

# UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy										Date: February 2015		
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 Program Element (Number/Name) PE 0603582N / Combat System Integration							
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	357.238	4.270	20.881	35.901	-	35.901	35.213	31.985	29.556	30.259	Continuing	Continuing
0164: Combat System Integration	350.151	-	11.528	27.028	-	27.028	25.888	24.193	21.639	22.077	Continuing	Continuing
3312: MTMD-Maritime Theater Missile Defense Forum	7.087	4.270	9.353	8.873	-	8.873	9.325	7.792	7.917	8.182	Continuing	Continuing

## 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 common warfare systems engineering processes. 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's system modernization (non-HME) including warfighting capability & other C5I upgrades including C5IMP Baseline Management; and 3) Ship Warfare System Certification & Force Level Assessments. This includes Warfare Systems Certification, Interoperability Certification, Force Level Interoperability Analysis, & Assessments, Cybersecurity Assessments and recommendations for improvements to the program offices for implementation at the systems level.

In addition to these core efforts, this program also engages in efforts designed to ensure the U.S. Navy is interoperable with Joint and Coalition forces through the Maritime Theater Missile Defense (MTMD) and other bilateral/multilateral maritime integrated air and missile defense related efforts.

Project 0164 Combat System Integration:

This project consists of five key pillars executed within the SFI program: 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

# UNCLASSIFIED

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2016 Navy		<b>Date:</b> February 2015
<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy / BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</i>		<b>R-1 Program Element (Number/Name)</b> PE 0603582N / <i>Combat System Integration</i>
<p>installation, thereby reducing risk and enhancing readiness and effectiveness of deploying ship 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 and certifies ship electronic charting capability and certifies the accurate transmission of navigation data to combat and weapons systems; and 4) Interoperability Certification and Assessment, the independent assessment of Strike Group Warfare Systems operational performance. Interoperability Assessment examine force level engagement threads, aircraft control, air battle management, and operational displays. Assessments of deploying ships in Strike Force configurations are accomplished through the utilization of the Navy's Distributed Integration &amp; Interoperability Assessment Capability (DIIAC) Concept which will support the Deputy Assistant Secretary of the Navy (DASN) shift to the left policy by providing early interoperability testing in the acquisition lifecycle. 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 &amp; Limitations (C&amp;L) and Tactical Information Coordinator Technical Aids (TIC TECHAIDs)), which ensure that operators understand the interoperability capabilities and limitations of their combat systems and have the watch station tools necessary for the performance of their tactical responsibilities; 5) Cybersecurity assessment, the assessment of cybersecurity at the Warfare Systems System of Systems (SoS) level.</p> <p>Project 3312 Maritime Theater Missile Defense Forum (MTMD):            This project funds participation in Maritime Integrated Air and Missile Defense projects with other nations. Included is participation in the Maritime Missile Defense Projects Framework Memorandum of Understanding of 2004 (as amended 2009). Known as the Maritime Theater Missile Defense (MTMD) forum, it promotes interoperability with the Navies of nine participating nations (Australia, Canada, France, Germany, Italy, Netherlands, Spain, United Kingdom and the United States). This project funds participation in several Project Arrangements and includes maritime contribution to the NATO Active Layered Theater Ballistic Missile Defense (ALTBMD) project, now known as NATO Ballistic Missile Defense (BMD). Engineering analysis and recommendations from MTMD activities are provided to European, Pacific and Central Combatant Commands to influence present day operations. Specifically, the MTMD Forum is addressing challenges with "Maritime Allied Air Defense in Support of Ballistic Missile Defense Operations" that face the Combatant Commanders during present day operations.</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>This project supports USN participation in several Maritime IAMD related Project Arrangements and Working Groups including:</p> <ol style="list-style-type: none"> <li>(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.</li> <li>(2) Modeling &amp; Simulation (M&amp;S) to establish and maintain a maritime coalition M&amp;S testbed and to perform legacy and future systems simulation testing.</li> <li>(3) Coalition Distributed Engineering Plant (CDEP) to establish and maintain a maritime coalition Hardware-in-the-Loop Testbed and to conduct CDEP testing.</li> <li>(4) Open Architecture (OA) to develop Interface Standards and Data Models.</li> <li>(5) Test Planning and Execution (TPEX) to develop Test Plans, oversee exercise participation and conduct post event data analysis and reporting.</li> <li>(6) Operational Requirements (OR) to develop a Coalition Maritime Missile Defense Operational Concept Document and to identify operational constraints and tactical constructssurrounding coalition maritime missile defense activities.</li> </ol>		

**UNCLASSIFIED**

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy				Date: February 2015	
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 4: Advanced Component Development & Prototypes (ACD&P)		R-1 Program Element (Number/Name) PE 0603582N / Combat System Integration			
(7) Reciprocal Use of Test Facilities agreements with other nations to support Maritime IAMD and MTMD related demonstrations.					
B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	4.396	20.881	33.195	-	33.195
Current President's Budget	4.270	20.881	35.901	-	35.901
Total Adjustments	-0.126	-	2.706	-	2.706
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.126	-			
• Program Adjustments	-	-	2.881	-	2.881
• Rate/Misc Adjustments	-	-	-0.175	-	-0.175
Change Summary Explanation					
FY 2016, Proj 0164, increase to support research and development of Cybersecurity metrics and support Warfare Systems Certifications.					

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy										Date: February 2015		
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0603582N / <i>Combat System Integration</i>				Project (Number/Name) 0164 / <i>Combat System Integration</i>			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
0164: <i>Combat System Integration</i>	350.151	-	11.528	27.028	-	27.028	25.888	24.193	21.639	22.077	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**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; and 4) Interoperability Certification and Assessment, the independent assessment of Strike Group Warfare Systems operational performance. Interoperability Assessment examine force level engagement threads, aircraft control, air battle management, and operational displays. Assessments of deploying ships in Strike Force configurations are accomplished through the utilization of the Joint Mission Environment Test Capability (JMETC) network, which is the cornerstone for the Distributed Integration & Interoperability Assessment Capability (DIIAC) Concept which will support the DASN (RDA) shift to the left policy by providing early interoperability testing in the acquisition lifecycle. 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 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 and have the tactical guidance necessary to perform their task of operating the data links and 5) Cybersecurity assessment, the assessment of cybersecurity at the Warfare Systems System of Systems (SoS) level.

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

	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016 Base</b>	<b>FY 2016 OCO</b>	<b>FY 2016 Total</b>
<b>Title:</b> Navigation System Certification (NAVCERT)	-	1.143	1.824	-	1.824
<b>Articles:</b>	-	-	-	-	-
<b>Description:</b> This project funds assessments in support of new capability upgrades and modernization funded by the cognizant program office. The Navigation Certification (NAVCERT) program provides assurance to the ship, Immediate Superior in Command (ISIC) and Type Commander that the ships integrated navigation suite operates as intended and meets performance requirements for safe and reliable navigation and system operation. In addition, this program verified the accuracy of the data originating from sensors and validates its receipt by all users including Aircraft Inertial Alignment System, and Integrated Warfare Systems. Certification is required after five years, Chief of Naval Operations Availabilities Greater than six months, or in support of					

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy				Date: February 2015		
Appropriation/Budget Activity 1319 / 4		R-1 Program Element (Number/Name) PE 0603582N / Combat System Integration		Project (Number/Name) 0164 / Combat System Integration		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
<p>Precision Approach and Landing System (PALS). The scope of the certification includes all inertial navigation system equipment as well as the Electronic Charting and Display System Navy (ECDIS- N). This program meets OPNAV ECDIS-N and Operational Safety and Assurance certification requirements in SECNAVINST 5400.15C, and OPNAVINST 9420.2 and in the current draft of OPNAVINST 9420.1.</p> <p><b>FY 2014 Accomplishments:</b> FY 2014 accomplishments were funded with FY 2013 RDTEN funding issued in FY 2014. Performed 18 NAVCERTs on cruisers, destroyers, carriers, and amphib. Initiated update of NAVSEA Instruction 9420.4A to incorporate new program requirements, fleet input and lessons learned.</p> <p><b>FY 2015 Plans:</b> Continuing critical NAVCERT efforts to include performing 17 NAVCERTs on cruisers, destroyers, carriers, and amphib.</p> <p><b>FY 2016 Base Plans:</b> Plans are to perform 29 NAVCERTs on cruisers, destroyers, carriers, and amphib. Issue update of NAVSEA Instruction 9420.4A.</p> <p><b>FY 2016 OCO Plans:</b> N/A</p>						
<p><b>Title:</b> Command, Control, Communications, Computer, Combat Systems, and Intelligence Modernization Process (C5IMP) and Fleet Readiness (C5ISR)</p> <p><b>Articles:</b></p> <p><b>Description:</b> This project funds engineering assessments of proposed C5I capability modernizations to determine maturity for installation and risk associated with installs of equipment outside of normal modernization windows. This project is required to support the fleet C5I Modernization Policy (per COMUSFLTFORCOM/COMPACFLT Inst. 4720.3B), to manage operational risks associated with C5ISR modernization in both afloat and ashore units ensuring deploying units receive improved, interoperable, and certified warfighting capabilities in order to meet theater operational requirements. This is done by determining the maturity, through engineering analysis, of the critical linchpins needed to achieve interoperability for each proposed C5IMP capability improvement item to be installed in a ships baseline (Baseline Change), developing installation recommendations of C5I system upgrades for the Fleet Commanders, and researching and analyzing installation or operating problems. Failure to achieve required maturity can break the warfare system package installed on a ship and impact strike group capabilities. There is close coordination with the FLTCDRs and TYCOMs as well as other members of the C5IMP community to address, coordinate,</p>		- -	1.660 -	1.780 -	- -	1.780 -

