Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy											DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*					R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*							
COST ($ in Millions)	**All Prior Years**	**FY 2012**	**FY 2013#**	**FY 2014 Base**	**FY 2014 OCO ##**	**FY 2014 Total**	**FY 2015**	**FY 2016**	**FY 2017**	**FY 2018**	**Cost To Complete**	**Total Cost**
Total Program Element	662.132	71.094	87.662	130.360	-	130.360	118.266	122.347	80.626	69.848	Continuing	Continuing
2178: *QRCC*	642.184	68.161	81.106	117.232	-	117.232	110.786	117.317	75.586	65.238	Continuing	Continuing
3172: *Joint Non-Lethal Weapons*	19.948	1.308	5.379	10.849	-	10.849	5.141	2.658	2.682	2.725	Continuing	Continuing
3306: *Integrated Swimmer Defense (ISD)*	0.000	1.625	1.177	1.198	-	1.198	1.219	1.242	1.265	1.285	Continuing	Continuing
3358: *SSDS Training Improvement Program*	0.000	0.000	0.000	1.081	-	1.081	1.120	1.130	1.093	0.600	Continuing	Continuing

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

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

This program element consolidates currently ongoing and planned programmatic efforts related to Detect & Control aspects of Ship Self Defense (SSD) to facilitate effective planning and management of these efforts and to exploit the synergistic relationship inherent in each. Analysis and demonstration have established that surface SSD based on single-sensor detection point-to-point control architecture is inadequate against current and projected Anti-Ship Cruise Missile (ASCM) threats. The supersonic seaskimming ASCM reduces the effective battle space to the horizon and the available reaction time-line to less than 30 seconds from first opportunity to detect until the ASCM impacts its target ship. Against such a threat, multi-sensor integration is required for effective detection, and parallel processing is essential to reduce reaction time to acceptable levels and to provide vital coordination/integration of hardkill and softkill assets. These SSD projects address and coordinate the detect and control functions necessary to meet the rigorous SSD requirements.

DETECTION: Improvements in coordinated sensor performance to increase the probability of detecting low altitude, low observable targets are to be achieved through the synergism gained from the integration of dissimilar sensor sources. Multi-sensor integration is being addressed through the efforts of Quick Reaction Combat Capability (QRCC, PU 2178). This provides improvements to both active and passive detection.

CONTROL: Multi-sensor integration, parallel processing and the coordination of hardkill/softkill capabilities in an automated, doctrine-based response to the ASCM threats are the cornerstones of Ship Self Defense System (SSDS) being developed through QRCC (PU 2178) efforts. In addition, this project provides for the central system engineering management for the integration of SSD developments, including efforts required to integrate SSDS with the Advanced Combat Direction System (ACDS) functionality for those ships having a CDS with the Open Architecture Computing Environment and with advanced sensor, weapon and C4I upgrades. The SSDS Training Improvement Program (PU 3358) is for the integration of Total Ship Training Capability (TSTC) improvements into the SSDS Advanced Capability Build (ACB) and Technology Insertion (TI) efforts under QRCC (PU 2178).

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Integrated Swimmer Defense (ISD, PU3306) scope is to provide the Navy Expeditionary security forces with capabilities of a portable marine integrated swimmer defense system (ISDS) to engage combat swimmers/divers or unknown individuals underwater once they have been detected.

Non-Lethal Weapons (PU 3172) provides a long range laser warning and dazzle systems for use in the maritime environment. Optical warning and distraction has been identified by the services as a possible technology solution to mitigate and/or address several known joint non-lethal capability gaps.

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	71.222	87.662	73.032	-	73.032
Current President's Budget	71.094	87.662	130.360	-	130.360
Total Adjustments	-0.128	0.000	57.328	-	57.328
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	1.604	0.000			
• SBIR/STTR Transfer	-1.732	0.000			
• Program Adjustments	0.000	0.000	58.064	-	58.064
• Rate/Misc Adjustments	0.000	0.000	-0.736	-	-0.736

Change Summary Explanation

$5.4M was added in FY12 to project 2178 for product development of SSDS MK2 Link16 software improvements to support the Accelerated Mid-Term Interoperability Improvement effort (AMIIP) for AEGIS Wholeness. This addresses Fleet interoperability issues with code corrections centered on enhanced correlation processing and non-material solutions such as tactics, techniques and procedures.

$54.760M was added in FY14 to project 2178 to initiate product development for SSDS MK2 ACB-16 warfighting improvements based on a competitive acquisition strategy; and for technology refresh of the SSDS MK2 TI-12 Open Architecture Computing Environment equipment, designated as TI-16.

$2.295M was added in FY14 to the SSDS MK2 development test and evaluation for Combat system certification testing ashore for SSDS MK2-based Carrier and Amphibious ship combat systems.

$1.081M was added in FY14 under project 3358 for the integration of SSDS MK2 Total Ship Training Capability improvements into the SSDS MK2 ACB-16 and TI-16 efforts.

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COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
2178: *QRCC*	642.184	68.161	81.106	117.232	-	117.232	110.786	117.317	75.586	65.238	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

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

The FY 2014 OCO Request will be submitted at a later date

A. Mission Description and Budget Item Justification

The Quick Reaction Combat Capability (QRCC) project implements an evolutionary acquisition of improved ship self defense capabilities against Anti-Ship Cruise Missiles (ASCMs) for selected ships. The Ship Self Defense System (SSDS) is the integrating element of QRCC. The design integrates several existing stand-alone Anti-Air Warfare (AAW) systems that do not individually provide the complete detection, control, and engagement capabilities needed against low flying, high speed ASCMs with low radar cross sections. The SSDS integration concept fulfills the need for an automated detection, quick reaction and multi-target engagement capability emphasizing performance in the littoral environment. SSDS replaces manual control of several self-defense systems with a single integrated capability under the computer-aided control of ship operators. System design emphasizes use of non-developmental items, commercial standards, commercial processors, computer program reuse and open system architecture. SSDS is a physically distributed, open system architecture computer network consisting of commercially available or previously developed hardware. It includes the Navy's standard displays (AN/UYQ-70 and Common Display System) and command table for human-system interface, commercially based local area network access units and interface units, and commercially available fiber optic cabling.

SSDS MK1 integrates the SPS-49A(V)1 radar, SPS-67(V)1 radar, AN/SLQ-32A/B electronic warfare system, Combat Identification Friend or Foe-Self Defense (CIFF-SD), Rolling Airframe Missile (RAM) and Phalanx Close-In Weapon System and is installed on LSD41/49 class ships. SSDS MK1 successfully completed Operational Evaluation in June 1997. SSDS received Milestone III Approval for Full Rate Production (Mar 98) and authority to integrate with ACDS and Cooperative Engagement Capability (CEC) on CVN, LPD-17, LHD and LHA ship classes.

SSDS MK2 facilitates the incremental evolution and implementation of follow-on modifications. Development of SSDS MK2 leveraged critical experiments and re-use of technology and software from SSDS MK1. SSDS MK2 integrates other ship self defense elements, such as AN/SPQ-9B radar, NATO Sea-sparrow system, CEC and Tactical Data Links for joint interoperability. SSDS MK2 provides enhanced capabilities for Self Defense against air, and surface threats using both ownship and remote data to address AAW Capstone requirements. SSDS MK2 becomes the integrated, coherent real time Command and Control System for Aircraft Carriers and Amphibious ships. It will increase operational capabilities; improve combat readiness and Strike Group/Expeditionary Strike Group Interoperability; and promote standardization. It introduces new shipboard tactical displays and support equipment via Tech Insertion and warfighting capability improvements via Advanced Capability Builds (ACB). ACBs integrate advanced systems such as Dual Band Radar, Evolved Sea-Sparrow Missile (ESSM), RAM Block 2 missile, SLQ-32 SEWIP Block 2 and MH-60R Helicopter to implement the warfighting capability improvements and Total Ship Training Capability (TSTC) improvements.

