collation-level Integrated Air and Missile Defense exercises with targets and weapons.</p> <p>FY 2013 Plans: To participate in the Modeling and Simulation (M&S), Battle Management, Command, Control, Communications, Computers and Intelligence (BMC4I), and Coalition Distributed Engineering Plant (CDEP), Test Planning and Execution (TPEX), Open Architecture (OA), Operational Requirements (OR) and Next Generation Infrared Search and Track (IRST) Project Arrangements and working groups.</p> <p>FY 2014 Plans: To participate in the Modeling and Simulation (M&S), Battle Management, Command, Control, Communications, Computers and Intelligence (BMC4I), and Coalition Distributed Engineering Plant (CDEP), Test Planning and Execution (TPEX), Open Architecture (OA), Operational Requirements (OR) and Next Generation Infrared Search and Track (IRST) Project Arrangements and working groups.</p>			
Accomplishments/Planned Programs Subtotals		3.135	4.561
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy N/A			

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>

E. Performance Metrics

Quarterly Program Reviews and Baseline Assessments

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy												DATE: April 2013			
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>						R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>						PROJECT 3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>			
Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	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:Dam Neck/Dahlgren/Corona	0.000	1.997	Dec 2011	2.995	Dec 2012	5.632	Sep 2014	-		5.632	Continuing	Continuing	Continuing
Maritime Theater Missile Defense Forum	C/FFP	Various Contracts:SAIC/EG&G/NOVONICS/TASC/BCI/JHU APL	0.000	1.138	Dec 2011	1.566	Dec 2012	2.893	Sep 2014	-		2.893	0.000	5.597	
Subtotal			0.000	3.135		4.561		8.525		0.000		8.525			
			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	3.135		4.561		8.525		0.000		8.525			
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
 BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE

