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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Navy **Date:** February 2016

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0603582N / <i>Combat System Integration</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	364.712	20.741	32.561	23.530	-	23.530	22.055	19.473	17.890	17.602	Continuing	Continuing
0164: <i>Combat System Integration</i>	350.151	11.509	23.688	23.530	-	23.530	22.055	19.473	17.890	17.602	Continuing	Continuing
3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>	14.561	9.232	8.873	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	32.666

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 (NCCM). 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

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<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 & Interoperability Assessment Capability (DIAC) 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 & 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 watch station tools necessary for the performance of their tactical responsibilities; 5) Cybersecurity assessment, the assessment of cybersecurity, as directed by OPNAV Memorandum 5400 Ser N2N6/4U1119089, including compliance with DoDI 8500.01 for each warfare system element, identifies vulnerabilities at both the system element and enclave level, and assesses ship's cyber posture in support of Warfare System Certification per NAVSEAINST 9410.2.</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 ten participating nations (Australia, Canada, France, Germany, Italy, Netherlands, Norway, 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"> (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. 		

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(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.

Starting in FY17 and through the out-years, the MTMD project moves to Program Element 0605853N under Project Unit 3312: MTMD-Maritime Theater Missile Defense Forum.

B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	20.881	35.901	35.213	-	35.213
Current President's Budget	20.741	32.561	23.530	-	23.530
Total Adjustments	-0.140	-3.340	-11.683	-	-11.683
• Congressional General Reductions	-	-0.027			
• Congressional Directed Reductions	-	-3.313			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.140	0.000			
• Program Adjustments	0.000	0.000	-11.544	-	-11.544
• Rate/Misc Adjustments	0.000	0.000	-0.139	-	-0.139

Change Summary Explanation

SFI, Project Unit 0164: In FY16, a reduction of \$3.313 is applied due to interoperability and assessment delays.

SFI, Project Unit 0164: In FY17, a reduction of \$1.259M is applied to transfer funds from the RDT&E,N appropriation to the Military Personnel, Navy (MP,N) appropriation to support nine Strike Force Integration Officers.

MTMD, Project Unit 3312: Reduction in funding in FY17 of \$9.303M and through the out-years due to the MTMD project moving to Program Element 0605853N under Project Unit 3312: MTMD-Maritime Theater Missile Defense Forum.

Decrease in Combat Systems Integration by \$.982M as required for the Department of the Navy to comply with the Bipartisan Budget Act of 2015.

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy										Date: February 2016		
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 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
0164: <i>Combat System Integration</i>	350.151	11.509	23.688	23.530	-	23.530	22.055	19.473	17.890	17.602	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 (JMETS) 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, as directed by OPNAV Memorandum 5400 Ser N2N6/4U1119089, including compliance with DoDI 8500.01 for each warfare system element, identifies vulnerabilities at both the system element and enclave level, and assesses ship's cyber posture in support of Warfare System Certification per NAVSEAINST 9410.2.

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

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Navigation System Certification (NAVCERT)	1.143	1.824	1.583	0.000	1.583
Articles:	-	-	-	-	-
Description: 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. This project funds assessments in support of new capability upgrades and modernization funded by the cognizant program office. This program verifies the accuracy of the data originating from sensors and validates its receipt					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<p>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 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>FY 2015 Accomplishments: Performed 23 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>FY 2016 Plans: Continuing critical NAVCERT efforts to include performing 30 NAVCERTs on cruisers, destroyers, carriers, and amphib.</p> <p>FY 2017 Base Plans: Plans are to perform 26 NAVCERTs on cruisers, destroyers, carriers, and amphib. Issue update of NAVSEA Instruction 9420.4A.</p> <p>FY 2017 OCO Plans: N/A</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 project is required to support the fleet C5I Modernization Policy (per COMUSFLTFORCOM/COMPACFLT Inst. 4720.3B), to manage operational risks associated with C5I Surveillance and Reconnaissance (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 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. The deliverables of this project is accomplished 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.</p>	1.660 -	1.780 -	2.003 -	0.000 -	2.003 -

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

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<p>There is 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.</p> <p>FY 2015 Accomplishments: Facilitated review of critical C5IMP efforts to include facilitating review, assessment, and execution of 2500 C5I installations during CNO Availabilities in FY14.</p> <p>FY 2016 Plans: Facilitate review, assessment, and execution of C5I installations during approximately 83 CNO Availabilities in FY15. The number of CNO Availabilities decreased from the PB2016 budget exhibit because ship schedules are very fluid and maintenance periods change as national tasking and other exigent circumstances arise. This project also plans to support two NCMCs and 12 monthly baseline events and 12 monthly Planned but Not Authorized (PNA) reviews.</p> <p>FY 2017 Base Plans: Facilitate review, assessment, and execution of C5I installations during approximately 84 CNO Availabilities in FY16. Support two NCMCs and 12 monthly baseline events and 12 monthly Planned but Not Authorized (PNA) reviews.</p> <p>FY 2017 OCO Plans: N/A</p>					
<p>Title: Interoperability Certification and Assessment</p> <p align="right">Articles:</p> <p>Description: 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</p>	5.912	8.973	12.952	0.000	12.952
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

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 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 & 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&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&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.

FY 2015 Accomplishments:

Conducted DIIAC testing, supported the Naval Warfare Systems Certification Policy (NWSCP) and produced Objective Quality Evidence (OQE) used in Warfare Systems Certification Installation Assessment (WSIA) and Warfare System Certification Decision (WSCD). Conducted one Interoperability certification event and completed three interoperability assessment reports of SSDS/AEGIS AMIIP. Provided C&L documents for 23 deploying Strike Groups (from a database containing 168 US surface ships), 43 Coalition ships, and 9 Naval Air Squadrons (covering F/A-18s, E-2C/Ds, MH-60R/Ss, EA-6Bs, EA-18Gs, P-3Cs and P-8As). TIC TECHAIDS delivered for 30 CSG ships, 4 ARG's, 28 BMD ships, 22 independent deploying ships, 4 FASCFAC sites and 6 MOC sites.