In order to meet the Navy's warfighting capabilities and modernization concepts described in SEA POWER 21, Navy Open Architecture (OA) is being introduced in conjunction with SSDS P3I Commercial off the Shelf (COTS) Tech Refresh. This is the first step in unifying a set of war fighting functions into a common architecture

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shared among many ship classes. This principle of commonality is a major mechanism for cost control and avoidances in the Navy's future war fighting systems. Starting in 2008, SSDS MK 2 was rehosted existing tactical computer program applications to the Open Architecture Computing Environment (OACE) specifications with equipment suites concurrent with P3I COTS Tech Insertion (TI) cycles, prior to migration and integration with other OA applications for implementation on future new construction ships or during future ship modernization. Tech Insertion cycles and equipment tech refresh are driven by COTS obsolescence. In FY09, system development was initiated for SSDS MK1 Technology Refresh for the LSD 41/49 class ships. The effort will transition these ships to an SSDS MK OACE and SSDS MK 2 single source library. New system designation is SSDS MK2 Mod 5C. The system development effort encompasses tech insertion of new OA computing and display equipment (Common Processor System (CPS) and Common Display System (CDS)), modifications and additions to the SSDS MK 2 software for an upgraded interface with the Phalanx Closed-In-Weapon System (CIWS) Block 1B Baseline 2 and Battle Force Tactical Trainer (BFTT), and other unique LSD SSDS interfaces and functionality. The first LSD SSDS MK 2 Mod 5C is programmed for FY14 installation after land-based Combat System Integration and Certification Testing with IOC in FY15. In FY10, SSDS MK 2 system development commenced for the first phase of migration to the Navy OA objective functional architecture designated as SSDS MK 2 ACB-12/TI-12. ACB-12/TI-12 encompasses: implementation of common product line software component for System Track Management; integration of the product line System Track Management components and associated data model with other SSDS software components and Combat System interfaces (e.g. CEC, Dual Band Radar, ESSM and JUWL up-link, RAM Block 2 and CV-TSC); integration of new interfaces with SEWIP Block 2 ES, MH-60R and Global Command & Control System-Maritime (GCCS-M) via Consolidated-Afloat Network and Enterprise Services (CANES); integration of Common Processors System and Common Display System; and expansion of SSDS MK 2 Local Area Network (LAN) to OA Combat System LAN. ACB-12/TI-12 is planned for IOC in the CVN 78, CVN 72 in FY16, and Amphibious Assault Ships in FY17. In FY12-FY13, planning, analysis, and top level requirements definition will be undertaken for SSDS MK 2 ACB-16/TI-16. ACB-16 warfighting improvement integration plan includes SEWIP Block 2 with automated radar designation decoy launch, CIWS and SPS-48G Sensor Integration, interoperability of IFF Mode 5/S and Joint Strike Fighter, advanced MH-60R integration, Total Ship Training Capability (TSTC) updates and GCCS-M Data Exchange via CANES. TI-16 will include common enterprise COTS Hardware / Software products for computing, storage, display, network switching, conversion, and information assurance devices to support system and equipment modernization driven by COTS obsolescence. Funds were added in FY13 for the integration and test of SSDS MK2 Link16 interoperability improvements to address critical Strike Group interoperability issues under the AEGIS Wholeness Initiative.

The SSDS MK2 Development Test and Evaluation (DT&E) provides for comprehensive testing of SSDS MK2-based Combat System hardware/software upgrades for the CVN, LPD 17, LHD, LHA 6 and LSD ship classes. This includes Land Based testing at Wallops Island and At-Sea testing in the lead ships for specific ship class Combat System configuration and testing in the Self Defense Test Ship. The DT&E encompasses test preparation, integration, engineering and development tests, data collection and analysis, and resolution and verification of deficiency corrections. The SSDS MK 2 T&E support Combat System certification, the SSDS Test and Evaluation Master Plan (TEMP) and the Air Warfare Ship Self Defense CAPSTONE Enterprise TEMP.

The initial Development Test and Evaluation (DT&E) and Follow On Operational Test and Evaluation (FOT&E) for SSDS MK 2 was conducted with the CVN 76 SSDS MK 2 Mod 1 configuration in FY05. In FY07, the SSDS MK 2 FOT&E requirements were linked with the Air Warfare Ship Self Defense Enterprise T&E initiative to combine At-Sea Combat System element DT&E and OT&E requirements to synergize the resources required for testing in the SSDS MK 2 ships and the Self Defense Test Ship. The LPD-17 class SSDS MK 2 Mod 2 FOT&E was conducted in FY07/FY08 as part of the Enterprise T&E initiative. Live fire, Combat System end-to-end testing was conducted against Anti Ship Cruise Missile targets in the Self Defense Test Ship in FY07/08/09 in the CVN/LHD/LPD configurations. FOT&E of ESSM integration with SSDS MK 2 was initiated in the CVN class in FY08 and will extend through FY14. FOT&E for the CVN class SSDS MK 2 Mod 1B P3I OACE COTS Tech Insertion was conducted in FY09. Future FOT&E includes the LHA 6 SSDS MK 2 Mod 4B configuration with the RAM Block 2 missile and ESSM; the LSD SSDS

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MK 2 Mod 5C configuration with the Phalanx CIWS 1B Baseline 2 system and RAM Block2; and CVN 78 SSDS MK 2 Mod 6C configuration with the Dual Band Radar, SEWIP Block 2 ES, ESSM with JUWL up-link, and RAM Block 2.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: SSDS MK2 Development Test & Evaluation	17.341	21.463	22.102
Articles:	0	0	0

FY 2012 Accomplishments:
For CVN71/LPD24/LHA 6 SSDS MK2 Mod 1B/2B/4B Configurations with RAM Block 2, ESSM integration and Linux OACE:
- Complete Land Based system integration and engineering test at Wallops Island for LPD24;
- Initiate Land Based system integration and engineering tests at Wallops Island for LHA6.

For LSD SSDS MK2 Mod 5C configuration with the Phalanx CIWS Block 1B Baseline 2, RAM Block 2 and OACE equipment (CPS, CDS, and Combat System LAN):
- Conduct Land Based system integration and engineering tests at Wallops Island for LSD50.

For CVN78 SSDS MK2 Mod 6C configuration with Dual Band Radar, Product Line System Track Manager (PL STM) and OACE equipment:
- Complete Land Based system integration and engineering test for CVN78 SSDS MK2 Engineering Software Releases for DBR Common Array Power and Cooling System integration at Raytheon (Andover MA); and for PL STM and OACE equipment at Wallops Island.

FY 2013 Plans:
For CVN71/LPD24/LHA 6 SSDS MK2 Mod 1B/2B/4B Configurations with RAM Block 2 integration and Linux OACE:
- Conduct Land Based system integration and engineering test at Wallops Island for LHA 6;
- Conduct Live Fire At Sea Testing for LHA 6 in the Self Defense Test Ship (SDTS) - Enterprise Test 05 Phase 1.

For LSD SSDS MK2 Mod 5C configuration with the Phalanx CIWS Block 1B Baseline 2, RAM Block 2 and CPS/CDS equipment:
- Complete Engineering Test, Development Test #1, and initiate Combat System Test (CST) at Wallops Island for LSD50.