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy				Date: February 2015		
Appropriation/Budget Activity 1319 / 4		R-1 Program Element (Number/Name) PE 0603582N / <i>Combat System Integration</i>		Project (Number/Name) 0164 / <i>Combat System Integration</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
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.  <b>FY 2014 Accomplishments:</b> FY 2014 accomplishments were funded with FY 2013 RDTEN funding issued in FY 2014. Facilitated critical C5IMP efforts to include facilitating review, assessment, and execution of C5I installations during CNO Availabilities in FY14.  <b>FY 2015 Plans:</b> Facilitate review, assessment, and execution of C5I installations during approximately 100 CNO Availabilities in FY15. Support two NCMCs and 12 monthly baseline events.  <b>FY 2016 Base Plans:</b> Facilitate review, assessment, and execution of C5I installations during approximately 100 CNO Availabilities in FY16. Support two NCMCs and 12 monthly baseline events.  <b>FY 2016 OCO Plans:</b> N/A						
<b>Title:</b> Interoperability Certification and Assessment  <b>Articles:</b>  <b>Description:</b> This project funds Interoperability assessments via the Distributed Integration & Interoperability Assessment Capability (DIIAC), the technical assessment of interoperable systems to meet mission requirements, the updating of Strike Group Capabilities and Limitations (C&L) and the updating of the Tactical Information Coordinator Technical Aids (TIC TECHAIDs). Efforts of the project 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 DIIAC, 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 DIIAC prior to deployment. The DIIAC provides the only opportunity for comprehensive interoperability testing of combat system and C5I configuration items prior to shipboard		- -	5.931 -	12.313 -	- -	12.313 -

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: February 2015			
Appropriation/Budget Activity 1319 / 4		R-1 Program Element (Number/Name) PE 0603582N / <i>Combat System Integration</i>		Project (Number/Name) 0164 / <i>Combat System Integration</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
<p>delivery for operational use in surface combatant platforms and strike group units. Further, the DIIAC provides the mechanism to support the surface Navy's participation in the Joint testing environments as well as the Maritime Theater Missile Defense (MTMD) Coalition forces interoperability testing. The result of DIIAC testing is fed into the development of fleet tactical tools: Capabilities &amp; Limitations (C&amp;L) and Tactical Information Coordinator Technical Aids (TIC TECHAIDS), which ensure that operators understand the interoperability capabilities and limitations of their combat systems. C&amp;Ls are delivered for Strike Groups and their Coalition and Joint partners. TIC TECHAIDS are delivered to deploying Strike Group ships prior to workups and then a final copy prior to deployment. C&amp;L and TIC TECHAIDS are the final report-out to the Fleet operators of the acquisition community's efforts. They are used on a daily basis in every operational theater as well as in every Navy and Joint schoolhouse.</p> <p><b>FY 2014 Accomplishments:</b> FY 2014 accomplishments were funded with FY 2013 RDTEN funding issued in FY 2014. DIIAC testing, supports the Naval Warfare Systems Certification Policy (NWSCP) and produces Objective Quality Evidence (OQE) used in Warfare Systems Certification Installation Assessment (WSIA) and Warfare System Certification Decision (WSCD). Conducted three limited interoperability assessments of LCS-1 and AEGIS/SSDS AMIIP Baselines. Provided C&amp;L documents for 30 deploying Strike Groups (from a database containing 204 US surface ships) and 10 Naval Air Squadrons (covering F/A-18s, E-2Cs, MH-60s, EA-6Bs and P-3s). TIC TECHAIDS delivered for SG ships, ARG ships, and independent deploying ships.</p> <p><b>FY 2015 Plans:</b> Continuing critical Interoperability Certification and Assessment efforts to include a limited interoperability assessment test for AEGIS Baseline 9. Conduct evaluation and provide required updates to Interoperability C&amp;L for 30 deploying Strike Groups (from a database containing 204 US surface ships), 110 Naval Air Squadrons (covering F/A-18s, E-2Cs, MH-60s, EA-6Bs and P-3s). Provide annual deliveries of TIC TECHAIDS for SG, ships ARG ships, and independent deploying.</p> <p><b>FY 2016 Base Plans:</b> Conduct four DIIAC test event to support the Interoperability Assessment for certification of SSDS for CVN78, including planning, execution, and reconstruction with data analysis. Conduct Interoperability Certification assessments for two AEGIS baselines and a representative Carrier Strike Group (CSG) Assessment to provide OQE for Warfare Systems Certification. Conduct evaluation and provide required updates to Interoperability C&amp;L documents on the C&amp;L website for 30 deploying Strike Groups (from a database containing 204 US surface ships), 110 Naval Air Squadrons (covering F/A-18s, E-2Cs, MH-60s, EA-6Bs and P-3s). Provide annual</p>						

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: February 2015			
Appropriation/Budget Activity 1319 / 4		R-1 Program Element (Number/Name) PE 0603582N / Combat System Integration		Project (Number/Name) 0164 / Combat System Integration		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
deliveries of TIC TECHAIDS for SG, ships ARG ships, and independent deploying ships and Land Based Sites at Maritime Operations Centers (MOC) and Fleet Area Control and Surveillance Facilities (FACSFAC).						
FY 2016 OCO Plans: N/A						
Title: Warfare Systems Certification		-	2.794	8.111	-	8.111
Articles:		-	-	-	-	-
Description: This project funds the conduct of Warfare Systems Certification against set criteria. This includes providing operational risk assessments, using Objective Quality Evidence (OQE), to ensure installation readiness and deployment readiness of warfare systems and Navy surface ships. 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 perform these assessments based on OQE obtained through testimony of subordinate activities and independent modeling/simulation and testing both for initial assessments and certifications. NAVSEA engineering analyses are developed and staffed for criteria not met. NAVSEA accomplishes these efforts through Warfare Systems Certification Readiness Reviews (WSCRR), Warfare Systems Installation Assessment (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 the Fleet with 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. This allows the Fleet to make informed installation, testing/exercise, and training decisions. 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. An operational risk assessment characterizing warfare systems maturity and readiness to support the subject ship's deployment is developed from OQE gathered from 20 different criteria for each decision point meeting/panel. This pillar also ensures that aggregate deficiencies and workarounds do not render the operator ineffective by conducting modeling/simulation/testing and analysis of all work-arounds documented in Tactics, Techniques and Procedures (TTPs), Capabilities & Limitations (C&L), and Trouble Reports (TR).						
FY 2014 Accomplishments:						



**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: February 2015			
Appropriation/Budget Activity 1319 / 4		R-1 Program Element (Number/Name) PE 0603582N / Combat System Integration		Project (Number/Name) 0164 / Combat System Integration		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
FY 2014 accomplishments were funded with FY 2013 RDTEN funding issued in FY 2014. Conducted Warfare Systems Certification Events for a subset of the 20 criteria that do not require modeling/simulation and testing for 80 ships (WSCRRs, WSIAAs, and WSCDs), involving CG 47, DDG 51/1000, CVN 68/78, LHA 1/6, LHD 1, LPD 17, LSD 41/49 LCS Ship Classes and amphibious assault ships.  <b>FY 2015 Plans:</b> Continuing Warfare System Certification for subset of the 20 criteria that do not require modeling/simulation and testing for 50 ships (e.g. aggregate deficiencies and workload analysis) efforts to for 50 Warfare Systems Certification Events for above ship classes.  <b>FY 2016 Base Plans:</b> Support approximately 100 Warfare Systems Certification Events for above ship classes for all 20 criteria including those criteria that require modeling/simulation and testing. Update the NWSCP and implement revised Naval Warfare Systems Certification Policy.  <b>FY 2016 OCO Plans:</b> N/A						
<b>Title:</b> Warfare Systems Cybersecurity  <div>Articles:</div> <b>Description:</b> The required assessment and characterization of aggregate levels of risk for Ships is required at the Warfare Systems System of Systems (SoS) level and will be required for the Naval Warfare Systems Certification of Navy Carriers and Combatants. Cybersecurity assessment activities begins in FY16. Cybersecurity Assessment at the SoS level will entail: 1.) establishing and collecting metrics to characterize Warfare Systems ability to protect, detect, react, and restore capabilities, as well as analyze the mission effects induced by the cyber threat activity; 2.) start the development of the methodologies, tools, and techniques used to conduct such risk assessments appropriate to ship warfare systems baselines and representative strike group interoperability requirements; 3.) conduct an assessment of developmental and operational warfare systems.  <b>FY 2014 Accomplishments:</b> N/A  <b>FY 2015 Plans:</b> N/A  <b>FY 2016 Base Plans:</b>		- -	- -	3.000 -	- -	3.000 -