FY 2016 Plans:

Continuing critical Interoperability Certification and Assessment efforts to include limited Interoperability Testing for CVN-78; one (1) Certification Test for AEGIS BL 9C1, and support two (2) Interoperability Development Tests for AEGIS 9A CPM and SSDS 10.10 . Conduct two (2) Interoperability Certification Assessments to support warfare system certification of AEGIS 9C1, and SSDS 09.08.01 (EU1-4), to provide Objective Quality Evidence (OQE) for Warfare Systems Certification Events on those systems. Conduct evaluation and provide required updates to Interoperability C&L for 25 Deploying Strike Group Ships (from a database containing 163 U.S. Surface Ships), and 10 Naval Air Squadrons (covering F/A-18s, E-2Cs (only), MH-60Ss (only), EA-6Bs, EA-18Gs, P-3Cs and P-8As). Provide annual deliveries of TIC TECHAIDS for 30 Carrier Strike Group (CSG)

FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total

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

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<p>Ships, 4 Amphibious Ready Group (ARG) Ships, 30 BMD Ships, 22 Independent Deploying Ships, 10 Littoral Combat Ships (LCS), 2 AEGIS Ashore Sites, 4 Fleet Area Control and Surveillance Facility (FACSFAC) sites and 6 Maritime Operations Center (MOC) sites.</p> <p>FY 2017 Base Plans: Increase in funding from FY16 to FY17 is a result of an increase in testing planned in FY17. Planning to conduct three (3) Interoperability Tests; two (2) Certification Tests for SSDS 09.08.04, and SSDS 10.10; and support one (1) Interoperability Development Test for AEGIS Baseline 9C2. Conduct two (2) Interoperability Certification Assessments for two (2) SSDS Baselines to provide OQE for Warfare Systems Certification. Conduct evaluation and provide required updates to Interoperability CAPS&LIMS documents on the C&L Website for 25 deploying Strike Group Ships from a database containing 178 U.S. Surface Ships), and 10 Naval Air Squadrons (covering F/A-18s, E-2C/Ds, MH-60R/Ss, EA-6Bs, EA-18Gs, P-3Cs and P-8As). Provide annual deliveries of TIC TECHAIDS for 30 Carrier Strike Group (CSG) ships, 4 Amphibious Ready Group (ARG) ships, 12 Forward-Deployed Naval Force (FDNF) ships with 2 deliveries, 32 BMD Ships, 22 Independent Deploying Ships, 15 Littoral Combat Ships (LCS), 2 AEGIS Ashore Sites, 4 Fleet Area Control and Surveillance Facility (FACSFAC) sites and 6 Maritime Operations Center (MOC) sites</p> <p>FY 2017 OCO Plans: N/A</p>					
<p>Title: Warfare Systems Certification</p> <p align="right">Articles:</p> <p>Description: This project provides operational risk assessments to the Fleet Commanders using Objective Quality Evidence (OQE) against set criteria 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 performs these assessments based on OQE obtained through testimony of subordinate activities and independent modeling, simulation or testing both for initial assessments and certifications. NAVSEA engineering analyses and risk assessments 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</p>	2.794	8.111	4.019	0.000	4.019
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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<p>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 event. An operational risk assessment characterizing warfare systems maturity and readiness to support the subject ship's deployment is developed from OQE gathered from NWSCP 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, or testing and analysis of all workarounds documented in Tactics, Techniques and Procedures (TTPs), Capabilities & Limitations (C&L), and Trouble Reports (TR).</p> <p><i>FY 2015 Accomplishments:</i> Conducted Warfare Systems Certification Events for a subset of the 20 criteria for 60 ships (WSCRRs, WSIAAs, and WSCDs) and three Warfare Systems Certification Plans (WSCPs), involving CG 47, DDG 51, CVN 68/78, LHA 1/6, LHD 1, LPD 17, LSD 41/49 LCS Ship Classes and amphibious assault ships.</p> <p><i>FY 2016 Plans:</i> Continuing Warfare Systems Certification for the subset of the 20 criteria for 212 ships (e.g. aggregate deficiencies and workload analysis) efforts to for 163 Warfare Systems Certification Events (WSCRRs, WSIAAs and WSCDs) and 9 WSCPs for above ship classes.</p> <p><i>FY 2017 Base Plans:</i> Support the Naval Warfare Systems Certification Policy (NWSCP) by conducting approximately 135 Warfare Systems Certification Events (WSCRRs, WSIAAs and WSCDs) and 32 WSCPs for the CG-47, DDG-51, CVN-68/78, LHA-1/6, LHD-1, LPD-17, LSD-41/49, LCS and amphibious assault ship classes for all 20 NWSCP Criteria, including those criteria that require modeling or simulation or testing. Update the NWSCP and implement the revised Policy.</p> <p><i>FY 2017 OCO Plans:</i> N/A</p>					

Title: Warfare Systems Cybersecurity	0.000	3.000	2.973	0.000	2.973
Articles:	-	-	-	-	-