PE 0603582N: Combat System Integration

PROJECT

3312: MTMD-Maritime Theater Missile
 Defense Forum

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Proj: 3312 - MTMD-Maritime Theater Missile Defense Forum																												
Next Generation IRST (NG IRST) #1																												
Battle Mgmt, Command, Control, Communications, Computers, & Intell. (BMC4I) #2 Baseline Arch IO GAP Analysis & Target Arch #1 (TA1)																												
OA-OARIS #1																												
OR-Force Level ROE , OCD																												
OA-FLOATS #1 FLFs Interface Standards																												
Test Planning and Execution (TPEX) Master Test Plan, RIMPAC 12, Rapid Arrow, JW 13-1, JPOW13, At-Sea Event #1																												
Modeling & Simulation (M&S) Test #2 (BA/RA) and JPOW 2013																												
CDEP Interoperability Test #2 (BA/RA)																												
NG IRST #2																												
Combined M&S and CDEP Test #4 TA1 and Force Level Functions (FLFs) Test																												
Combined M&S and CDEP Test #3 TA1 and Pre-At-Sea Event Training																												
OR-Operational Oversight to T&E Events, FLFs, Training & TTPs																												
BMC4I Target Architecture # 3 (TA2) Engineering & Analysis																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy																								DATE: April 2013							
APPROPRIATION/BUDGET ACTIVITY												R-1 ITEM NOMENCLATURE												PROJECT							
1319: Research, Development, Test & Evaluation, Navy												PE 0603582N: Combat System Integration												3312: MTMD-Maritime Theater Missile							
BA 4: Advanced Component Development & Prototypes (ACD&P)																								Defense Forum							
				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
				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
TPEX A #2: At-Sea Events Joint Warrior 2015, RIMPAC 2016, Joint Warrior 2017 and RIMPAC 2018				<div></div>																											
OA-FLOATS #2 TA2, PPS Interface Standards				<div></div>																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj: 3312 - MTMD-Maritime Theater Missile Defense Forum				
Next Generation IRST (NG IRST) #1	1	2012	4	2012
Battle Mgmt, Command, Control, Communications, Computers, & Intell. (BMC4I) #2 Baseline Arch IO GAP Analysis & Target Arch #1 (TA1)	1	2012	4	2013
OA-OARIS #1	1	2012	4	2013
OR-Force Level ROE , OCD	1	2012	2	2013
OA-FLOATS #1 FLFs Interface Standards	1	2012	1	2015
Test Planning and Execution (TPEX) Master Test Plan, RIMPAC 12, Rapid Arrow, JW 13-1, JPOW13, At-Sea Event #1	1	2012	4	2015
Modeling & Simulation (M&S) Test #2 (BA/RA) and JPOW 2013	1	2012	3	2013
CDEP Interoperability Test #2 (BA/RA)	1	2012	4	2014
NG IRST #2	3	2013	3	2016
Combined M&S and CDEP Test #4 TA1 and Force Level Functions (FLFs) Test	2	2015	1	2018
Combined M&S and CDEP Test #3 TA1 and Pre-At-Sea Event Training	3	2012	4	2018
OR-Operational Oversight to T&E Events, FLFs, Training & TTPs	1	2013	4	2018
BMC4I Target Architecture # 3 (TA2) Engineering & Analysis	1	2013	1	2017
TPEX A #2: At-Sea Events Joint Warrior 2015, RIMPAC 2016, Joint Warrior 2017 and RIMPAC 2018	1	2014	4	2018
OA-FLOATS #2 TA2, PPS Interface Standards	1	2015	4	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy										DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603582N: Combat System Integration				PROJECT 9B88: Automated Test and Re-Test			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 [#]	FY 2014 Base	FY 2014 OCO ^{##}	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
9B88: Automated Test and Re-Test	0.000	9.875	10.136	10.005	-	10.005	8.124	8.236	8.411	8.552	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		
# FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012												
## The FY 2014 OCO Request will be submitted at a later date												
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 and integration which provides reproducible and quantitative evaluation of system performance with reduced levels of effort and schedule 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 Combat Systems Integration Testing (CSIT), formerly known as Warfare Systems Integration and Interoperability Testing (WSI2T), AEGIS Combat System Advanced Capability Build (ACB) 12, Antisubmarine Warfare Integrated Common Processor/Acoustic Rapid COTS Insertion, the Littoral Combat Ship (LCS) Mission Module development and other major acquisition programs. In addition, funding will support 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 2012	FY 2013	FY 2014
Title: Automated Test and Re-Test										9.875	10.136	10.005
Articles:										0	0	0
Description: The Navy, through Automated Test and Re-Test (ATRT) is developing an automated test/analysis capability, which is applicable at phases within system development and integration which provides reproducible and quantitative evaluation of system performance with reduced levels of effort and schedule 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 Combat Systems Integration Testing (CSIT), formerly known as Warfare Systems Integration and Interoperability Testing (WSI2T), AEGIS Combat System Advanced Capability Build (ACB) 12, Antisubmarine Warfare Integrated Common Processor/Acoustic Rapid COTS Insertion, the Littoral Combat Ship (LCS) Mission Module development and other major acquisition programs. In addition, funding will support the development of standards, specifications, and guidance to facilitate NAVSEA-affiliated programs' adoption of this TOC-reducing discipline and technology.												
FY 2012 Accomplishments: The ATRT program will be concluding (6) FY 2011 ATRT implementation projects throughout NAVSEA - affiliated PEOs. The ATRT program has continued to lead and advocate the development of automating testing standards, specifications, and contract language. There are currently (12) FY 2012 efforts in process for award and execution through PEO SHIPS, PEO CARRIERS,												