For CVN78 SSDS MK2 Mod 6C configuration with Dual Band Radar, CEC, UPX-29, PL STM and OACE equipment:
- Initiate Land Based system integration and engineering tests for CVN78 SSDS MK2 Engineering Software Releases for DBR Track and UPX-29 IFF Mode 5 capabilities at Wallops Island. This includes integration with CEC, TPX-42, and PL STM.

FY 2014 Plans:
For CVN71/LPD24/LHA 6 SSDS MK2 Mod 1B/2B/4B Configurations with RAM Block 2 integration and Linux OACE:

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
- Conduct Land Based DT at Wallops Island for LHA 6 - Conduct Live Fire At Sea Testing for LHA 6 in SDTS - Enterprise Test 05 Phase 2 - Conduct DT/OT (IIIH Phase3 / ET08) and CSSQT on LHA6. For LSD SSDS MK2 Mod 5C configuration with the Phalanx CIWS Block 1B Baseline 2, RAM Block 2 and CPS/CDS equipment: - Complete Engineering Tests, Development Test # 2/Operation Assessment, and Combat System Test (CST) at Wallops Island for LSD50. For CVN78 SSDS MK2 Mod 6C configuration with full Combat System (Dual Band Radar, CEC, TPX-42, PL STM, UPX-29, ESSM, MK29 launcher, RAM Block2, SEWIP Block2, TPX-42, and CV-TSC). - Conduct Land Based system integration and engineering tests for CVN78 SSDS MK2 Engineering Software Releases at Wallops Island for the fire control loop including CEC, UPX-29, ESSM, MK-29 launcher, RAM Block 2 and SEWIP Block 2. This includes missile integration testing of ESSM X-Band JUWL uplink/downlink with the SSDS MK2 MOD6C, and Dual Band Radar. The testing will also includes integration test with CV-TSC, TPX-42, TADIL and Air Control. - Conduct Combat System Certification Testing ashore at the Integrated Combat System Test Facility, NSWC-Dahlgren or SCSC Wallops Island for SSDS MK2-based carrier and amphibious ships combat systems.			
Title: SSDS MK2 Product Development-Advanced Capability Builds (ACB)/Technology Insertion	50.820	59.643	95.130
Articles:	0	0	0
FY 2012 Accomplishments: Perform SSDS MK 2 System Development including integration of government furnished hardware and software to provide Warfighting Capability Improvements via Advanced Capability Builds (ACB), and Open Architecture Computing Environment (OACE) improvements and COTS obsolescence refresh via Technology Insertional Refresh. Product development encompasses studies and analysis, modeling and simulation, system requirements engineering, critical experiments, hardware and software design, software code development, Engineering Development Model (EDM) units, hardware/software integration, factory system integration testing, factory qualification testing, and system pre and post certification support during Combat System Integration Testing, Combat System Certification testing, Development Test and Evaluation (land-based and at-sea). For LSD SSDS MK 2 Mod 5C Tech Insertion, complete Factory System Integration Test and Factory Qualification Testing and initiate pre and post certification support for Land Based engineering tests, development tests, and Combat System certification test. For CVN 78 SSDS MK 2 Mod 6C, complete hardware CDR and software code and integration test for phase 1 of software development for product line system track manager integration, DBR Track capability and OACE (CPS, CDS and Combat System			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
LAN); and complete software IPRs for phase 2 for integration of UPX-29 Mode 5, ESSM with JUWL up-link, RAM Block2, SEWIP Block 2 ES, CV-TSC, TADIL, Air Control, and OACE. This includes the development and integration of product line software components (Product Line System Track Manager/Track Server) within SSDS MK2; the required modifications to existing SSDS MK2 software for implementation of the common software components, and supporting modifications for the new Combat System architecture and interfaces. For SSDS MK2 AMIIP for designated fielded CVNs, conduct integration and test of SSDS MK2 software engineering releases for Link 16 interoperability improvements in support of Strike Group interoperability improvements as part of the AEGIS Wholeness Initiative. For ACB-16/TI-16, conduct planning and analysis and define top level requirements including total system training capability improvements. ***FY 2013 Plans:*** Perform SSDS MK 2 System Development including integration of government furnished hardware and software to provide Warfighting Capability Improvements via Advanced Capability Builds (ACB), and Open Architecture Computing Environment (OACE) improvements and COTS obsolescence refresh via Technology Insertional Refresh. Product development encompasses studies and analysis, modeling and simulation, system requirements engineering, critical experiments, hardware and software design, software code development, Engineering Development Model (EDM) units, hardware/software integration, factory system integration testing, factory qualification testing, and system pre and post certification support during Combat System Integration Testing, Combat System Certification testing, Development Test and Evaluation (land-based and at-sea). For LSD SSDS MK 2 Mod 5C Tech Insertion, conduct pre and post certification support for Land Based engineering tests, development tests, and Combat System certification test. For CVN 78 SSDS MK 2 Mod 6C, complete software code and unit test for phase 1 of software development for DBR track capability integration; and complete software IPRs for the design of phase 2 software for integration of ESSM with JUWL up-link, RAM Block2, SEWIP Block 2 ES, CV-TSC, TADIL and Air Control. Initiate development of operator and maintenance training courses for SSDS MK 2 Mod 6C ACB-12/TI-12. For SSDS MK2 AMIIP for designated fielded carriers, complete software development and integration of SSDS MK2 Link 16 improvements. Transition to Combat System interoperability and certification testing.			

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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
For ACB-16/TI-16, define and generate documentation for Combat System / SSDS MK2 system requirements for software and hardware development. ***FY 2014 Plans:*** Perform SSDS MK 2 System Development including integration of government furnished hardware and software to provide Warfighting Capability Improvements via Advanced Capability Builds (ACB), and Open Architecture Computing Environment (OACE) improvements and COTS obsolescence refresh via Technology Insertional Refresh. Product development encompasses studies and analysis, modeling and simulation, system requirements engineering, critical experiments, hardware and software design, software code development, Engineering Development Model (EDM) units, hardware/software integration, factory system integration testing, factory qualification testing, and system pre and post certification support during Combat System Integration Testing, Combat System Certification testing, Development Test and Evaluation (land-based and at-sea). For CVN 78 SSDS MK 2 Mod 6C, complete SSDS MK2 software design, code, test, and integration for all software releases for the CVN78 Combat System Light-off baseline. Complete FSIT and FQT and initiate pre and post certification support for Land Based integration and engineering tests. Continue development of operator and maintenance training courses for SSDS MK 2 Mod 6C ACB-12/TI-12. For SSDS MK2 AMIIP for designated fielded carriers, provide software support for shipboard integration and testing. For SSDS MK2 ACB-16/TI-16, initiate full scale development of SSDS MK2 ACB16 warfighting improvements, including integration of Total Ship Training Capabilities (TSTC) improvements, based on planned award of competitive contract. Conduct System Requirements Review (SRR) for ACB-16 software development. For TI-16, conduct SRR, System Functional Review (SFR), and Preliminary Design Review (PDR) for SSDS MK2 TI-16 physical architecture and equipment.			
Accomplishments/Planned Programs Subtotals	68.161	81.106	117.232

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPN/5239: *SSDS*	54.324	55.371	51.858		51.858	71.423	79.389	66.641	67.826	Continuing	Continuing
• RDTEN/0603382N: *Advanced Combat System Technology*	1.107	1.506	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• RDTEN/0603658N: *Cooperative Engagement*	54.422	56.512	68.312		68.312	66.001	87.766	77.204	78.532	Continuing	Continuing

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C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• RDTEN/0603582N: *Combat System Integration*	35.989	41.854	18.040		18.040	24.347	26.975	30.621	33.345	Continuing	Continuing
• RDTEN/0604307N: *Surface Combatant Cmbt Sys Eng*	211.968	260.616	236.528		236.528	195.914	312.413	217.682	243.334	Continuing	Continuing

Remarks

D. Acquisition Strategy

The first SSDS MK 2 system procurements took place under a Cost Plus Award Fee (CPAF) contract in FY99 for the CVN 76, LPD 17, LPD 18 and CVN 69. Follow-on equipment procurements for additional ships of the CVN, LPD and LHD classes were awarded on Firm Fixed Price (FFP) contracts. For those ships that will be receive P3I OACE COTS tech Refresh hardware suites, the initial system Tech Refresh Development occurred under a CPAF type contract, with ship COTS conversion equipment/kits procured on FFP contracts.