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

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<p>Description: 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.</p> <p>FY 2015 Accomplishments: N/A</p> <p>FY 2016 Plans: Develop Cybersecurity metrics, methodologies and support Warfare Systems Certifications by providing cybersecurity assessments in support of WSIA's and WSCDs. Conduct Cybersecurity Assessments on 92 Ships. Develop five (5) Ship Cybersecurity Certification Plans</p> <p>FY 2017 Base Plans: Refine and align Cybersecurity metrics and assessment methodologies in support of the Naval Warfare Systems Certification Program. Execute cybersecurity assessment methodology through modeling, simulation or testing in support of the Warfare Systems Certification events. Develop approximately 12 Ship Cybersecurity Plans, Installation Decisions or Certifications. Finalize development of Cybersecurity Assessment Scorecards (CSA) in support of scheduled Warfare Systems Certification WSIA/WSCD Events. Initiate the development of Guidebooks for drafting Cyber Capabilities and Limitations (CAPS&LIMS) and Technical Aids (TECHAIDS) enabling follow-on development of Tactics, Techniques and Procedures (TTPs) that incorporate effective Cyber Pre-Planned Responses to known/emerging threats. Integrate Cyber Information Assurance Assessments into C5IMP Baseline Lock Events.</p> <p>FY 2017 OCO Plans: N/A</p>					
Accomplishments/Planned Programs Subtotals	11.509	23.688	23.530	0.000	23.530

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy	Date: February 2016
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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>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u> <u>Base</u>	<u>FY 2017</u> <u>OCO</u>	<u>FY 2017</u> <u>Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPN 2960: <i>ICSTF: Integrated Combat System Test Facility</i>	4.016	14.419	8.777	-	8.777	8.972	9.186	9.379	9.567	Continuing	Continuing

Remarks

D. Acquisition Strategy

RDTEN 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 RDTEN 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

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy **Date:** February 2016

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>
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Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
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	-
C5IMP & Fleet Readiness	WR	NSWCs : PHD	4.577	1.660	Oct 2014	3.175	Nov 2015	3.252	Nov 2016	-		3.252	Continuing	Continuing	Continuing
C5IMP & Fleet Readiness	WR	Non-NSWCs : Various	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
Warfare Systems Certification	WR	NSWCs : DD/Crane	16.154	0.376	Nov 2014	0.883	Nov 2015	0.719	Nov 2016	-		0.719	Continuing	Continuing	Continuing
Warfare Systems Certification	WR	Non-NSWCs : Various	3.500	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
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	-
OA Automated Test and Retest	WR	NSWCs : Various	17.500	0.000		0.000		0.000		-		0.000	0.000	17.500	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy **Date:** February 2016

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>
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Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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
Contract Engineering Support	C/CPFF	Gryphon Technology : VA	22.159	2.913	Dec 2014	5.819	Jan 2016	5.393	Jan 2017	-		5.393	Continuing	Continuing	Continuing
Contract Program Management Support	C/CPFF	Delta Resources Inc. : VA	8.141	0.000		0.000		0.000		-		0.000	0.000	8.141	-
Travel	Allot	NAVSEA HQ : Washington, DC	2.290	0.012	Jan 2015	0.028	Jan 2016	0.021	Jan 2017	-		0.021	0.000	2.351	-
Interoperability Fixes	WR	NSWCs : Various	1.500	0.000		0.000		0.000		-		0.000	0.000	1.500	-
TIC TECHAIDS	WR	CSC : VA	0.000	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Warfare Systems Cybersecurity	WR	NSWCs : Various	0.000	0.000		3.000	Jan 2016	3.111	Jan 2017	-		3.111	0.000	6.111	-
Capabilities & Limitations	WR	NSWCs : PHD	0.000	2.696	Nov 2014	2.597	Nov 2015	3.332	Nov 2016	-		3.332	0.000	8.625	-
Subtotal			281.569	7.657		15.502		15.828		-		15.828	-	-	-

Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 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	0.000		0.000		0.000		-		0.000	0.000	5.736	-
Interoperability Certification Assessment	WR	NSWCs : DD/ SPAWAR/San Diego	26.804	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Navigation System Certification	WR	SPAWAR : Charleston, SC	6.290	1.143	Nov 2014	1.824	Nov 2015	1.657	Nov 2016	-		1.657	0.000	10.914	-
DIIAC Engineering and Operations	WR	NSWCs : DD/DN/ SPAWAR	17.129	0.954	Oct 2014	2.240	Jan 2016	2.196	Jan 2017	-		2.196	Continuing	Continuing	Continuing
DEP Engineering and Operations	WR	NSWCs : Various	12.623	0.000		0.000		0.000		-		0.000	0.000	12.623	-
Interoperability Cert Assessment	WR	NSWCs : DD/DN/ Corona	0.000	1.242	Oct 2014	2.917	Nov 2015	2.724	Nov 2016	-		2.724	0.000	6.883	-
Interoperability Cert Assessment	C/CPFF	Non-NSWCs : CNA	0.000	0.373	Dec 2014	0.876	Jan 2016	0.818	Jan 2017	-		0.818	0.000	2.067	-

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy **Date:** February 2016

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>
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	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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																												
NAVCERT: FY15 NAVCERTs (DDGs 87, 96; CVN 74; LPD 21)	■																											
NAVCERT: FY15 NAVCERTs (DDG 109; LHD 4; LPD 17)		■																										
NAVCERT: FY15 NAVCERTs (CVN 75; DDG 86, 88, 94, 108; LHD 1; MCM 7, 11)			■																									
NAVCERT: FY15 NAVCERTs (CVN 69, 73; DDGs 73, 77; LCS 1; CG 56, 58)				■																								
NAVCERT: FY16 NAVCERTs (CGs 57; CVN 77; DDGs 70, 112; LHD 5, 8; LPDs 19)					■																							
NAVCERT: FY16 NAVCERTs (CG 54, 66, 67, CVN 70, LPD 22, DDGs 102, 104, 111; MCM 13)						■																						
NAVCERT: FY16 NAVCERTs (CVN 68; DDGs 95, 97, 100, 109, 110; LHD 7)							■																					
NAVCERT: FY16 NAVCERTs (CVN 71; DDGs 62, 89, 98; LHD 6; LPDs 21, 23; LCS 2)								■																				
NAVCERT: FY17 NAVCERTs (CVN 71; DDG 99; LPD 17, 19, 21)									■																			
NAVCERT: FY17 NAVCERTs (CG 65; CVN 74; DDGs 60 , 71, 79, 81, 85, 96, 101, 112; LHD 2, 3)										■																		
NAVCERT: FY17 NAVCERTs (CG, 63, 64; CVN 70, 76, 77; LHD 1)											■																	
NAVCERT: FY17 NAVCERTs (CVN 69; LPD 24; LCC 20)												■																