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2016 Navy			<b>Date:</b> February 2015		
<b>Appropriation/Budget Activity</b> 1319 / 4		<b>R-1 Program Element (Number/Name)</b> PE 0603582N / <i>Combat System Integration</i>		<b>Project (Number/Name)</b> 0164 / <i>Combat System Integration</i>	

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>		<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016 Base</b>	<b>FY 2016 OCO</b>	<b>FY 2016 Total</b>
Develop Cybersecurity metrics, methodologies and support Warfare Systems Certifications by providing cybersecurity assessments in support of WSIA's and WSCDs.						
<b>FY 2016 OCO Plans:</b> N/A						
<b>Accomplishments/Planned Programs Subtotals</b>		-	11.528	27.028	-	27.028

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

<u>Line Item</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016 Base</u>	<u>FY 2016 OCO</u>	<u>FY 2016 Total</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPN 2960: <i>ICSTF: Integrated Combat System Test Facility</i>	8.143	4.016	14.419	-	14.419	8.777	8.972	9.186	8.379	Continuing	Continuing

**Remarks**

**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**

Quarterly Program Reviews and Baseline Assessments

## UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy												Date: February 2015			
Appropriation/Budget Activity 1319 / 4						R-1 Program Element (Number/Name) PE 0603582N / <i>Combat System Integration</i>				Project (Number/Name) 0164 / <i>Combat System Integration</i>					
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	-		-		-		-		-	-	5.157	-
SF Requirements Engineering & Analysis	WR	Non-NSWCs : Various	5.295	-		-		-		-		-	-	5.295	-
Platform/Strike Force Certification	WR	NSWCs : DD/ICSTD/DN/Corona	39.732	-		-		-		-		-	-	39.732	-
Platform/Strike Force Certification	WR	Non-NSWCs : Various	27.843	-		-		-		-		-	-	27.843	-
Fleet Response Plan (FRP)	WR	NSWCs : DD/PHD/DN	27.030	-		-		-		-		-	-	27.030	-
Fleet Response Plan (FRP)	WR	Non-NSWCs : Various	3.793	-		-		-		-		-	-	3.793	-
Combat Systems Cert ISO Platform Cert	WR	NSWCs : DN/DD/PHD/Corona	24.640	-		-		-		-		-	-	24.640	-
Combat Systems Cert ISO Platform Cert	WR	Non-NSWCs : Various	1.853	-		-		-		-		-	-	1.853	-
Navigation System Certification	WR	SPAWAR : Charleston	6.290	-		1.143	Nov 2014	1.824	Nov 2015	-		1.824	Continuing	Continuing	Continuing
C5IMP & Fleet Readiness	WR	NSWCs : DD/PHD	4.577	-		1.210	Jan 2015	1.780	Jan 2016	-		1.780	Continuing	Continuing	Continuing
C5IMP & Fleet Readiness	WR	Non-NSWCs : Various	0.000	-		-		-		-		-	-	-	-
Warfare Systems Certification	WR	NSWCs : DD/DN/Corona	16.154	-		1.035	Nov 2014	3.850	Nov 2015	-		3.850	Continuing	Continuing	Continuing
Warfare Systems Certification	WR	Non-NSWCs : Various	3.500	-		1.759	Jan 2015	4.261	Jan 2016	-		4.261	Continuing	Continuing	Continuing
CNI/Design Agent	SS/CPAF	General Dynamics : Not Specified	47.926	-		-		-		-		-	-	47.926	-
CNI/Software Engineering	WR	NSWC : Dahlgren	8.383	-		-		-		-		-	-	8.383	-
CNI/Test and Evaluation	WR	CDSA : Not Specified	3.922	-		-		-		-		-	-	3.922	-
CNI/Systems Engineering	WR	NSWC : PHD	2.645	-		-		-		-		-	-	2.645	-
CNI/Miscellaneous	WR	Various : Various	7.529	-		-		-		-		-	-	7.529	-

## UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy												Date: February 2015			
Appropriation/Budget Activity 1319 / 4						R-1 Program Element (Number/Name) PE 0603582N / <i>Combat System Integration</i>				Project (Number/Name) 0164 / <i>Combat System Integration</i>					
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	-		-		-		-		-	-	17.500	-
Contract Engineering Support	C/CPFF	Gryphon Technology : VA	22.159	-		1.050	Jan 2015	1.170	Jan 2016	-		1.170	Continuing	Continuing	Continuing
Contract Program Management Support	C/CPFF	Delta Resources Inc. : VA	8.141	-		-		-		-		-	-	8.141	-
Travel	Allot	NAVSEA HQ : Washington, DC	2.290	-		-		-		-		-	-	2.290	-
Interoperability Fixes	WR	NSWCs : Various	1.500	-		-		-		-		-	-	1.500	-
TIC TECHAIDS	WR	CSC : VA	0.000	-		1.175	Jan 2015	1.460	Jan 2016	-		1.460	Continuing	Continuing	Continuing
Interoperability Cert Assessment	WR	NSWCs : DD/SSC/ Corona	0.000	-		1.146	Nov 2014	1.352	Nov 2015	-		1.352	Continuing	Continuing	Continuing
DIIAC Engineering and Operations	WR	NSWCs : DD/DN/ PHD	0.000	-		1.326	Jan 2015	2.981	Jan 2016	-		2.981	Continuing	Continuing	Continuing
Warfare Systems Cybersecurity	WR	NSWCs : Various	0.000	-		-		3.000	Jan 2016	-		3.000	-	3.000	-
Subtotal			287.859	-		9.844		21.678		-		21.678	-	-	-
Remarks															
The programs principle support contracts (N00178-04D-4062 EH04 and N00178-04D-4030 EH02) are incrementally funded via Technical Instructions throughout the course of the fiscal year and the last increment to be awarded is 15% of the budget to cover efforts executed during the 4th qtr of the FY.															
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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	5.736	-		-		-		-		-	-	5.736	-
Interoperability Certification Assessment	WR	NSWCs : DD/ SPAWAR/San Diego	26.804	-		1.052	Jan 2015	2.791	Jan 2016	-		2.791	Continuing	Continuing	Continuing
DEP Engineering and Operations	WR	NSWCs : DD/ SPAWAR/San	17.129	-		0.632	Jan 2015	2.559	Jan 2016	-		2.559	Continuing	Continuing	Continuing

## UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy													Date: February 2015		
Appropriation/Budget Activity 1319 / 4						R-1 Program Element (Number/Name) PE 0603582N / <i>Combat System Integration</i>				Project (Number/Name) 0164 / <i>Combat System Integration</i>					
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
DEP Engineering and Operations	WR	NSWCs : Various	12.623	-		-		-		-		-	-	12.623	-
Subtotal			62.292	-		1.684		5.350		-		5.350	-	-	-
			Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			350.151	-		11.528		27.028		-		27.028	-	-	-
Remarks															

## UNCLASSIFIED

Exhibit R-4, RDT&amp;E Schedule Profile: PB 2016 Navy

Date: February 2015

Appropriation/Budget Activity

1319 / 4

R-1 Program Element (Number/Name)

PE 0603582N / *Combat System Integration*

Project (Number/Name)

0164 / *Combat System Integration*

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	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>COMBAT SYSTEM INTEGRATION</b>																												
NAVCERT: FY14 NAVCERTs (DDGs 72; CG 69)	■																											
NAVCERT: FY14 NAVCERTs (DDGs 74, 78, 90, 95; LHD 2)		■																										
NAVCERT: FY14 NAVCERTs (DDGs 67, 76, 106; LHD 3; CG 53; LPD 20)			■																									
NAVCERT: FY14 NAVCERTs (DDGs 73, 87, 92; CVN 74; LHD 1)				■																								
NAVCERT: FY15 NAVCERTs (DDGs 86, 93, 94; LHDs 2, 4; CG 61, CVN 69)					■																							
NAVCERT: FY15 NAVCERTs (CG 53; DDG 88, 96)						■																						
NAVCERT: FY15 NAVCERTs (DDGs 62, 107, 109; CG 58, CVNs 73, 75, 76)							■																					
NAVCERT: FY16 NAVCERTs (CVNs 68, 70, 77; DDGs 51, 56, 77, 97, 100; LHDs 6, 8)								■																				
NAVCERT: FY16 NAVCERTs (DDGs 70, 89, 102, 111; LHD 7; MCM 13)									■																			
NAVCERT: FY16 NAVCERTs (CGs 54, 66, 71; CVN 71; DDGs 57, 69, 99, 110; LCC 20; LHD 2)										■																		
NAVCERT: FY16 NAVCERTs (CG 72, DDG 74, LHD 6)											■																	
NAVCERT: FY17 NAVCERTs (DDGs 63, 98; LPDs 17, 22; LHD 4, LCC 19)												■																
NAVCERT: FY17 NAVCERTs (DDGs 52, 55, 60, 79, 81, 112; LHDs 1, 3; CVNs 67 68, 70; CVN 69)													■															