A system engineering/design agent and Life Cycle Maintenance Cost Plus Fixed Fee (CPFF) contract was awarded in FY05 and a follow-on cost type contract (with incentives), N00024-08-C-5122, was awarded on 30 Sept 2008, to support SSDS MK 2 system/software maintenance and system upgrades through FY13 including the P3I COTS Tech Insertion. A follow on contract to N00024-08-C-5122 will be awarded on a sole source basis for the FY14-FY17 timeframe for the completion of the development, test, certification of SSDS MK2 (ACB12/TI12) for CVN78, CVN72, and Amphibious Assault Ships. For the SSDS MK2 ACB16 software development, including integration of TSTC software improvements, and the software migration to TI-16, a competitive Combat System Engineering Agent (CSEA) / SSDS Design Agent (DA) contract is planned for award in the third quarter of FY14. For TI-16, the SSDS project will leverage common enterprise COTS Open Architecture Computing Environment (OACE) products for computing, storage, display, network, conversion, and information assurance.

E. Performance Metrics

Requirement Documents
- Ship Self Defense System (SSDS) Operational Requirement Document (ORD) approved April 1995 and validated in 1997.
- SSDS MK2 KPPs were promulgated in OPNAV N76 letter SER N766/1S649367 of 18 Dec 01.
* Subject: Ship Self Defense System (SSDS) Requirement Clarification of Key Performance Parameters (KPP) and Measures of Suitability.
* Included the Interoperability KPP for CVN/LPD/LHD
- SSDS MK2 KPPs were clarified in OPNAV N86 letter SER N86F/7U178266 of 13 Nov 07.
* Subject: Ship Self Defense System (SSDS) Requirement Clarification of Key Performance Parameters (KPPs) and Measures of Suitability and Effectiveness
* Included Force Protection and Survivability KPPs
- Test and Evaluation Master Plan (TEMP No. 1400) For Ship Self Defense System (SSDS) Revision B, 5 Mar 2008.

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Background
- SSDS MK1 OPEVAL was successfully completed June 1997 with a Milestone III approval in March 1998
- SSDS MK2 MOD 1 FOT&E was conducted on CVN 76 in 2005. All KPP thresholds were met. However, the system was assessed as not suitable and not effective by COMOPTEVFOR based on the identification of SSDS MK2 and Combat Systems deficiencies (24major, 37 minor deficiencies).
- SSDS MK 2 Mod 2 FOT&E was conducted in LPD 17-19 in 2007/2008. All KPPs thresholds were met and the system was assessed OPERATIONALLY EFFECTIVE and OPERATIONALLY SUITABLE by COMOPTEVFOR in the 12 Feb 2010 report. 10 major and minor deficiencies were identified against SSDS MK 2. (Also, major Warfare effects deficiencies were identified against the LPD 17 class Combat System).
- SSDS MK 2 Mod 3A FOT&E was conducted in LHD 8 in Feb 2010. All KPPs thresholds were met and the system was assessed OPERATIONALLY EFFECTIVE and OPERATIONALLY SUITABLE by COMOPTEVFOR in the 13 Dec 2010 report. 10 major deficiencies were identified against SSDS MK 2. (Also, major Warfare effects deficiencies were identified against the LHD 8 Combat System).

Status
- The Director, Operational Test and Evaluation (DOT&E) FY 2011 Annual Report identified ship self-defense mission deficiencies based on operational testing. The report is a compilation of multiple reports from Commander, Operational Test Force (COTF) including shipboard testing on the CVN 76, CVN 70, LPD 17, LPD 18, LPD 19, LHD 8; and enterprise testing on the Self-Defense Test Ship (SDTS) and in the Probability of Raid Annihilation (PRA) test-bed.
- SSDS was assessed Operationally Effective and Operationally Suitable for the LPD 17 Class and LHD 8. The Combat Systems (CVN, LPD, LHD) were assessed Not Operationally Effective against several Anti-Ship Cruise Missiles (ASCM). There are system of systems performance issues and design limitations. The issues are divided into four categories: detect, engage, test resources, and threat representation.
- All of the major training deficiencies have been addressed and are pending Verification of Correction of Deficiency (VCD) by COTF upon release of SSDS NTSP (Q3, FY12).
- OPNAV N96 is working with PEO IWS, DASN, and COTF to address the shortfalls in performance testing with the following initiatives:
a. Continue to test and field combat system improvements: High Diver improvements to SPS-48E and CEC; RAM Blk 2; SPQ-9B tracking improvements; SEWIP Blk 2 integration; Evolved Sea Sparrow Missile (ESSM) and North Atlantic Treaty Organization (NATO) Seasparrow Surface Missile System (NSSMS) MK 9 Target Illuminator improvements; and NULKA improvements.
b. Expand the use of Modeling and Simulation. Exploit the PRA test-bed model for system engineering and predictive analysis.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*