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy **Date:** February 2016

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>
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	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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: FY18 NAVCERTs (CG 55, 64; DDGs 62, 68, 82, 84, 100; LHD 5; MCM 6)													■															
NAVCERT: FY18 NAVCERTs (CG 65; LHD 4; CVN 70; LCC 19)															■													
NAVCERT: FY18 NAVCERTs (CG 56, 62; DDG 53; CVNs 69, 76; LHD 2, 5; LPD 18, 19, 25; MCM 3, 4, 8, 14)																■												
NAVCERT: FY18 NAVCERTs (CGs 60, 64, 68; DDGs 56, 71, 100, 104, 111; LHD 6; LPD 25; MCM, Aegis Ashore Poland)																	■											
NAVCERT: FY19 NAVCERTs (CG 61; CVN 71; DDGs 63, 72, 79, 85, 102)																			■									
NAVCERT: FY19 NAVCERTs (CG 52; DDGs 57, 58, 69 74; LPDs 22, 23; LHA 6)																				■								
NAVCERT: FY19 NAVCERTs (CG 69, 73; CVN 68,78; DDGs 62 ,67,72 ,83; LCS 2, 4; LHD 7, 8; LPD 21)																					■							
NAVCERT: FY19 NAVCERTs (CG 53, 63, 64, 66; CVN 77; DDGs 76, 78 86, 90, 92, 95, 105; LHDs 2 ,4, 6; LPD 19, 20, 23; MCM 9)																						■						
NAVCERT: FY20 NAVCERTs (DDG 96; LPD 21)																											■	
NAVCERT: FY20 NAVCERTs (CG 59; DDG 52, 65, 93, 109)																												■
NAVCERT: FY20 NAVCERTs (CVN 75; DDG 88, 94, 108; LHD 1; MCM 7, 11)																												■
NAVCERT: FY20 NAVCERTs (CVN 69, 73; DDGs 73, 77; LCS 1; CG 56, 58; AEGIS Ashore Romania)																												■

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy **Date:** February 2016

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>															
	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021							
	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: FY18 C5IMP Monthly Baseline (12/Year)																																
C5IMP: FY18 NCMC - 1																																
C5IMP: FY18 NCMC - 2																																
C5IMP: FY18 PNA Reviews (12/Year) (88 Ships)																																
C5IMP: FY19 C5IMP Monthly Baseline (12/Year)																																
C5IMP: FY19 NCMC - 1																																
C5IMP: FY19 NCMC - 2																																
C5IMP: FY19 PNA Reviews (12/Year) (93 Ships)																																
C5IMP: FY20 C5IMP Monthly Baseline (12/Year)																																
C5IMP: FY20 NCMC - 1																																
C5IMP: FY20 NCMC - 2																																
C5IMP: FY20 PNA Reviews (12/Year) (92 Ships)																																
C5IMP: FY21 C5IMP Monthly Baseline (12/Year)																																
C5IMP: FY21 NCMC - 1																																
C5IMP: FY21 NCMC - 2																																
C5IMP: FY21 PNA Reviews (12/Year) (84 Ships)																																
Interoperability Certification & Assessments: FY15 AEGIS 9A (DIIAC 15-1)																																
Interoperability Certification & Assessments: FY16 BL 9C1 Interoperability Assessment (16-1)																																

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy **Date:** February 2016

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>
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	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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 Development Tests: SSDS 10.10, LCS (16-2)						■																						
Interoperability Certification & Assessments: FY16 LCS-3, Continue Development Tests: SSDS BL10.10 Interoperability Assessment (16-3)							■																					
Interoperability Certification & Assessments: FY17 BL 10.10.X LHD-2 Interoperability Assessment (17-1)											■																	
Interoperability Certification & Assessments: FY17 BL 9C2 Development Tests (17-2)											■																	
Interoperability Certification & Assessments: FY17 BL 9.08.04 Certification Interoperability Assessment (17-3)												■																
Interoperability Certification & Assessments: FY18 CVN 78 BL 10.10X Interoperability Assessment (18-1)															■													
Interoperability Certification & Assessments: FY18 9C2 Certification Interoperability Assessment (18-3)																■												
Interoperability Certification & Assessments: FY19 TBD Interoperability Assessment (19-4)																				■								
Interoperability Certification & Assessments: FY20 Event (20-2)																											■	
Interoperability Certification & Assessments: FY21 Event (21-2)																												■
Warfare Systems Certification: FY15 Warfare Systems Cert (60 events + 3 WSCPs)																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy **Date:** February 2016