## UNCLASSIFIED

Exhibit R-4, RDT&amp;E Schedule Profile: PB 2016 Navy

Date: February 2015

## Appropriation/Budget Activity

1319 / 4

## R-1 Program Element (Number/Name)

PE 0603582N / Combat System Integration

## Project (Number/Name)

0164 / Combat System Integration

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	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
NAVCERT: FY17 NAVCERTs (CGs 57, 65, 67; CVN 76; DDGs 66, 71, 85, 101)																												
NAVCERT: FY17 NAVCERTs (LHDs 4, 5; DDG 68)																												
NAVCERT: FY18 NAVCERTs (CG 64; DDGs 62, 82, 84; LHD 5; MCM 6; LPD 24)																												
NAVCERT: FY18 NAVCERTs (DDGs 54, 64, 75, 80, 83; CGs 55, 69, 52; LHA 6; LHD 7; MCM 4, MCM 11)																												
NAVCERT: FY18 NAVCERTs (DDG 82; CVNs 68, 74, 75, 76; LHD 2; LPD 19; MCM 14)																												
NAVCERT: FY18 NAVCERTs (CGs 60, 64, 68; DDGs 71, 80, 104; LHD 6; LPDs 19, 25; MCMs 2, 3)																												
NAVCERT: FY19 NAVCERTs (DDGs 63, 72, 85)																												
NAVCERT: FY19 NAVCERTs (DDGs 58, 69, 74, 83; LPDs 22, 23)																												
NAVCERT: FY19 NAVCERTs (DDGs 67, 81; LHD 3; CG 53; CVN 71)																												
NAVCERT: FY19 NAVCERTs (DDGs 73, 76, 86, 87, 92; CVN 77; LHDs 4, 6; LPD 20)																												
C5IMP: FY15 C5IMP Monthly Baseline (12/ Year)																												
C5IMP: FY15 NCMC - 1																												
C5IMP: FY15 NCMC - 2																												
C5IMP: FY16 C5IMP Monthly Baseline (12/ Year)																												
C5IMP: FY16 NCMC - 1																												

## UNCLASSIFIED

Exhibit R-4, RDT&amp;E Schedule Profile: PB 2016 Navy

Date: February 2015

## Appropriation/Budget Activity

1319 / 4

## R-1 Program Element (Number/Name)

PE 0603582N / *Combat System Integration*

## Project (Number/Name)

0164 / *Combat System Integration*

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	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
C5IMP: FY16 NCMC - 2																												
C5IMP: FY17 C5IMP Monthly Baseline (12/ Year)																												
C5IMP: FY17 NCMC - 1																												
C5IMP: FY17 NCMC - 2																												
C5IMP: FY18 C5IMP Monthly Baseline (12/ Year)																												
C5IMP: FY18 NCMC - 1																												
C5IMP: FY18 NCMC - 2																												
C5IMP: FY19 C5IMP Monthly Baseline (12/ Year)																												
C5IMP: FY19 NCMC - 1																												
C5IMP: FY19 NCMC - 2																												
Interoperability Certification & Assessments: FY14 SSDS Interoperability Test & Analysis																												
Interoperability Certification & Assessments: FY14 ACS 9 Interoperability Test & Analysis																												
Interoperability Certification & Assessments: FY14 SSDS Interoperability Assessment																												
Interoperability Certification & Assessments: FY15 BL 9C1 (DIIAC 15-1)																												
Interoperability Certification & Assessments: FY15 LCS 6/MH60R/VTUAV (DIIAC 15-2)																												
Interoperability Certification & Assessments: FY15 LCS 5/MH60R (DIIAC 15-3)																												
Interoperability Certification & Assessments: FY15 CSG Event (15-4)																												
Interoperability Certification & Assessments: FY15 BL 5.3.10/BFAS (15-5)																												



## UNCLASSIFIED

Exhibit R-4, RDT&amp;E Schedule Profile: PB 2016 Navy

Date: February 2015

## Appropriation/Budget Activity

1319 / 4

## R-1 Program Element (Number/Name)

PE 0603582N / *Combat System Integration*

## Project (Number/Name)

0164 / *Combat System Integration*

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	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
Interoperability Certification & Assessments: FY16 CVN 78 Interoperability Assessment (16-1)																												
Interoperability Certification & Assessments: FY16 CSG Event (16-2)																												
Interoperability Certification & Assessments: FY16 BL 5.4 Interoperability Assessment (16-3)																												
Interoperability Certification & Assessments: FY16 DDG 1000 (16-4)																												
Interoperability Certification & Assessments: BL 5.3.10/BFAS (16-5)																												
Interoperability Certification & Assessments: FY17 LCS 7 Interoperability Assessment (17-1)																												
Interoperability Certification & Assessments: FY17 BL 9C2 Certification Interoperability Assessment (17-2)																												
Interoperability Certification & Assessments: FY17 CVN 78 Certification Interoperability Assessment (17-3)																												
Interoperability Certification & Assessments: FY17 BL 92C Certification Interoperability Assessment (17-4)																												
Interoperability Certification & Assessments: BL 5.3.10/BFAS (17-5)																												
Interoperability Certification & Assessments: FY18 TBD Interoperability Assessment (18-1)																												
Interoperability Certification & Assessments: FY18 CSG Event (18-2)																												

## UNCLASSIFIED

Exhibit R-4, RDT&amp;E Schedule Profile: PB 2016 Navy

Date: February 2015

## Appropriation/Budget Activity

1319 / 4

## R-1 Program Element (Number/Name)

PE 0603582N / *Combat System Integration*

## Project (Number/Name)

0164 / *Combat System Integration*

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	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
Interoperability Certification & Assessments: FY18 TBD Interoperability Assessment (18-3)																												
Interoperability Certification & Assessments: FY18 DDG 1000 (18-4)																												
Interoperability Certification & Assessments: FY19 CSG Event (19-1)																												
Interoperability Certification & Assessments: FY19 LCS Interoperability Assessment (19-2)																												
Interoperability Certification & Assessments: FY19 LCS Interoperability Assessment (19-3)																												
Interoperability Certification & Assessments: FY19 LCS Interoperability Assessment (19-4)																												
Warfare Systems Certification: FY14 Warfare Systems Cert (80 events)																												
Warfare Systems Certification: FY15 Warfare Systems Cert (50 events)																												
Warfare Systems Certification: FY16 Warfare Systems Cert (100 events)																												
Warfare Systems Certification: FY17 Warfare Systems Cert (100 events)																												
Warfare Systems Certification: FY18 Warfare Systems Cert (100 events)																												
Warfare Systems Certification: FY19 Warfare Systems Cert (100 events)																												
Warfare Systems Cybersecurity: Warfare Systems Cybersecurity																												

**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details: PB 2016 Navy</b>			<b>Date:</b> February 2015
<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603582N / <i>Combat System Integration</i>	<b>Project (Number/Name)</b> 0164 / <i>Combat System Integration</i>	

**Schedule Details**

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>COMBAT SYSTEM INTEGRATION</b>				
NAVCERT: FY14 NAVCERTs (DDGs 72; CG 69)	1	2014	1	2014
NAVCERT: FY14 NAVCERTs (DDGs 74, 78, 90, 95; LHD 2)	2	2014	2	2014
NAVCERT: FY14 NAVCERTs (DDGs 67, 76, 106; LHD 3; CG 53; LPD 20)	3	2014	3	2014
NAVCERT: FY14 NAVCERTs (DDGs 73, 87, 92; CVN 74; LHD 1)	4	2014	4	2014
NAVCERT: FY15 NAVCERTs (DDGs 86, 93, 94; LHDs 2, 4; CG 61, CVN 69)	1	2015	1	2015
NAVCERT: FY15 NAVCERTs (CG 53; DDG 88, 96)	2	2015	2	2015
NAVCERT: FY15 NAVCERTs (DDGs 62, 107, 109; CG 58, CVNs 73, 75, 76)	3	2015	3	2015
NAVCERT: FY16 NAVCERTs (CVNs 68, 70, 77; DDGs 51, 56, 77, 97, 100; LHDs 6, 8)	1	2016	1	2016
NAVCERT: FY16 NAVCERTs (DDGs 70, 89, 102, 111; LHD 7; MCM 13)	2	2016	2	2016
NAVCERT: FY16 NAVCERTs (CGs 54, 66, 71; CVN 71; DDGs 57, 69, 99, 110; LCC 20; LHD 2)	3	2016	3	2016
NAVCERT: FY16 NAVCERTs (CG 72, DDG 74, LHD 6)	4	2016	4	2016
NAVCERT: FY17 NAVCERTs (DDGs 63, 98; LPDs 17, 22; LHD 4, LCC 19)	1	2017	1	2017
NAVCERT: FY17 NAVCERTs (DDGs 52, 55, 60, 79, 81, 112; LHDs 1, 3; CVNs 67 68, 70; CVN 69)	2	2017	2	2017
NAVCERT: FY17 NAVCERTs (CGs 57, 65, 67; CVN 76; DDGs 66, 71, 85, 101)	3	2017	3	2017
NAVCERT: FY17 NAVCERTs (LHDs 4, 5; DDG 68)	4	2017	4	2017
NAVCERT: FY18 NAVCERTs (CG 64; DDGs 62, 82, 84; LHD 5; MCM 6; LPD 24)	1	2018	1	2018
NAVCERT: FY18 NAVCERTs (DDGs 54, 64, 75, 80, 83; CGs 55, 69, 52; LHA 6; LHD 7; MCM 4, MCM 11)	2	2018	2	2018
NAVCERT: FY18 NAVCERTs (DDG 82; CVNs 68, 74, 75, 76; LHD 2; LPD 19; MCM 14)	3	2018	3	2018