c. Consider high return self-defense improvements through the POM process.
- Corrective actions will be validated by follow-on testing during the FY13 to FY16 time period: CVN 68 class / LHA 6 Self-Defense Test Ship (SDTS) events; verification of Correction of Deficiencies (VCD); new targets & threat representations; and expansion of PRA test-bed to the CVN 78 and LHA 6 ship classes.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CSEA / ACB-12 SW Dev	SS/CPIF	RSC (TBD):San Diego, CA	0.000	0.000		0.000		29.774	Dec 2013	-		29.774	0.000	29.774	
Systems Eng/Dev/ Integrate (5110)	SS/CPAF	RSC (5110):San Diego, CA	50.100	33.351	Nov 2011	41.550	Nov 2012	0.000		-		0.000	Continuing	Continuing	Continuing
Systems Eng/Dev/ Integrate	SS/CPAF	RSC (5202):Portsmouth, RI	0.000	0.000		1.794	Nov 2012	0.000	Nov 2013	-		0.000	Continuing	Continuing	Continuing
Sys Eng/Safety (Dahlgren)	WR	NSWC DD:Dalhgren, VA	47.795	4.874	Nov 2011	4.480	Oct 2012	10.345	Oct 2013	-		10.345	Continuing	Continuing	Continuing
Systems Engineering (JHU)	SS/FP	JHU/APL:Laurel, MD	46.630	6.666	Apr 2012	7.333	Nov 2012	6.018	Dec 2013	-		6.018	Continuing	Continuing	Continuing
Sys Eng/Training Dev (PHD)	WR	NSWC PHD:Pt Hueneme, CA	19.916	2.407	Nov 2011	0.450	Oct 2012	1.823	Oct 2013	-		1.823	Continuing	Continuing	Continuing
Sys Eng/ILS (CDSA)	WR	CDSA DN:Dam Neck, VA	15.225	2.407	Nov 2011	1.554	Oct 2012	8.795	Oct 2013	-		8.795	Continuing	Continuing	Continuing
Systems Eng/Dev/ Integrate (5100)	SS/CPAF	Gen. Dyn. (5100):Fairfax, VA	2.000	0.000		0.834	Nov 2012	0.536	Dec 2013	-		0.536	Continuing	Continuing	Continuing
Systems Eng	SS/CPAF	Lockheed Martin:Moorestown, NJ	0.000	0.000		0.500	Dec 2012	0.250	Dec 2013	-		0.250	0.000	0.750	
Systems Engineering (Corona)	WR	NSWC Corona:Corona, CA	0.644	0.200	Jan 2012	0.247	Oct 2012	0.000		-		0.000	Continuing	Continuing	Continuing
TI-16 EDM HW Proc / Install	C/CPFF	Various:Various	0.000	0.000		0.000		3.200	Dec 2013	-		3.200	0.000	3.200	
TI-16 HW Devt / Qual Test	C/CPFF	Various:Various	0.000	0.000		0.000		0.000	Dec 2013	-		0.000	0.000	0.000	
ACB-16 SW Dev / CSEA	C/CPIF	TBD:TBD	0.000	0.000		0.000		29.952	Mar 2014	-		29.952	0.000	29.952	
ACB-16 PL / SW Dev	C/CPFF	Various:Various	0.000	0.000		0.000		2.145	Dec 2013	-		2.145	0.000	2.145	
Systems Engineering (IH)	WR	NSWC IH:Indian Head, MD	3.056	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Display Development Kits	SS/FP	Lockheed Martin:St Paul, MN	3.958	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Eng/Dev/ Integrate (5132)	SS/CPAF	RSC (5132):San Diego, CA	20.576	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Award Fees (5132)	SS/CPAF	RSC (5132):San Diego, CA	3.603	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Systems Eng/Dev/ Integrate (5108)	SS/CPAF	RSC (5108):San Diego, CA	98.646	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Systems Eng/Dev/ Integrate (5466)	SS/CPAF	RSC (5466):San Diego, CA	20.353	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Systems Eng/Dev/ Integrate (5104)	SS/CPFF	RSC (5104):San Diego, CA	23.685	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Award Fees (5108)	SS/CPAF	RSC (5108):San Diego, CA	11.208	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Award Fees (5466)	SS/CPAF	RSC (5466):San Diego, CA	2.163	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
RisK Reduction/EMD	Various	Various:Various	76.366	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Misc.	Various	Various:Various	4.513	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	450.437	49.905		58.742		92.838		0.000		92.838			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
QA/RMA	WR	NSWC Corona:Corona, CA	9.954	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	9.954	0.000		0.000		0.000		0.000		0.000			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation (PHD)	WR	NSWC PHD:Port Hueneme, CA	74.294	6.517	Nov 2011	6.645	Oct 2012	5.594	Oct 2013	-		5.594	Continuing	Continuing	Continuing
Development Test & Evaluation (SCSC-WI)	WR	SCSC-WI:Wallops Is, VA	39.772	5.944	Jan 2012	4.922	Oct 2012	5.362	Oct 2013	-		5.362	Continuing	Continuing	Continuing
Development Test & Evaluation (JHU)	SS/CPFF	JHU/APL:Laurel, MD	15.122	1.100	Apr 2012	1.637	Nov 2012	2.239	Dec 2013	-		2.239	Continuing	Continuing	Continuing
Development Test & Evaluation (Corona)	WR	NSWC Corona:Corona, CA	3.798	1.070	Jan 2012	1.061	Oct 2012	1.394	Oct 2013	-		1.394	Continuing	Continuing	Continuing
Development Test & Evaluation	SS/CPAF	RSC (5202):St. Pete, FL	0.000	0.000		0.900	Nov 2012	1.516	Dec 2013	-		1.516	Continuing	Continuing	Continuing
DT&E (RAM & ESSM)	WR	NAWC:China Lake, CA	0.000	0.000		1.150	Oct 2012	0.535	Dec 2013	-		0.535	Continuing	Continuing	Continuing
DT&E (RAM & ESSM)	SS/CPFF	RSC(5432):Tucson, AZ	2.180	0.000		0.800	Nov 2012	0.966	Dec 2013	-		0.966	Continuing	Continuing	Continuing
Development Test & Evaluation (5110)	SS/CPFF	RSC(5110):San Diego, CA	10.754	1.000	Nov 2011	0.562	Nov 2012	0.000		-		0.000	Continuing	Continuing	Continuing
Development Test & Eval	SS/CPIF	RSC:San Diego, CA	0.000	0.000		0.000		0.000	Nov 2013	-		0.000	0.000	0.000	
Development Test & Evaluation (DD)	WR	NSWC DD:Dahlgren, VA	5.760	0.205	Nov 2011	0.462	Oct 2012	2.568	Oct 2013	-		2.568	Continuing	Continuing	Continuing
Development Test & Evaluation (COTF)	WR	OPTEVFOR:Norfolk, VA	3.250	0.412	Feb 2012	0.310	Oct 2012	0.052	Oct 2013	-		0.052	Continuing	Continuing	Continuing
Development Test & Evaluation (CDSA)	WR	CDSA DN:Dam Neck, VA	1.461	0.205	Nov 2011	0.786	Nov 2012	0.322	Oct 2013	-		0.322	Continuing	Continuing	Continuing
Development Test & Evaluation	SS/CPAF	RSC (5412):Portsmouth, RI	0.000	0.000		1.326	Nov 2012	0.644	Oct 2013	-		0.644	Continuing	Continuing	Continuing
Miscellaneous	Various	Various:Not Specified	5.546	0.000	Nov 2011	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	161.937	16.453		20.561		21.192		0.000		21.192			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPAF	Not Specified:Not Specified	19.856	1.803	Apr 2012	1.803	Nov 2012	3.202	Dec 2013	-		3.202	Continuing	Continuing	Continuing
		Subtotal	19.856	1.803		1.803		3.202		0.000		3.202			

Remarks

Program Management Support includes three SEAPORT contracts, Alion (01D7013), TASC (01D7026), and SAIC (04D4119). These contracts provide services in the areas of financial management planning, configuration management, test and evaluation, and engineering support.

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	642.184	68.161		81.106		117.232		0.000		117.232			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*