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>
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	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	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
Warfare Systems Certification: FY16 Warfare Systems Cert (163 events + 49 WSCPs)					██████████																							
Warfare Systems Certification: FY17 Warfare Systems Cert (135 events + 32 WSCPs)									██████████																			
Warfare Systems Certification: FY18 Warfare Systems Cert (148 events + 32 WSCPs)													██████████															
Warfare Systems Certification: FY19 Warfare Systems Cert (146 events + 0 WSCPs)																	██████████											
Warfare Systems Certification: FY20 Warfare Systems Cert (146 events + 0 WSCPs)																					██████████							
Warfare Systems Certification: FY21 Warfare Systems Cert (146 events + 0 WSCPs)																									██████████			
Warfare Systems Cybersecurity: Warfare Systems Cybersecurity					████████████████████																							
Warfare Systems Cybersecurity: Assessment development, codification, and refinement (metrics & methodology)					██████████																							
Warfare Systems Cybersecurity: Pilot with DIIAC & SFI Testing																												
Warfare Systems Cybersecurity: Follow-on Testing Event																												
Warfare Systems Cybersecurity: Assessment refinement and maintenance (metrics & methodology)									████████████████████																			
Warfare Systems Cybersecurity: FY17 Testing Events (3)									██████████																			
Warfare Systems Cybersecurity: FY18 Testing Events (3)													██████████															

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy **Date:** February 2016

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>
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
COMBAT SYSTEM INTEGRATION				
NAVCERT: FY15 NAVCERTs (DDGs 87, 96; CVN 74; LPD 21)	1	2015	1	2015
NAVCERT: FY15 NAVCERTs (DDG 109; LHD 4; LPD 17)	2	2015	2	2015
NAVCERT: FY15 NAVCERTs (CVN 75; DDG 86, 88, 94, 108; LHD 1; MCM 7, 11)	3	2015	3	2015
NAVCERT: FY15 NAVCERTs (CVN 69, 73; DDGs 73, 77; LCS 1; CG 56, 58)	4	2015	4	2015
NAVCERT: FY16 NAVCERTs (CGs 57; CVN 77; DDGs 70, 112; LHD 5, 8; LPDs 19)	1	2016	1	2016
NAVCERT: FY16 NAVCERTs (CG 54, 66, 67, CVN 70, LPD 22, DDGs 102, 104, 111; MCM 13)	2	2016	2	2016
NAVCERT: FY16 NAVCERTs (CVN 68; DDGs 95, 97, 100, 109, 110; LHD 7)	3	2016	3	2016
NAVCERT: FY16 NAVCERTs (CVN 71; DDGs 62, 89, 98; LHD 6; LPDs 21, 23; LCS 2)	4	2016	4	2016
NAVCERT: FY17 NAVCERTs (CVN 71; DDG 99; LPD 17, 19, 21)	1	2017	1	2017
NAVCERT: FY17 NAVCERTs (CG 65; CVN 74; DDGs 60 , 71, 79, 81, 85, 96, 101, 112; LHD 2, 3)	2	2017	2	2017
NAVCERT: FY17 NAVCERTs (CG, 63, 64; CVN 70, 76, 77; LHD 1)	3	2017	3	2017
NAVCERT: FY17 NAVCERTs (CVN 69; LPD 24; LCC 20)	4	2017	4	2017
NAVCERT: FY18 NAVCERTs (CG 55, 64; DDGs 62, 68, 82, 84, 100; LHD 5; MCM 6)	1	2018	1	2018
NAVCERT: FY18 NAVCERTs (CG 65; LHD 4; CVN 70; LCC 19)	2	2018	2	2018
NAVCERT: FY18 NAVCERTs (CG 56, 62; DDG 53; CVNs 69, 76; LHD 2, 5; LPD 18, 19, 25; MCM 3, 4, 8, 14)	3	2018	3	2018
NAVCERT: FY18 NAVCERTs (CGs 60, 64, 68; DDGs 56, 71, 100, 104, 111; LHD 6; LPD 25; MCM, Aegis Ashore Poland)	4	2018	4	2018
NAVCERT: FY19 NAVCERTs (CG 61; CVN 71; DDGs 63, 72, 79, 85, 102)	1	2019	1	2019
NAVCERT: FY19 NAVCERTs (CG 52; DDGs 57, 58, 69 74; LPDs 22, 23; LHA 6)	2	2019	2	2019

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy **Date:** February 2016

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>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
NAVCERT: FY19 NAVCERTs (CG 69, 73; CVN 68,78; DDGs 62 ,67,72 ,83; LCS 2, 4; LHD 7, 8; LPD 21)	3	2019	3	2019
NAVCERT: FY19 NAVCERTs (CG 53, 63, 64, 66; CVN 77; DDGs 76, 78 86, 90, 92, 95, 105; LHDs 2 ,4, 6; LPD 19, 20, 23; MCM 9)	4	2019	4	2019
NAVCERT: FY20 NAVCERTs (DDG 96; LPD 21)	1	2020	1	2020
NAVCERT: FY20 NAVCERTs (CG 59; DDG 52, 65, 93, 109)	2	2020	2	2020
NAVCERT: FY20 NAVCERTs (CVN 75; DDG 88, 94, 108; LHD 1; MCM 7, 11)	3	2020	3	2020
NAVCERT: FY20 NAVCERTs (CVN 69, 73; DDGs 73, 77; LCS 1; CG 56, 58; AEGIS Ashore Romania)	4	2020	4	2020
NAVCERT: FY21 NAVCERTs (CGs 57; CVN 77; DDGs 70, 112; LCS 7, 8; LHDs 5, 8; LPD 19)	1	2021	1	2021
NAVCERT: FY21 NAVCERTs (CG54, 66, 67; CVN 70; DDG 1000; LPD 22; DDGs 102, 104, 111; MCM 13)	2	2021	2	2021
NAVCERT: FY21 NAVCERTs (CVN 68; CVN 78; DDGs 95, 97, 100, 109, 110; LHD 7)	3	2021	3	2021
NAVCERT: FY21 NAVCERTs (CVN 71; DDGs 62, 89, 98; LHD 6; LPDs 21, 23; LCS 2)	4	2021	4	2021
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: FY15 PNA Reviews (12/Year) 67 Ships)	1	2015	4	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: FY16 PNA Reviews (12/Year) (83 ships)	1	2016	4	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: FY17 PNA Reviews (12/Year) (67 Ships)	1	2017	4	2017