**UNCLASSIFIED**

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy			Date: February 2015	
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603582N / Combat System Integration		Project (Number/Name) 0164 / Combat System Integration	
	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
NAVCERT: FY18 NAVCERTs (CGs 60, 64, 68; DDGs 71, 80, 104; LHD 6; LPDs 19, 25; MCMs 2, 3)	4	2018	4	2018
NAVCERT: FY19 NAVCERTs (DDGs 63, 72, 85)	1	2019	1	2019
NAVCERT: FY19 NAVCERTs (DDGs 58, 69,74, 83; LPDs 22, 23)	2	2019	2	2019
NAVCERT: FY19 NAVCERTs (DDGs 67, 81; LHD 3; CG 53; CVN 71)	3	2019	3	2019
NAVCERT: FY19 NAVCERTs (DDGs 73, 76, 86, 87, 92; CVN 77; LHDs 4, 6; LPD 20)	4	2019	4	2019
C5IMP: FY15 C5IMP Monthly Baseline (12/Year)	1	2015	4	2015
C5IMP: FY15 NCMC - 1	1	2015	1	2015
C5IMP: FY15 NCMC - 2	3	2015	3	2015
C5IMP: FY16 C5IMP Monthly Baseline (12/Year)	1	2016	4	2016
C5IMP: FY16 NCMC - 1	1	2016	1	2016
C5IMP: FY16 NCMC - 2	3	2016	3	2016
C5IMP: FY17 C5IMP Monthly Baseline (12/Year)	1	2017	4	2017
C5IMP: FY17 NCMC - 1	1	2017	1	2017
C5IMP: FY17 NCMC - 2	3	2017	3	2017
C5IMP: FY18 C5IMP Monthly Baseline (12/Year)	1	2018	4	2018
C5IMP: FY18 NCMC - 1	1	2018	1	2018
C5IMP: FY18 NCMC - 2	3	2018	3	2018
C5IMP: FY19 C5IMP Monthly Baseline (12/Year)	1	2019	4	2019
C5IMP: FY19 NCMC - 1	1	2019	1	2019
C5IMP: FY19 NCMC - 2	3	2019	3	2019
Interoperability Certification & Assessments: FY14 SSDS Interoperability Test & Analysis	1	2014	2	2014
Interoperability Certification & Assessments: FY14 ACS 9 Interoperability Test & Analysis	2	2014	2	2014
Interoperability Certification & Assessments: FY14 SSDS Interoperability Assessment	2	2014	2	2014
Interoperability Certification & Assessments: FY15 BL 9C1 (DIIAC 15-1)	1	2015	1	2015

**UNCLASSIFIED**

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy			Date: February 2015	
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0603582N / Combat System Integration		Project (Number/Name) 0164 / Combat System Integration	
	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Interoperability Certification & Assessments: FY15 LCS 6/MH60R/VTUAV (DIIAC 15-2)	2	2015	2	2015
Interoperability Certification & Assessments: FY15 LCS 5/MH60R (DIIAC 15-3)	3	2015	3	2015
Interoperability Certification & Assessments: FY15 CSG Event (15-4)	4	2015	4	2015
Interoperability Certification & Assessments: FY15 BL 5.3.10/BFAS (15-5)	4	2015	4	2015
Interoperability Certification & Assessments: FY16 CVN 78 Interoperability Assessment (16-1)	1	2016	1	2016
Interoperability Certification & Assessments: FY16 CSG Event (16-2)	2	2016	2	2016
Interoperability Certification & Assessments: FY16 BL 5.4 Interoperability Assessment (16-3)	3	2016	3	2016
Interoperability Certification & Assessments: FY16 DDG 1000 (16-4)	4	2016	4	2016
Interoperability Certification & Assessments: BL 5.3.10/BFAS (16-5)	4	2016	4	2016
Interoperability Certification & Assessments: FY17 LCS 7 Interoperability Assessment (17-1)	1	2017	1	2017
Interoperability Certification & Assessments: FY17 BL 9C2 Certification Interoperability Assessment (17-2)	2	2017	2	2017
Interoperability Certification & Assessments: FY17 CVN 78 Certification Interoperability Assessment (17-3)	3	2017	3	2017
Interoperability Certification & Assessments: FY17 BL 92C Certification Interoperability Assessment (17-4)	4	2017	4	2017
Interoperability Certification & Assessments: BL 5.3.10/BFAS (17-5)	4	2017	4	2017
Interoperability Certification & Assessments: FY18 TBD Interoperability Assessment (18-1)	1	2018	1	2018
Interoperability Certification & Assessments: FY18 CSG Event (18-2)	2	2018	2	2018
Interoperability Certification & Assessments: FY18 TBD Interoperability Assessment (18-3)	3	2018	3	2018
Interoperability Certification & Assessments: FY18 DDG 1000 (18-4)	4	2018	4	2018
Interoperability Certification & Assessments: FY19 CSG Event (19-1)	1	2019	1	2019

**UNCLASSIFIED**

**Exhibit R-4A, RDT&E Schedule Details:** PB 2016 Navy **Date:** February 2015

<b>Appropriation/Budget Activity</b> 1319 / 4	<b>R-1 Program Element (Number/Name)</b> PE 0603582N / <i>Combat System Integration</i>	<b>Project (Number/Name)</b> 0164 / <i>Combat System Integration</i>
--	--	---

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Interoperability Certification & Assessments: FY19 LCS Interoperability Assessment (19-2)	2	2019	2	2019
Interoperability Certification & Assessments: FY19 LCS Interoperability Assessment (19-3)	3	2019	3	2019
Interoperability Certification & Assessments: FY19 LCS Interoperability Assessment (19-4)	4	2019	4	2019
Warfare Systems Certification: FY14 Warfare Systems Cert (80 events)	1	2014	4	2014
Warfare Systems Certification: FY15 Warfare Systems Cert (50 events)	1	2015	4	2015
Warfare Systems Certification: FY16 Warfare Systems Cert (100 events)	1	2016	4	2016
Warfare Systems Certification: FY17 Warfare Systems Cert (100 events)	1	2017	4	2017
Warfare Systems Certification: FY18 Warfare Systems Cert (100 events)	1	2018	4	2018
Warfare Systems Certification: FY19 Warfare Systems Cert (100 events)	1	2019	4	2019
Warfare Systems Cybersecurity: Warfare Systems Cybersecurity	1	2016	4	2018

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy										Date: February 2015		
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0603582N / <i>Combat System Integration</i>				Project (Number/Name) 3312 / <i>MTMD-Maritime Theater Missile Defense Forum</i>			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>	7.087	4.270	9.353	8.873	-	8.873	9.325	7.792	7.917	8.182	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

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

This project funds participation in Maritime Integrated Air and Missile Defense projects with other nations. Included is participation in the Maritime Missile Defense Projects Framework Memorandum of Understanding of 2004 (as amended 2009). Known as the Maritime Theater Missile Defense (MTMD) forum, it promotes interoperability with the Navies of nine participating nations (Australia, Canada, France, Germany, Italy, Netherlands, Spain, United Kingdom and the United States). This project funds participation in several Project Arrangements and includes maritime contribution to the NATO Active Layered Theater Ballistic Missile Defense (ALTBMD) project, now known as NATO Ballistic Missile Defense (BMD). Engineering analysis and recommendations from MTMD activities are provided to European, Pacific and Central Combatant Commands to influence present day operations. Specifically, the MTMD Forum is addressing challenges with "Maritime Allied Air Defense in Support of Ballistic Missile Defense Operations" that face the Combatant Commanders during present day operations.

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.

This project supports USN participation in several Maritime IAMD 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) Reciprocal Use of Test Facilities agreements with other nations to support Maritime IAMD and MTMD related demonstrations.