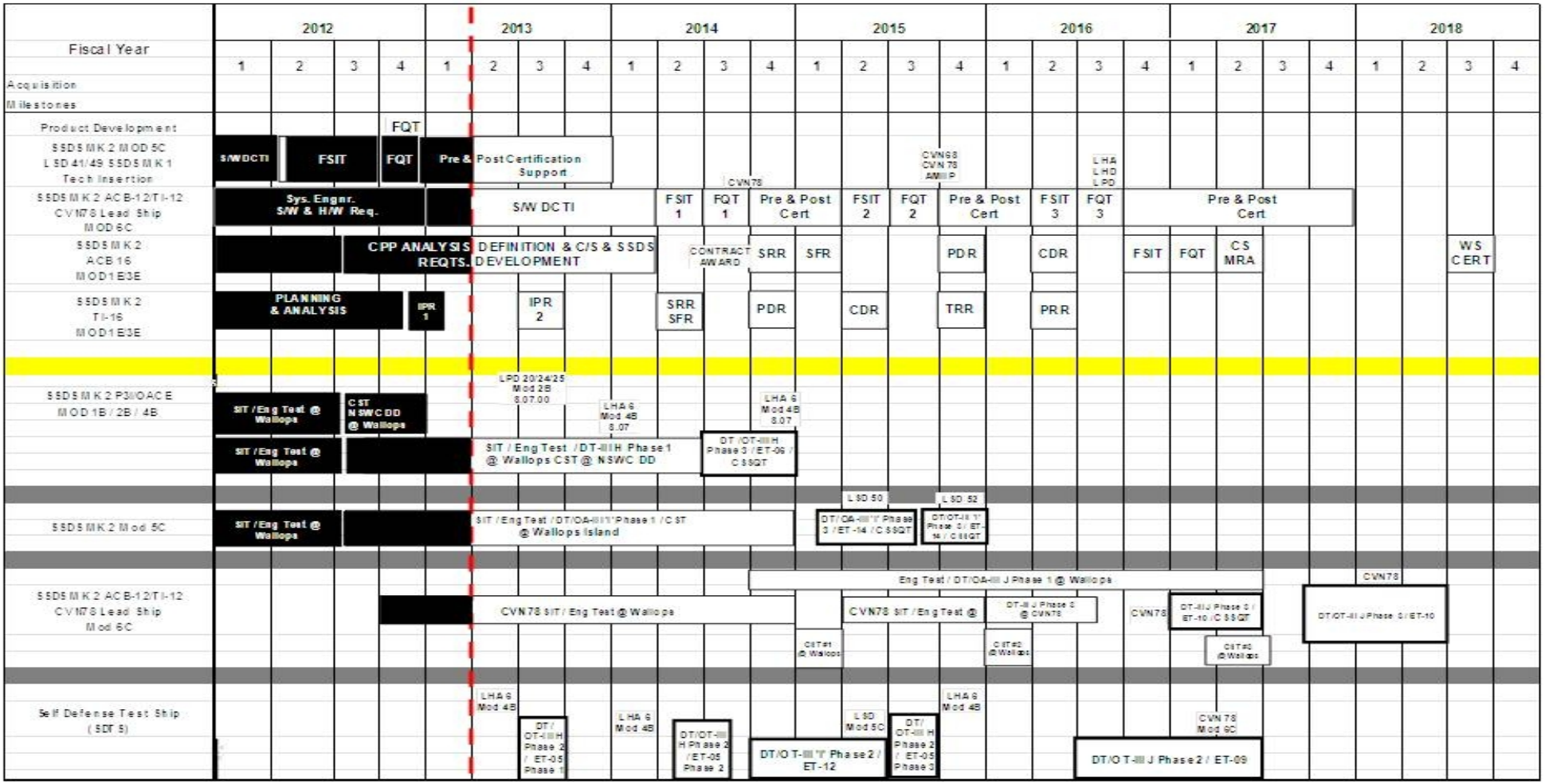

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604755N: *Ship Self Def (Detect & Cntrl)*	**PROJECT** 2178: *QRCC*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2178				
SSDS MK 2 MOD 5C (LSD) - DESIGN/CODE/TEST/INTEGRATION (DCTI)	1	2012	2	2012
SSDS MK 2 MOD 5C (LSD) - FACTORY SYS INTEGRATION TEST (FSIT)	2	2012	3	2012
SSDS MK 2 MOD 5C (LSD) - FACTORY QUALIFICATION TEST (FQT)	4	2012	4	2012
SSDS MK 2 MOD 5C (LSD) - PRE&POST CERT SUPPORT	4	2012	4	2013
SSDS MK 2 MOD 5C (LSD) - T&E - SIT/ENG TEST/CST AT WALLOPS	1	2012	4	2014
SSDS MK 2 MOD 5C (LSD) - T&E - LSD 50 DT/CSSQT	1	2015	3	2015
SSDS MK 2 MOD 5C (LSD) - T&E - LSD 52 DT/OT/CSSQT	3	2015	4	2015
SDTS-SSDS MK 2 MOD 5C T&E DT/OT III I/ET12 PHASE 2	4	2014	2	2015
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - SYS ENG/SW/HW REQTS	1	2012	4	2012
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - SYS ENG/SW/HW REQTS/S/W INTERIM PROGRASS REVIEW (IPR 1)	1	2012	1	2012
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - SYS ENG/SW/HW REQTS-S/W (IPR 2)	2	2012	2	2012
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - SYS ENG/SW/HW REQTS-H/W CDR/ SW (IPR 3)	3	2012	3	2012
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - DCTI	1	2013	1	2014
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - DCTI S/W (IPR 4)	1	2013	1	2013
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - DCTI S/W (IPR 5)	2	2013	2	2013
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - DCTI S/W (IPR 6)	3	2013	3	2013
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 -DCTI S/W (IPR 7)	1	2014	1	2014
SSDS MK2 MOD 6C - CVN 68 ACB12/TI12 - FACTORY SYS INTEGRATION TEST (FSIT 1)	2	2014	2	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
SSDS MK2 MOD 6C - CVN 68 ACB12/TI12 - FACTORY QUALIFICATION TEST (FQT 1)	3	2014	3	2014
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - PRE & POST CERT SUPPORT	4	2014	1	2015
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12-T&E-SIT/ENG TEST AT WALLOPS	4	2012	4	2014
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12-T&E ET/DT/OA III J AT WALLOPS	4	2014	2	2017
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12-T&E CST # 1 AT WALLOPS	1	2015	1	2015
SSDS MK2 MOD 6C - CVN68/CVN78 AMIIP ACB12/TI12-FACTORY SYS INTEGRATION TEST (FSIT 2)	2	2015	2	2015
SSDS MK2 MOD 6C - CVN68/CVN78 AMIIP ACB12/TI12-FACTORY QUALIFICATION TEST (FQT 2)	3	2015	3	2015
SSDS MK2 MOD 6C - CVN68./CVN78 AMIIP ACB12/TI12 - PRE & POST CERT SUPPORT	4	2015	1	2016
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - T&E-CST # 2 AT WALLOPS	1	2016	1	2016
SSDS MK 2 MOD 6C-CVN78 ACB12/TI12/T&E DT III J PHASE 3 (ON CVN78)	1	2016	3	2016
SDTS SSDS MK 2 MOD 6C-CVN78 ACB12/TI12 T&E DT/OT III J/ET09/PHASE 2	3	2016	2	2017
SSDS MK 2 MOD 6C-CVN78 ACB12/TI12-T&E DT III J PHASE 3/ET10/CSSQT	1	2017	2	2017
SSDS MK 2 MOD 6C-CVN78 ACB12/TI12-T&E CST #3 AT WALLOPS	1	2017	3	2017
SSDS MK 2 MOD 6C-CVN78 ACB12/TI12-T&E DT/OT III J PHASE 3/ET-10	3	2017	2	2018
LHA/LHD/LPD SSDS MK 2 ACB12/TI12-FACTORY SYS INTEGRATION TEST (FSIT3)	2	2016	2	2016
LHA/LHD/LPD SSDS MK 2 ACB12/TI12-FACTORY QUALIFICATION TEST (FQT3)	3	2016	3	2016
LHA/LHD/LPD SSDS MK 2 ACB12/TI12-PRE & POST CERT SPT	4	2016	1	2017
SSDS MK 2 MOD 1E/3E/ACB 16/CPP ANALYSIS/DEFINITION & C/S SSDS REQTS DEVELOPMENT	1	2012	1	2014
SSDS MK 2 MOD 1E/3E/ACB 16/CONTRACT AWARD	2	2014	2	2014
SSDS MK 2 MOD 1E/3E/ACB 16/SRR	4	2014	4	2014
SSDS MK 2 MOD 1E/3E/ACB 16/SFR	1	2015	1	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
SSDS MK 2 MOD 1E/3E/ACB 16/PDR	4	2015	4	2015
SSDS MK 2 MOD 1E/3E/ACB 16/CDR	2	2016	2	2016
SSDS MK 2 MOD 1E/3E/ACB 16/FACTORY SYS INTEGRATION TEST (FSIT)	4	2016	4	2016
SSDS MK 2 MOD 1E/3E/ACB 16/FACTORY QUALIFICATION TEST (FQT)	1	2017	1	2017
SSDS MK 2 MOD 1E/3E/ACB 16/COMBAT SYSTEM (C/S) MATERIAL READINESS ASSESSMENT (MRA)	2	2017	2	2017
SSDS MK 2 MOD 1E/3E/ACB 16/WARFARE SYSTEM (WS) CERT	3	2018	3	2018
SSDS MK 2 MOD 1E/3E/TI 16/PLANNING & ANALYSIS	1	2012	3	2012
SSDS MK 2 MOD 1E/3E/TI 16 HW IPR # 1	4	2012	4	2012
SSDS MK 2 MOD 1E/3E/TI 16 HW IPR # 2	3	2013	3	2013
SSDS MK 2 MOD 1E/3E/TI 16 SRR/SFR	2	2014	2	2014
SSDS MK 2 MOD 1E/3E/TI 16 HW PDR	4	2014	4	2014
SSDS MK 2 MOD 1E/3E/TI 16HW CDR	2	2015	2	2015
SSDS MK 2 MOD 1E/3E/TI 16/HW TRR	4	2015	4	2015
SSDS MK 2 MOD 1E/3E/TI 16/PRODUCTION READINESS REVIEW (PRR)	2	2016	2	2016
SSDS MK 2 P3I OACE MOD 2B 8.07 (LPD 20/24/25) T&E-SIT/ENG TEST AT WI	1	2012	2	2012
SSDS MK 2 P3I OACE MOD 2B 8.07 (LPD 20/24/25) CST AT NSWC DD	3	2012	4	2012
SSDS MK 2 P3I OACE MOD 4B (LHA6) T&E-SIT/ENG TEST/DT-III H PHASE 1 AT WI/CST @ NSWC DD	1	2012	1	2014
SSDS MK 2 P3I OACE MOD 4B (LHA6) T&E DT/OT III I/ET06/CSSQT	3	2014	4	2014
SDTS-SSDS MK 2 P3I OACE MOD 4B (LHA6) T&E DT/OT/ET05 PHASE 1	3	2013	3	2013
SDTS-SSDS MK 2 P3I OACE MOD 4B (LHA6) T&E DT/OT/ET05 PHASE 2	2	2014	3	2014
SDTS-SSDS MK 2 P3I OACE MOD 4B (LHA6) T&E DT/OT III H/ET05 PHASE 3	3	2015	3	2015
SSDS MK2 MOD 6C-CVN78 ACB12/TI12-SIT/ENG TEST AT WALLOPS	2	2015	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3172: *Joint Non-Lethal Weapons*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
3172: *Joint Non-Lethal Weapons*	19.948	1.308	5.379	10.849	-	10.849	5.141	2.658	2.682	2.725	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