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy **Date:** February 2016

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>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
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: FY18 PNA Reviews (12/Year) (88 Ships)	1	2018	4	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
C5IMP: FY19 PNA Reviews (12/Year) (93 Ships)	1	2019	4	2019
C5IMP: FY20 C5IMP Monthly Baseline (12/Year)	1	2020	4	2020
C5IMP: FY20 NCMC - 1	1	2020	1	2020
C5IMP: FY20 NCMC - 2	3	2020	3	2020
C5IMP: FY20 PNA Reviews (12/Year) (92 Ships)	1	2020	4	2020
C5IMP: FY21 C5IMP Monthly Baseline (12/Year)	1	2021	4	2021
C5IMP: FY21 NCMC - 1	1	2021	1	2021
C5IMP: FY21 NCMC - 2	3	2021	3	2021
C5IMP: FY21 PNA Reviews (12/Year) (84 Ships)	1	2021	4	2021
Interoperability Certification & Assessments: FY15 AEGIS 9A (DIIAC 15-1)	1	2015	1	2015
Interoperability Certification & Assessments: FY16 BL 9C1 Interoperability Assessment (16-1)	1	2016	1	2016
Interoperability Certification & Assessments: FY16 Development Tests: SSDS 10.10, LCS (16-2)	2	2016	2	2016
Interoperability Certification & Assessments: FY16 LCS-3, Continue Development Tests: SSDS BL10.10 Interoperability Assessment (16-3)	3	2016	3	2016
Interoperability Certification & Assessments: FY17 BL 10.10.X LHD-2 Interoperability Assessment (17-1)	1	2017	1	2017
Interoperability Certification & Assessments: FY17 BL 9C2 Development Tests (17-2)	2	2017	2	2017

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy **Date:** February 2016

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>
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Interoperability Certification & Assessments: FY17 BL 9.08.04 Certification Interoperability Assessment (17-3)	3	2017	3	2017
Interoperability Certification & Assessments: FY18 CVN 78 BL 10.10X Interoperability Assessment (18-1)	1	2018	1	2018
Interoperability Certification & Assessments: FY18 9C2 Certification Interoperability Assessment (18-3)	3	2018	3	2018
Interoperability Certification & Assessments: FY19 TBD Interoperability Assessment (19-4)	4	2019	4	2019
Interoperability Certification & Assessments: FY20 Event (20-2)	2	2020	4	2020
Interoperability Certification & Assessments: FY21 Event (21-2)	2	2021	3	2021
Warfare Systems Certification: FY15 Warfare Systems Cert (60 events + 3 WSCPs)	1	2015	4	2015
Warfare Systems Certification: FY16 Warfare Systems Cert (163 events + 49 WSCPs)	1	2016	4	2016
Warfare Systems Certification: FY17 Warfare Systems Cert (135 events + 32 WSCPs)	1	2017	4	2017
Warfare Systems Certification: FY18 Warfare Systems Cert (148 events + 32 WSCPs)	1	2018	4	2018
Warfare Systems Certification: FY19 Warfare Systems Cert (146 events + 0 WSCPs)	1	2019	4	2019
Warfare Systems Certification: FY20 Warfare Systems Cert (146 events + 0 WSCPs)	1	2020	4	2020
Warfare Systems Certification: FY21 Warfare Systems Cert (146 events + 0 WSCPs)	1	2021	4	2021
Warfare Systems Cybersecurity: Warfare Systems Cybersecurity	1	2016	4	2018
Warfare Systems Cybersecurity: Assessment development, codification, and refinement (metrics & methodology)	1	2016	4	2016
Warfare Systems Cybersecurity: Pilot with DIIAC & SFI Testing	3	2016	4	2016
Warfare Systems Cybersecurity: Follow-on Testing Event	4	2016	4	2016
Warfare Systems Cybersecurity: Assessment refinement and maintenance (metrics & methodology)	1	2017	4	2018
Warfare Systems Cybersecurity: FY17 Testing Events (3)	1	2017	4	2017
Warfare Systems Cybersecurity: FY18 Testing Events (3)	1	2018	4	2018

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy										Date: February 2016		
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 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
3312: <i>MTMD-Maritime Theater Missile Defense Forum</i>	14.561	9.232	8.873	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	32.666
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 ten participating nations (Australia, Canada, France, Germany, Italy, Netherlands, Norway, 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.

Starting in FY17 and through the out-years, the MTMD project moves to Program Element 0605853N under Project Unit 3312: MTMD-Maritime Theater Missile Defense Forum.

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy		Date: February 2016
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>