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

	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016 Base</b>	<b>FY 2016 OCO</b>	<b>FY 2016 Total</b>
<b>Title:</b> Maritime Theater Missile Defense Forum (MTMD)	4.270	9.353	8.873	-	8.873

**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: February 2015			
Appropriation/Budget Activity 1319 / 4		R-1 Program Element (Number/Name) PE 0603582N / Combat System Integration		Project (Number/Name) 3312 / MTMD-Maritime Theater Missile Defense Forum		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Articles:		-	-	-	-	-
<p><b>Description:</b> This project funds participation in Maritime IAMD to promote interoperability with other nations. This project funds participation in Modeling and Simulation (M&amp;S), Battle Management, Command, Control, Communications, Computers and Intelligence (BMC4I), Coalition Distributed Engineering Plant (CDEP), Test Planning and Execution (TPEX), Open Architecture (OA), and Operational Requirements (OR) activities.</p> <p><b>FY 2014 Accomplishments:</b></p> <p>(1) BMC4I Target Architecture 1 was fully completed and provided to M&amp;S, CDEP and TPEX to finalize test architectures and to create the initial information exchange requirements between systems and nations to enable mission threads test development. BMC4I delivered the MTMD Coalition Capabilities and Interoperability (CCI) and Systems Tactical Data Links Interoperability (STIR) Reports.</p> <p>(2) M&amp;S delivered the Level I national M&amp;S Baseline Architecture test data for Level II multi-national analysis and conducted updates to system models and the M&amp;S testbed and federation stability tests to meet Target Architecture No. 1 requirements. M&amp;S also completed and delivered the Joint Project Optic Windmill 2013 (JPOW13) data analysis and final report. The JPOW13 and Baseline Architecture M&amp;S Level II analysis and recommendations will support at sea demonstration risk reduction activities.</p> <p>(3) CDEP completed supplemental Baseline Architecture Hardware-in the-Loop testing and delivered the CDEP Baseline Integrated Capabilities and Limitations Report and CDEP Target Architecture 2 test plan</p> <p>(4) Open Architecture completed the Open Architecture Radar Interface Standard and delivered the standard for international certification through the industry consortium Object Management Group. Once the industry consortium certifies the radar interface standard, it becomes an international standard. The development of Force Level Open Architecture Technical Standards (FLOATS) continues.</p> <p>(5) TPEX delivered the updated MTMD Master Test Plan and initial Data Collection and Analysis Plan and will continue planning and range preparations for the major at-sea demonstrations during Joint Warrior 152 in 2015 and Rim of the Pacific (RIMPAC) 2016. Targets and range services procurements for 2015 test events have commenced. Test architectures are in development with NATO BMD and the Missile Defense Agency. Risk reduction analysis and tests are underway.</p> <p>(6) Operational Requirements working group provided the initial Maritime Integrated Air and Missile Defense tactics, techniques and procedures and Operational Framework and Objectives for 2015 at sea testing to Fleet staff and operators for review. The MTMD nations received the documents for evaluation and the Operational framework guidance was provided for MTMD Forum multi-national and Force-Level mission planning.</p> <p><b>FY 2015 Plans:</b></p>						



**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy			Date: February 2015			
Appropriation/Budget Activity 1319 / 4		R-1 Program Element (Number/Name) PE 0603582N / Combat System Integration		Project (Number/Name) 3312 / MTMD-Maritime Theater Missile Defense Forum		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
<p>(1) BMC4I will continue engineering analysis and multi-national interoperability gap assessment from Target Architecture 1 Test results and will develop Target Architecture No. 2. BMC4I will evaluate Recommended Point Solutions and provide final recommendations for the implementation in correcting coalition interoperability gaps. BMC4I will finalize information exchange requirements in preparation for at-sea demonstrations. M&amp;S will support 2015 at-sea test training.</p> <p>(2) M&amp;S will complete analysis of Target Architecture No. 1 tests and test Architecture No. 1-1 and provide assessments and recommendations to improve information exchange requirements identified by BMC4I. M&amp;S will also provide training in support of the 2015 At-Sea demonstration.</p> <p>(3) CDEP will complete analysis of Target Architecture No. 1 hardware-in-the-loop tests and provide assessments and recommendations to improve information exchanges required to conduct the at-sea demonstrations. CDEP will provide the final architecture risk assessment and Capabilities &amp; Limitations document to support the at-sea demonstrations.</p> <p>(4) Open Architecture will continue development of the Force Level Open Architecture Technical Standard. Inputs from M&amp;S and CDEP test results will be used to improve the details of the standard.</p> <p>(5) TPEX will finalize preparations and conduct MTMD participation as part of Joint Warrior 152. This 2015 At-Sea Demonstration will include live tracking events and a combination of live and simulated engagements. Integrated Air Defense and Ballistic Missile Defense test scenarios among the nations will be conducted. This will be the first multi-national maritime test of its kind ever conducted. Planning for RIMPAC 2016 will continue and will include target configuration/procurement.</p> <p>(6) Operational Requirements group will continue to provide fleet inputs and operator oversight to test and evaluation events. The Operational Concept Document will be updated as will final tactics, techniques and procedures in support of the at-sea demonstrations in 2015 and 2016.</p> <p><b>FY 2016 Base Plans:</b></p> <p>(1) BMC4I will continue engineering analysis and multi-national interoperability gap assessment from Target Architecture 1 test results and complete development of Target Architecture No. 2. BMC4I will evaluate Recommended Point Solutions and provide final recommendations for the implementation in correcting coalition interoperability gaps. BMC4I will finalize information exchange requirements in preparation for at-sea demonstrations. BMC4I develop updates to MTMD Coalition Capabilities and Interoperability (CCI) and Systems Tactical Data Links Interoperability (STIR) Reports.</p>						

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2016 Navy			<b>Date:</b> February 2015		
<b>Appropriation/Budget Activity</b> 1319 / 4		<b>R-1 Program Element (Number/Name)</b> PE 0603582N / <i>Combat System Integration</i>		<b>Project (Number/Name)</b> 3312 / <i>MTMD-Maritime Theater Missile Defense Forum</i>	

<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016 Base</b>	<b>FY 2016 OCO</b>	<b>FY 2016 Total</b>
<p>(2) M&amp;S complete analysis of Target Architecture No 1-1 M&amp;S test and provide final assessment of Target Architecture 1-1. M&amp;S will also provide and recommendations to improve the information exchange requirements identified by BMC4I. M&amp;S will model and further Target Architectures and provide training in support of the 2016 at sea demonstration.</p> <p>(3) CDEP will conduct Target Architecture No. 1 hardware-in-the-loop tests and provide assessments and recommendations to improve information exchanges required to conduct the at-sea demonstrations. CDEP will evaluate the architecture risk, and update the Capabilities &amp; Limitations document to support the at-sea demonstrations.</p> <p>(4) Open Architecture will continue development of the Force Level Open Architecture Technical Standards. Inputs from M&amp;S, CDEP and TPEX tests will be used to improve standards.</p> <p>(5) TPEX will finalize preparations for and conduct MTMD participation as part of RIMPAC 16. This 2016 At-Sea Demonstration will include live tracking events and a combination of live and simulated engagements. Integrated Air Defense and Ballistic Missile Defense test scenarios among the nations will be conducted. This will be the first multi-national maritime test of its kind ever conducted. Planning for RIMPAC 2016 and follow-on 2017/2018 at-sea testing will continue and will include target configuration/procurement.</p> <p>(6) Operational Requirements group will continue to provide fleet inputs and operator oversight to test and evaluation events. The Operational Concept Document will be updated as will final tactics, techniques and procedures in support of the at-sea demonstrations in 2016.</p> <p><b>FY 2016 OCO Plans:</b> N/A</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	4.270	9.353	8.873	-	8.873

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

<b>Line Item</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016 Base</b>	<b>FY 2016 OCO</b>	<b>FY 2016 Total</b>	<b>FY 2017</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• 0605853N: <i>PU 0149 INTERNATIONAL COOP MANAGEMENT, TECHNICAL AND INTL SUPT</i>	2.500	2.244	2.300	-	2.300	2.358	2.417	2.477	2.539	Continuing	Continuing
• 0603790N: <i>PU 2293 NATO RESEARCH &amp; DEVELOPMENT</i>	0.500	-	-	-	-	-	-	-	-	Continuing	Continuing

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2016 Navy										<b>Date:</b> February 2015		
<b>Appropriation/Budget Activity</b> 1319 / 4				<b>R-1 Program Element (Number/Name)</b> PE 0603582N / <i>Combat System Integration</i>				<b>Project (Number/Name)</b> 3312 / <i>MTMD-Maritime Theater Missile Defense Forum</i>				
<b>C. Other Program Funding Summary (\$ in Millions)</b>												
	<u>Line Item</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u> <u>Base</u>	<u>FY 2016</u> <u>OCO</u>	<u>FY 2016</u> <u>Total</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
<u>Remarks</u>												
<b>D. Acquisition Strategy</b>												
N/A												
<b>E. Performance Metrics</b>												
Quarterly Program Reviews and Baseline Assessments												