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

The FY 2014 OCO Request will be submitted at a later date

Note

Funding for Integrated Swimmer Defense (ISD) moved to project 3306 starting in FY12.

A. Mission Description and Budget Item Justification

The scope of this project is to provide the fleet Expeditionary (specifically the Maritime Expeditionary Security Force) units with the capability of a portable maritime system to engage contacts of interest once they have been detected. Long Range Ocular Interruption (LROI) consists of efforts to develop and demonstrate a long range laser warning and dazzle system for use in maritime environment. The device is designed to issue clear and unambiguous optically dazzling warnings at long ranges (in excess of 1000m) to personnel, vehicles, vessels, (and potentially aircraft) approaching Navy, Coast Guard, or Army ships, ground assets, and critical maritime infrastructure.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Non-Lethal Weapons Development	0.408	3.979	8.849
Articles:	0	0	0
FY 2012 Accomplishments: Support program planning for technology investment resulting from the Analysis of Alternatives (AoA). Develop non-lethal, vessel-entanglement technologies to stop small and medium sized vessels in response to CENTCOM JUONS CC-0371. Effort will involve design and fabrication of launchers and payloads (i.e. nets used for entanglement of vessels' propellers). ***FY 2013 Plans:*** Support design refinement for the Long Range Ocular Interrupter (LROI) and other systems resulting from the Analysis of Alternatives (AoA). ***FY 2014 Plans:*** Support design refinement for the Long Range Ocular Interrupter (LROI) and other systems resulting from the Analysis of Alternatives (AoA).			
Title: Non-Lethal Weapons Testing	0.900	1.400	2.000
Articles:	0	0	0

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3172: *Joint Non-Lethal Weapons*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
FY 2012 Accomplishments: Complete development of Request For Proposal (RFP) package to support system production Post Milestone C. Also plan to test non-lethal, vessel-entanglement technologies on various representative vessels. ***FY 2013 Plans:*** Test Long Range Ocular Interrupter (LROI) components and other Non-lethal capabilities resulting from Analysis of Alternatives (AoA). ***FY 2014 Plans:*** Test Long Range Ocular Interrupter (LROI) components and other Non-lethal capabilities resulting from Analysis of Alternatives (AoA).			
Accomplishments/Planned Programs Subtotals	1.308	5.379	10.849

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPN/8128: *NCW Forces Active*	0.600	0.600	0.600		0.600	2.016	5.496	7.335	8.245	Continuing	Continuing

Remarks

D. Acquisition Strategy

The acquisition strategy includes the assessment of mature technologies, strategies and potential system capabilities matched against identified capability gaps that can be used in a flexible response posture. Selected capabilities will be based on AoA and best material approach to meet expeditionary and afloat force protection requirements. Technology development will occur in FY12-13 culminating in an Engineering and Manufacturing Development (EMD) phase commencing in FY14. Successful capabilities will require cross-integration onto existing Navy platforms and ensure compatibility/interoperability within the expeditionary context. Multiple solutions could be output based on overall satisfaction of technical and operational requirements, acquisition life cycle costs, and forecasted procurement quantity needs.

E. Performance Metrics

Complete material solution analysis and technical development strategy. Conduct Capability Development Document (CDD) process.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3172: *Joint Non-Lethal Weapons*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering	WR	NSWC Dahlgren:Dahlgren VA	5.956	0.500	Feb 2012	2.779	Feb 2013	7.849	Feb 2014	-		7.849	Continuing	Continuing	Continuing
System Engineering	WR	NSWC Port Hueneme:Port Hueneme CA	0.400	0.228	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
System Engineering	WR	NSWC Crane:Crane IN	0.400	0.180	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	6.756	0.908		2.779		7.849		0.000		7.849			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Services (NSWC)	WR	NSWC Dahlgren:Dahlgren, VA	0.000	0.000		1.000	Feb 2013	1.000	Feb 2014	-		1.000	0.000	2.000	
Program Management	WR	NUWC Newport:Newport, RI	2.857	0.000		0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Engineering Services (NSWC)	WR	NSWC Panama City:Panama City, FL	1.200	0.000		0.000		0.000		-		0.000	0.000	1.200	
		Subtotal	4.057	0.000		1.000		1.000		0.000		1.000			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	WR	NSWC Carderock:Bethesda MD	0.300	0.000		0.000		0.000		-		0.000	0.000	0.300	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3172: *Joint Non-Lethal Weapons*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	MIPR	Military Sealift Command:Washington DC	2.200	0.000		0.000		0.000		-		0.000	0.000	2.200	
Test and Evaluation	WR	COMOPTEVFOR:Norfolk VA	3.325	0.100	Feb 2012	1.000	Feb 2013	1.000	Feb 2014	-		1.000	Continuing	Continuing	Continuing
		Subtotal	5.825	0.100		1.000		1.000		0.000		1.000			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	WR	NSWC Dahlgren:Dahlgren VA	3.292	0.300	Feb 2012	0.600	Feb 2013	1.000	Feb 2014	-		1.000	Continuing	Continuing	Continuing
DAWDF	Various	Not Specified:Not Specified	0.018	0.000		0.000		0.000		-		0.000	0.000	0.018	
		Subtotal	3.310	0.300		0.600		1.000		0.000		1.000			