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

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Maritime Theater Missile Defense Forum (MTMD)	9.232	8.873	0.000	0.000	0.000
Articles:	-	-	-	-	-
<p>Description: This project funds participation in Maritime IAMD to promote interoperability with other nations. This project funds participation in Modeling and Simulation (M&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>FY 2015 Accomplishments:</p> <p>(1) BMC4I continued engineering analysis and multi-national interoperability gap assessment from Target Architecture 1 Test results and developed Target Architecture input. BMC4I evaluated Recommended Point Solutions and provided final recommendations for the implementation in correcting coalition interoperability gaps. BMC4I finalized information exchange requirements in preparation for at-sea demonstrations.</p> <p>(2) M&S completed analysis of Target Architecture tests and Test Architecture and provided assessments and recommendations to improve information exchange requirements identified by BMC4I.</p> <p>(3) CDEP completed analysis of Target Architecture hardware-in-the-loop tests and provided assessments and recommendations to improve information exchanges required to conduct the at-sea demonstrations. CDEP provided the final architecture risk assessment and Capabilities & Limitations document to support the at-sea demonstrations.</p> <p>(4) Open Architecture continued development of the Force Level Open Architecture Technical Standard. Inputs from M&S and CDEP test results were used to improve the details of the standard.</p> <p>(5) TPEX finalized preparations for MTMD participation as part of Joint Warrior 152 in September/October 2015. 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 is the first multi-national maritime test of its kind ever conducted. Planning for RIMPAC 2016 continued and included target configuration/procurement.</p> <p>(6) Operational Requirements group continued to provide fleet inputs and operator oversight to test and evaluation events. The Operational Concept Document was updated as was final tactics, techniques and procedures in support of the at-sea demonstrations in 2015 and 2016.</p> <p>FY 2016 Plans:</p> <p>(1) BMC4I will continue engineering analysis and multi-national interoperability gap assessment from Target Architecture test results and complete development of Target Architectures based on requests for</p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy			Date: February 2016		
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>			
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<p>information input from member nations. 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> <p>(2) M&S will continue analysis of Target Architectures and conduct further assessments in support of providing recommendations to improve information exchange requirements identified by BMC4I. M&S will model and further Target Architectures and provide training in support of the 2016 at sea demonstration.</p> <p>(3) CDEP will conduct hardware-in-the-loop tests and provide assessments and recommendations to improve information exchanges required to conduct at-sea demonstrations. CDEP will evaluate At-Sea Demonstration architecture risk, and update the Capabilities & 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&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 at-sea test events. 2016 At-Sea Demonstrations 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. Planning for RIMPAC 2016 and follow-on at-sea testing in future years 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>FY 2017 Base Plans: Starting in FY17 and through the out-years, the MTMD project moves to Program Element 0605853N under Project Unit 3312: MTMD-Maritime Theater Missile Defense Forum.</p> <p>FY17 plans stated under the new Program Element.</p> <p>FY 2017 OCO Plans: N/A</p>					
Accomplishments/Planned Programs Subtotals	9.232	8.873	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Navy	Date: February 2016
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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>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u> <u>Base</u>	<u>FY 2017</u> <u>OCO</u>	<u>FY 2017</u> <u>Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0605853N: <i>PU 0149</i> <i>INTERNATIONAL</i> <i>COOP MANAGEMENT,</i> <i>TECHNICAL AND INTL SUPT</i>	4.608	2.584	3.557	-	3.557	3.638	3.423	3.526	3.652	Continuing	Continuing

Remarks

D. Acquisition Strategy

N/A

E. Performance Metrics

Quarterly Program Reviews and Baseline Assessments

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy **Date:** February 2016

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>
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Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
BCM4I Architectures Definition &	WR	NSWC/DD : DAHLGREN, VA	0.864	0.159	Nov 2014	0.154	Jan 2016	0.000		-		0.000	0.000	1.177	-
BMC4I Architectures Definition &	C/CPFF	NSWC/DD : DAHLGREN, VA	0.423	0.224	May 2015	0.239	Jan 2016	0.000		-		0.000	0.000	0.886	-
BMC41 Interoperability Program Design & Direction	C/CPFF	SPAWAR : SAN DIEGO, CA	0.850	0.320	Mar 2015	0.679	Jan 2016	0.000		-		0.000	0.000	1.849	Continuing
BMC4I Programmatic Support	C/CPFF	GRYPHON : WASHINGTON, DC	0.023	0.161	Dec 2014	0.140	Jan 2016	0.000		-		0.000	0.000	0.324	-
M&S Test Plan and Execution	WR	CDSA/DN : DAM NECK, VA	0.783	0.306	Oct 2014	0.244	Jan 2016	0.000		-		0.000	0.000	1.333	-
M&S Test Development & Engineering	C/CPFF	CDSA/DN : DAM NECK, VA	0.554	0.169	Jan 2015	0.244	Jan 2016	0.000		-		0.000	0.000	0.967	-
M&S Technical Support & Special Studies	C/CPFF	NAVSEA (JHU/ APL) : LAUREL, MD	0.764	0.336	Dec 2014	0.494	Jan 2016	0.000		-		0.000	0.000	1.594	-
CDEP Project Officer (PO)	WR	CDSA/DN : DAM NECK, VA	0.197	0.118	Oct 2014	0.364	Jan 2016	0.000		-		0.000	0.000	0.679	-
CDEP Interoperability Cert Assess	WR	NSWC/DD : DAHLGREN, VA	0.814	0.071	Nov 2014	0.212	Jan 2016	0.000		-		0.000	0.000	1.097	-
CDEP Test Event Plan & Coord for Data Mgt & Analysis	WR	NSWC/COR : RIVERSIDE, CA	0.509	0.145	Oct 2014	0.149	Jan 2016	0.000		-		0.000	0.000	0.803	-
CDEP Caps & Lims Development	WR	NSWC/PHD : VENTURA, CA	0.194	0.284	Oct 2014	0.292	Jan 2016	0.000		-		0.000	0.000	0.770	-
CDEP Cross Domain Network Engineering	WR	SSCPAC : SAN DIEGO, CA	0.472	0.103	Oct 2014	0.212	Jan 2016	0.000		-		0.000	0.000	0.787	-
CDEP Engineering & Operations	C/CPFF	SSCPAC (TEA) : SAN DIEGO, CA	0.210	0.179	Feb 2015	0.215	Jan 2016	0.000		-		0.000	0.000	0.604	-
CDEP Data Guard Engineering	C/CPFF	NSWC/DD (LM) : DAHLGREN, VA	0.512	0.109	Dec 2014	0.186	Jan 2016	0.000		-		0.000	0.000	0.807	-
CDEP Contract Engineering Support	C/CPFF	CDSA/DN (URS) : DAM NECK, VA	0.349	0.110	Nov 2014	0.148	Jan 2016	0.000		-		0.000	0.000	0.607	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Navy **Date:** February 2016