**UNCLASSIFIED**

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy												Date: February 2015				
Appropriation/Budget Activity 1319 / 4						R-1 Program Element (Number/Name) PE 0603582N / <i>Combat System Integration</i>				Project (Number/Name) 3312 / <i>MTMD-Maritime Theater Missile Defense Forum</i>						
Test and Evaluation (\$ in Millions)						FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total		
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
BCM4I Architectures Definition &	WR	NSWC/DD : DAHLGREN, VA	0.703	0.161	Jan 2014	0.188	Dec 2014	0.154	Jan 2016	-		0.154	-	1.206	-	
BMC4I Architectures Definition &	C/CPFF	NSWC/DD : DAHLGREN, VA	0.393	0.030	Jul 2014	0.249	Dec 2014	0.239	Jan 2016	-		0.239	-	0.911	-	
BMC41 Interoperability Program Design & Direction	C/CPFF	SPAWAR : SAN DIEGO, CA	0.350	0.500	Jan 2014	0.756	Dec 2014	0.679	Jan 2016	-		0.679	Continuing	Continuing	Continuing	
BMC4I Programmatic Support	C/CPFF	GRYPHON : WASHINGTON, DC	0.000	0.023	Jun 2014	0.156	Dec 2014	0.140	Jan 2016	-		0.140	-	0.319	-	
M&S Test Plan and Execution	WR	CDSA/DN : DAM NECK, VA	0.629	0.154	Dec 2013	0.353	Dec 2014	0.244	Jan 2016	-		0.244	Continuing	Continuing	Continuing	
M&S Test Development & Engineering	C/CPFF	CDSA/DN : DAM NECK, VA	0.481	0.073	Feb 2014	0.356	Dec 2014	0.244	Jan 2016	-		0.244	Continuing	Continuing	Continuing	
M&S Technical Support & Special Studies	C/CPFF	NAVSEA (JHU/ APL) : LAUREL, MD	0.505	0.259	Mar 2014	0.384	Dec 2014	0.494	Jan 2016	-		0.494	Continuing	Continuing	Continuing	
CDEP Project Officer (PO)	WR	CDSA/DN : DAM NECK, VA	0.011	0.186	Apr 2014	0.404	Dec 2014	0.364	Jan 2016	-		0.364	Continuing	Continuing	Continuing	
CDEP Interoperability Cert Assess	WR	NSWC/DD : DAHLGREN, VA	0.714	0.100	Dec 2013	0.236	Dec 2014	0.212	Jan 2016	-		0.212	-	1.262	-	
CDEP Test Event Plan & Coor for Data Mgt & Analysis	WR	NSWC/COR : RIVERSIDE, CA	0.359	0.150	Dec 2013	0.165	Dec 2014	0.149	Jan 2016	-		0.149	Continuing	Continuing	Continuing	
CDEP Caps & Lims Development	WR	NSWC/PHD : VENTURA, CA	0.144	0.050	Dec 2013	0.325	Dec 2014	0.292	Jan 2016	-		0.292	Continuing	Continuing	Continuing	
CDEP Cross Domain Network Engineering	WR	SSCPAC : SAN DIEGO, CA	0.287	0.185	Dec 2013	0.236	Dec 2014	0.212	Jan 2016	-		0.212	Continuing	Continuing	Continuing	
CDEP Engineering & Operations	C/CPFF	SSCPAC (TEA) : SAN DIEGO, CA	0.210	-	Dec 2013	0.240	Dec 2014	0.215	Jan 2016	-		0.215	Continuing	Continuing	Continuing	
CDEP Data Guard Engineering	C/CPFF	NSWC/DD (LM) : DAHLGREN, VA	0.412	0.100	Apr 2014	0.207	Dec 2014	0.186	Jan 2016	-		0.186	Continuing	Continuing	Continuing	
CDEP Contract Engineering Support	C/CPFF	CDSA/DN (URS) : DAM NECK, VA	0.188	0.161	Jan 2014	0.166	Dec 2014	0.148	Jan 2016	-		0.148	Continuing	Continuing	Continuing	

**UNCLASSIFIED**

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy												Date: February 2015			
Appropriation/Budget Activity 1319 / 4						R-1 Program Element (Number/Name) PE 0603582N / <i>Combat System Integration</i>				Project (Number/Name) 3312 / <i>MTMD-Maritime Theater Missile Defense Forum</i>					
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	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 Development of Interface Standards	WR	NSWC/DD : DAHLGREN, VA	0.100	0.120	Apr 2014	0.473	Dec 2014	0.446	Jan 2016	-		0.446	Continuing	Continuing	Continuing
TPEX Technical Support	WR	PEO IWS : WASHINGTON, DC	0.000	0.050	Feb 2014	0.069	May 2015	0.051	Jan 2016	-		0.051	Continuing	Continuing	Continuing
TPEX Link Management Support, BTS LAB	WR	SPAWAR : SAN DIEGO, CA	0.000	-		-		-		-		-	-	-	-
TPEX Data Analysis & Reporting, PA 1 PO	WR	NSWC/COR : RIVERSIDE, CA	0.225	0.050	Dec 2013	0.597	Jun 2015	0.521	Jan 2016	-		0.521	Continuing	Continuing	Continuing
TPEX Afloat Training & Readiness	WR	TTGLANT : NORFOLK, VA	0.000	-		-		-		-		-	Continuing	Continuing	Continuing
TPEX Data Collection, Analysis & Reporting	WR	NSWC/DD : DAHLGREN, VA	0.000	0.100	Jan 2014	0.473	Dec 2014	0.106	Jan 2016	-		0.106	-	0.679	-
TPEX Mini Groom Team, PO, PE, TDL	WR	NSWC/PHD : PORT HUENEME, CA	0.040	1.368	May 2014	0.620	May 2015	0.318	Jan 2016	-		0.318	-	2.346	-
TPEX Test Plans, Trials Lead, Test Eng, Prog & Fin Management	C/CPFF	PEO IWS (TASC) : WASHINGTON, DC	0.411	0.400	Feb 2014	1.513	Dec 2014	1.189	Jan 2016	-		1.189	Continuing	Continuing	Continuing
TPEX Test Planning, Orbital Safety	C/CPFF	NAVSEA (JHU/ APL) : LAUREL, MD	0.000	0.050	Mar 2014	0.567	Dec 2014	0.413	Jan 2016	-		0.413	Continuing	Continuing	Continuing
TPEX Range Planning & execution, Safety Planning/Documentation, Clearances & Approval, Infrastructure Modifications	C/CPFF	UK MINISTRY OF DEFENSE : HEBRIDES, SCOTLAND	0.925	-		-		-		-		-	-	0.925	-
TPEX Targets & Weapons	WR	NSWC PHD/WSMR DET : CHINA LAKE, CA	0.000	-		0.295	Dec 2014	0.531	Dec 2015	-		0.531	-	0.826	-
TPEX Afloat Training & Readiness	WR	TTGPAC : SAN DIEGO, CA	0.000	-		-		0.053	Jan 2016	-		0.053	-	0.053	-
TPEX Air Target Support	WR	TTGPAC : NORFOLK, VA	0.000	-		-		-		-		-	-	-	-
TPEX Range Planning & execution, Safety	WR	PMRF : KAUAI, HI	0.000	-		0.118	Dec 2014	-		-		-	-	0.118	-

**UNCLASSIFIED**

<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2016 Navy												<b>Date:</b> February 2015			
<b>Appropriation/Budget Activity</b> 1319 / 4						<b>R-1 Program Element (Number/Name)</b> PE 0603582N / <i>Combat System Integration</i>				<b>Project (Number/Name)</b> 3312 / <i>MTMD-Maritime Theater Missile Defense Forum</i>					

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2014</b>		<b>FY 2015</b>		<b>FY 2016 Base</b>		<b>FY 2016 OCO</b>		<b>FY 2016 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Prior Years</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>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Planning/Documentation, Clearances & Approvals															
TPEX SAAM Flight Travel	WR	NATIONAL GUARD BUREAU : ARLINGTON, VA	0.000	-		0.089	Dec 2014	1.008	Jan 2016	-		1.008	-	1.097	-
TPEX Range & Target Support Services	WR	NAWC PM : POINT MUGU, CA	0.000	-		0.118	Dec 2014	0.265	Jan 2016	-		0.265	-	0.383	-
<b>Subtotal</b>			7.087	4.270		9.353		8.873		-		8.873	-	-	-

	<b>Prior Years</b>	<b>FY 2014</b>		<b>FY 2015</b>		<b>FY 2016 Base</b>		<b>FY 2016 OCO</b>		<b>FY 2016 Total</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Project Cost Totals</b>	7.087	4.270		9.353		8.873		-		8.873	-	-	-

**Remarks**

# UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy

Date: February 2015

Appropriation/Budget Activity

1319 / 4

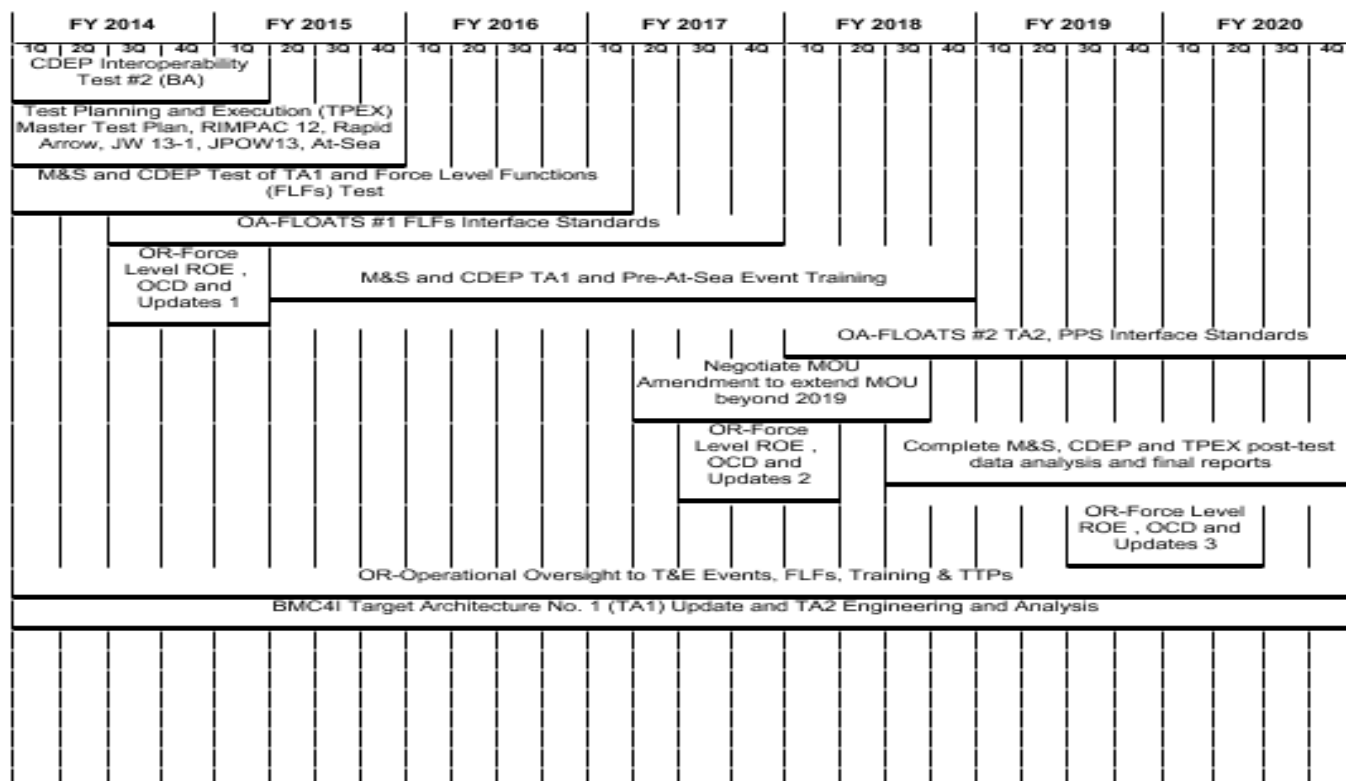
R-1 Program Element (Number/Name)