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 9B88: <i>Automated Test and Re-Test</i>	
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2012	FY 2013
PEO SUB, PEO IWS, PEO LCS, NAVSEA 05, and NAVSEA Warfare Centers. The ATRT program has continued to promote ATRT applications across NAVSEA - affiliated PEOs, with the intent of transitioning further development of the ATRT applications out of NAVSEA 05 program office funds. FY 2013 Plans: The ATRT program will continue to provide funding for investments in seed projects to implement ATRT within existing test processes in programs across NAVSEA. In parallel, the program will facilitate the development standards, specifications, and guidance for the use of ATRT tools and processes. With the recent engagement of other SYSCOMs in ATRT, a community of practice is gradually being developed across the system commands as the automated testing community becomes more engaged in the discipline. FY 2014 Plans: The ATRT program will continue to increase the number of ATRT pilot programs with the result of accelerating ATRT implementation as part of acquisition program development. Also, the ATRT program will continue to advocate the maturation/development of standards, specifications, and contract language that would improve test tool commonality and reuse across the Navy T&E domains.			
Accomplishments/Planned Programs Subtotals		9.875	10.136
C. Other Program Funding Summary (\$ in Millions) N/A			
Remarks			
D. Acquisition Strategy The Program Strategy for the ATRT program includes the following: - Investigation of applicable similarities to industry standards, specifications, and processes that are relevant to ATRT program to recognize best practices and leverage opportunities - Development of standards and specifications for ATRT tools/processes - Funding and execution of ATRT startup projects 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 Language Guidebook for ATRT			
E. Performance Metrics Progress towards meeting the objectives of the ATRT efforts will be monitored via the following:			

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>	PROJECT 9B88: <i>Automated Test and Re-Test</i>
<ul style="list-style-type: none">- Progress Briefs at Quarterly ATRT Stakeholders Meetings- Program Technical Reviews- Return on Investment (ROI) metrics based on testing and analysis level of effort (LOE) - before and after implementation of ATRT- Return on Investment Metrics based on work hours for test process execution - before and after automation		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy													DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>							R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>				PROJECT 9B88: <i>Automated Test and Re-Test</i>				

Product Development (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Auto Test Retest	C/CPFF	Innovative Defense Technologies (IDT):Ballston, VA	0.000	9.056	Dec 2011	9.090	Dec 2012	9.005	Sep 2014	-		9.005	0.000	27.151	
Auto Test Retest	WR	Various NSWCs:Not Specified	0.000	0.779	Dec 2011	0.842	Dec 2012	0.800	Sep 2014	-		0.800	0.000	2.421	
Subtotal			0.000	9.835		9.932		9.805		0.000		9.805	0.000	29.572	

Support (\$ in Millions)				FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Auto Test & Retest	C/CPFF	Gryphon Technologies:Herndon, VA	0.000	0.040	Dec 2011	0.204	Dec 2012	0.200	Sep 2014	-		0.200	Continuing	Continuing	Continuing
Subtotal			0.000	0.040		0.204		0.200		0.000		0.200			

			All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.000	9.875		10.136		10.005		0.000		10.005			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy			DATE: April 2013		
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>			R-1 ITEM NOMENCLATURE PE 0603582N: <i>Combat System Integration</i>		
			PROJECT 9B88: <i>Automated Test and Re-Test</i>		

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Automated Test and Re-Test (ATRT)																												
Development of ATRT Reference Model																												
Annual 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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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0603582N: Combat System Integration	PROJECT 9B88: Automated Test and Re-Test	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Automated Test and Re-Test (ATRT)				
Development of ATRT Reference Model	1	2012	1	2018
Annual Startup Projects for ATRT Implementation	1	2012	4	2018
Development of ATRT standards and specifications	1	2012	4	2018
Participation in Existing Government and Industrial Standards Boards	1	2012	4	2018
Evaluation of Business Case Analyses (BCA) of potential ATRT investments	1	2012	4	2018
Development of training and lessons learned for ATRT	1	2012	4	2018
Development of guidance for contract and requirements language pertaining to ATRT	1	2012	4	2018
Conduct of outreach efforts to NAVSEA programs and industry	1	2012	4	2018
ATRT Portal for Body of Knowledge	1	2012	4	2018