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>
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Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
OA Development of Interface Standards	WR	NSWC/DD : DAHLGREN, VA	0.000	0.413	Nov 2014	0.446	Jan 2016	0.000		-		0.000	0.000	0.859	-
TPEX Technical Support	WR	PEO IWS : WASHINGTON, DC	0.050	0.060	Nov 2014	0.051	Jan 2016	0.000		-		0.000	0.000	0.161	-
TPEX Link Management Support, BTS LAB	WR	SPAWAR : SAN DIEGO, CA	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
TPEX Data Analysis & Reporting, PA 1 PO	WR	NSWC/COR : RIVERSIDE, CA	0.275	1.296	Dec 2014	0.521	Jan 2016	0.000		-		0.000	0.000	2.092	-
TPEX Afloat Training & Readiness	WR	TTGLANT : NORFOLK, VA	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
TPEX Data Collection, Analysis & Reporting	WR	NSWC/DD : DAHLGREN, VA	0.100	0.413	Oct 2014	0.106	Jan 2016	0.000		-		0.000	0.000	0.619	-
TPEX Mini Groom Team, PO, PE, TDL	WR	NSWC/PHD : PORT HUENEME, CA	1.408	1.033	Nov 2014	0.318	Jan 2016	0.000		-		0.000	0.000	2.759	-
TPEX Test Plans, Trials Lead, Test Eng, Prog & Fin Management	C/CPFF	PEO IWS (TASC) : WASHINGTON, DC	0.811	1.322	Nov 2014	1.189	Jan 2016	0.000		-		0.000	0.000	3.322	-
TPEX Test Planning, Orbital Safety	C/CPFF	NAVSEA (JHU/ APL) : LAUREL, MD	0.050	0.970	Dec 2014	0.413	Jan 2016	0.000		-		0.000	0.000	1.433	-
TPEX Range Planning & execution, Safety Planning/Documentation, Clearances & Approval, Infrastructure Modifications	WR	UK MINISTRY OF DEFENSE : HEBRIDES, SCOTLAND	4.349	0.000		0.000		0.000		-		0.000	0.000	4.349	-
TPEX Targets & Weapons	WR	NSWC PHD/WSMR DET : CHINA LAKE, CA	0.000	0.258	Nov 2014	0.531	Dec 2015	0.000		-		0.000	0.000	0.789	-
TPEX Afloat Training & Readiness	WR	TTGPAC : SAN DIEGO, CA	0.000	0.000		0.053	Jan 2016	0.000		-		0.000	0.000	0.053	-
TPEX Air Target Support	WR	TTGPAC : NORFOLK, VA	0.000	0.000		0.000		0.000		-		0.000	0.000	0.000	-
TPEX Range Planning & execution, Safety	WR	PMRF : KAUAI, HI	0.000	0.052	Nov 2014	0.000		0.000		-		0.000	0.000	0.052	-

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy **Date:** February 2016

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>
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Proj: 3312 - MTMD - Maritime Theater Missile Defense Forum	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
CDEP Interoperability Test #2 (BA)																												
Test Planning and Execution (TPEX) Master Test Plan, RIMPAC 12, Rapid Arrow, JW 13-1, JPOW13, At-Sea																												
M&S and CDEP Test of TA1 and Force Level Functions (FLFs) Test																												
QA-FLOATS #1 FLFs Interface Standards																												
OR-Force Level ROE , OCD and Updates 1																												
M&S and CDEP TA1 and Pre-At-Sea Event Training																												
OR-Operational Oversight to T&E Events, FLFs, Training & TTPs																												
BMC4I Target Architecture No. 1 (TA1) Update and TA2 Engineering and Analysis																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Navy **Date:** February 2016

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>
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Proj: 3312 - MTMD - Maritime Theater Missile Defense Forum Events	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	
	TPEX PA#2 At-Sea Events																												
RIMPAC 2016 Test Preparations												RIMPAC 2016 Event																	
Joint Warrior 2015 Test Preparations				Joint Warrior 2015 Event		Joint Warrior 2015 Complete Post-Test Analysis																							
												Joint Warrior 2017 Test Preparations																	

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Navy		Date: February 2016
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>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj: 3312 - MTMD - Maritime Theater Missile Defense Forum				
CDEP Interoperability Test #2 (BA)	1	2015	1	2015
Test Planning and Execution (TPEX) Master Test Plan, RIMPAC 12, Rapid Arrow, JW 13-1, JPOW13, At-Sea Event #1	1	2015	4	2015
M&S and CDEP Test of TA1 and Force Level Functions (FLFs) Test	1	2015	4	2016
OA-FLOATS #1 FLFs Interface Standards	1	2015	4	2016
OR-Force Level ROE , OCD and Updates 1	1	2015	1	2015
M&S and CDEP TA1 and Pre-At-Sea Event Training	2	2015	4	2016
OR-Operational Oversight to T&E Events, FLFs, Training & TTPs	1	2015	4	2016
BMC4I Target Architecture No. 1 (TA1) Update and TA2 Engineering and Analysis	1	2015	4	2016
Proj: 3312 - MTMD - Maritime Theater Missile Defense Forum Events				
TPEX PA#2 At-Sea Events	1	2015	4	2016
RIMPAC 2016 Test Preparations	2	2015	3	2016
RIMPAC 2016 Event	4	2016	4	2016
Joint Warrior 2015 Test Preparations	1	2015	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	2016