PE 0603582N / Combat System Integration

Project (Number/Name)

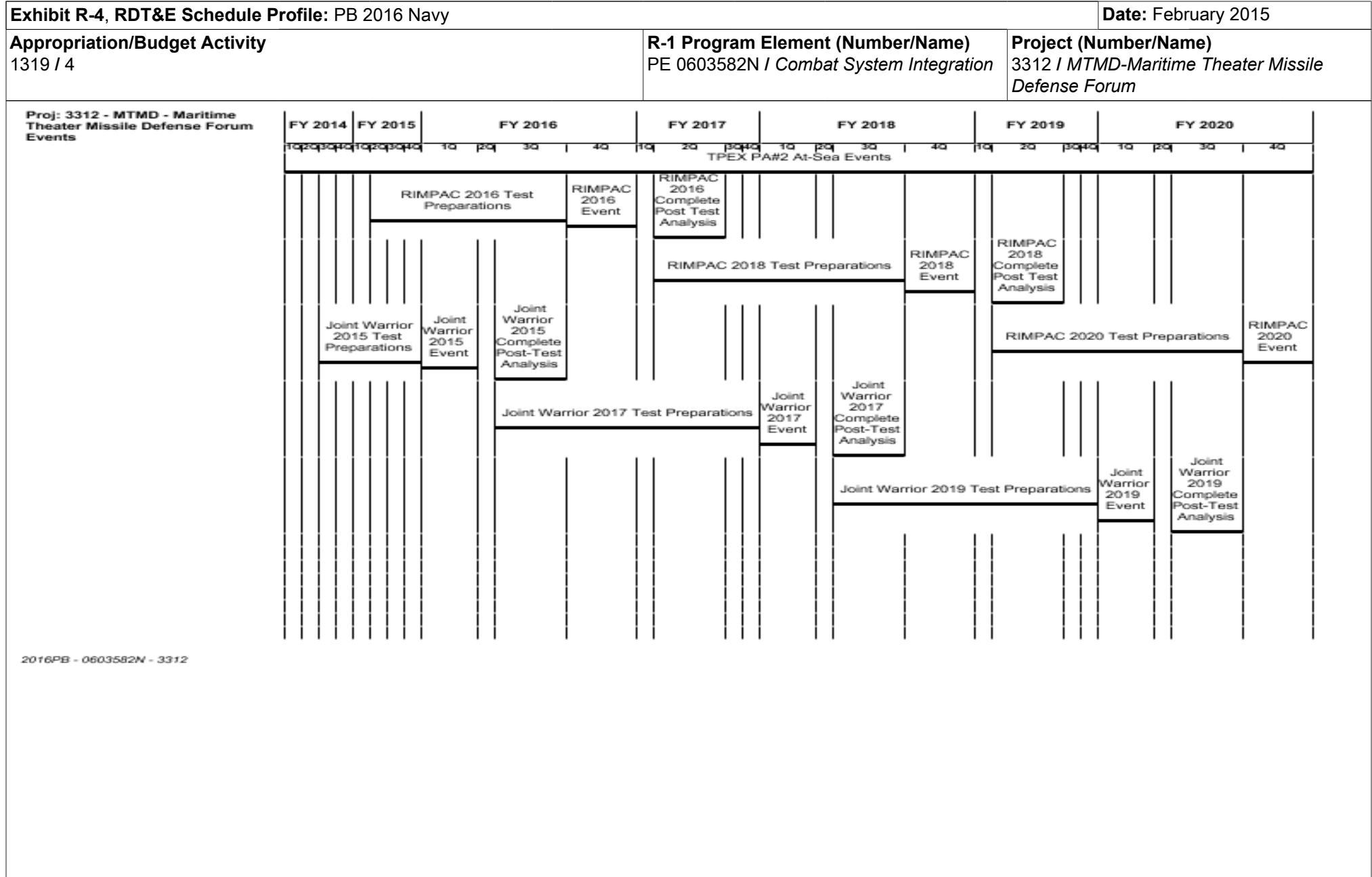
3312 / MTMD-Maritime Theater Missile Defense Forum

Proj: 3312 - MTMD - Maritime Theater Missile Defense Forum



2016PB - 0603582N - 3312

**UNCLASSIFIED**



2016PB - 0603582N - 3312



## UNCLASSIFIED

Exhibit R-4A, RDT&amp;E Schedule Details: PB 2016 Navy

Date: February 2015

## Appropriation/Budget Activity

1319 / 4

## R-1 Program Element (Number/Name)

PE 0603582N / Combat System Integration

## Project (Number/Name)

3312 / MTMD-Maritime Theater Missile Defense Forum

## Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj: 3312 - MTMD - Maritime Theater Missile Defense Forum</b>				
CDEP Interoperability Test #2 (BA)	1	2014	1	2015
Test Planning and Execution (TPEX) Master Test Plan, RIMPAC 12, Rapid Arrow, JW 13-1, JPOW13, At-Sea Event #1	1	2014	4	2015
M&S and CDEP Test of TA1 and Force Level Functions (FLFs) Test	1	2014	1	2017
OA-FLOATS #1 FLFs Interface Standards	3	2014	4	2017
OR-Force Level ROE , OCD and Updates 1	3	2014	1	2015
M&S and CDEP TA1 and Pre-At-Sea Event Training	2	2015	4	2018
OA-FLOATS #2 TA2, PPS Interface Standards	1	2018	4	2020
Negotiate MOU Amendment to extend MOU beyond 2019	2	2017	3	2018
OR-Force Level ROE , OCD and Updates 2	3	2017	1	2018
Complete M&S, CDEP and TPEX post-test data analysis and final reports	3	2018	4	2020
OR-Force Level ROE , OCD and Updates 3	3	2019	2	2020
OR-Operational Oversight to T&E Events, FLFs, Training & TTPs	1	2014	4	2020
BMC4I Target Architecture No. 1 (TA1) Update and TA2 Engineering and Analysis	1	2014	4	2020
<b>Proj: 3312 - MTMD - Maritime Theater Missile Defense Forum Events</b>				
TPEX PA#2 At-Sea Events	1	2014	4	2020
RIMPAC 2016 Test Preparations	2	2015	3	2016
RIMPAC 2016 Event	4	2016	4	2016
RIMPAC 2016 Complete Post Test Analysis	2	2017	2	2017
RIMPAC 2018 Test Preparations	2	2017	3	2018
RIMPAC 2018 Event	4	2018	4	2018

**UNCLASSIFIED**

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy			Date: February 2015		
Appropriation/Budget Activity 1319 / 4		R-1 Program Element (Number/Name) PE 0603582N / <i>Combat System Integration</i>		Project (Number/Name) 3312 / <i>MTMD-Maritime Theater Missile Defense Forum</i>	
		Start		End	
Events by Sub Project		Quarter	Year	Quarter	Year
RIMPAC 2018 Complete Post Test Analysis		2	2019	2	2019
RIMPAC 2020 Test Preparations		2	2019	3	2020
RIMPAC 2020 Event		4	2020	4	2020
Joint Warrior 2015 Test Preparations		3	2014	4	2015
Joint Warrior 2015 Event		1	2016	1	2016
Joint Warrior 2015 Complete Post-Test Analysis		3	2016	3	2016
Joint Warrior 2017 Test Preparations		3	2016	4	2017
Joint Warrior 2017 Event		1	2018	1	2018
Joint Warrior 2017 Complete Post-Test Analysis		3	2018	3	2018
Joint Warrior 2019 Test Preparations		3	2018	4	2019
Joint Warrior 2019 Event		1	2020	1	2020
Joint Warrior 2019 Complete Post-Test Analysis		3	2020	3	2020