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	19.948	1.308		5.379		10.849		0.000		10.849			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3172: *Joint Non-Lethal Weapons*

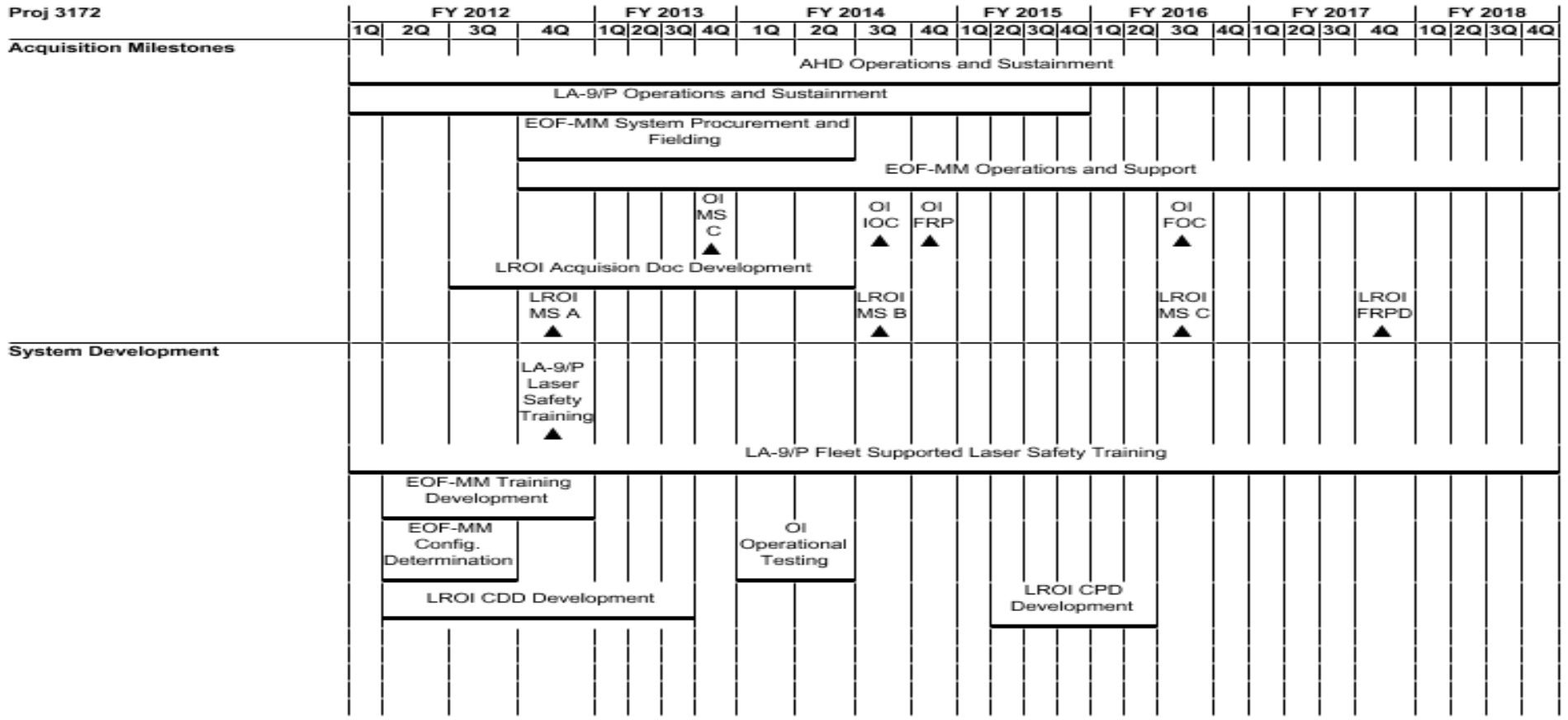

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Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3172: *Joint Non-Lethal Weapons*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3172				
Acquisition Milestones: Acoustic Hailing Devices (AHD)	1	2012	4	2018
Acquisition Milestones: LA-9/P Handheld Laser Dazzlers Operations and Sustainment	1	2012	4	2015
Acquisition Milestones: Escalation of Force Mission Module (EOF-MM) System Procurement and Fielding	4	2012	2	2014
Acquisition Milestones: Escalation of Force Mission Module (EOF-MM) Operations and Support	4	2012	4	2018
Acquisition Milestones: Ocular Interrupter (OI) MS-C	4	2013	4	2013
Acquisition Milestones: Ocular interrupter (OI) FRP	4	2014	4	2014
Acquisition Milestones: Ocular Interrupter (OI) IOC	3	2014	3	2014
Acquisition Milestones: Ocular Interrupter (OI) FOC	3	2016	3	2016
Acquisition Milestones: Long-Range Ocular Interrupter (LROI) TES/TEMP/TDS/SEP/ Acq Strat Development	3	2012	2	2014
Acquisition Milestones: Long-Range Ocular Interrupter (LROI) MS A	4	2012	4	2012
Acquisition Milestones: Long-Range Ocular Interrupter (LROI) MS B	3	2014	3	2014
Acquisition Milestones: Long-Range Ocular Interrupter (LROI) MS C	3	2016	3	2016
Acquisition Milestones: Long-Range Ocular Interrupter (LROI) MS FRPD	4	2017	4	2017
System Development: LA-9/P Handheld Laser Dazzlers Laser Safety Training	4	2012	4	2012
System Development: LA-9/P Handheld Laser Dazzlers Fleet Supported Laser Safety Training	1	2012	4	2018
System Development: Escalation of Force Mission Module (EOF-MM) Training Development	2	2012	4	2012
System Development: Escalation of Force Mission Module (EOF-MM) Config. Determination	2	2012	3	2012

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3172: *Joint Non-Lethal Weapons*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
System Development: Ocular Interrupter (OI) Operational Testing	1	2014	2	2014
System Development: Long-Range Ocular Interrupter (LROI) CDD Development	2	2012	3	2013
System Development: Long-Range Ocular Interrupter (LROI) CPD Development	2	2015	2	2016

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3306: *Integrated Swimmer Defense (ISD)*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
3306: *Integrated Swimmer Defense (ISD)*	0.000	1.625	1.177	1.198	-	1.198	1.219	1.242	1.265	1.285	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

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

The FY 2014 OCO Request will be submitted at a later date

Note

Funding moved from project 3172 starting in FY12.

A. Mission Description and Budget Item Justification

The scope of this project is to provide the fleet Expeditionary (specifically the Maritime Expeditionary Security Force) units with the capability of a portable maritime Integrated Swimmer Defense (ISD) system to engage combat swimmers/divers or unknown individuals underwater once they have been detected. The ISD program combines the detection and engagement operations in order to complete the swimmer defense picture for the fleet. The objective of the integrated swimmer defense system (ISD) is the development and deployment of an integrated system capable of being deployed by the expeditionary harbor security units (primarily the Maritime Expeditionary Security Force). ISD will be designed to detect, track, classify, warn, deter and neutralize divers' and swimmers' threats. ISD is important to protecting high value assets within harbors from the increasing threat of waterborne terrorist or combatant attacks.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: Integrated Swimmer Defense	1.625	1.177	1.198
Articles:	0	0	0
FY 2012 Accomplishments: Development of project documentation (P-SPEC, Market Survey, CPD, etc). Supports preparation for Milestone C decision.			
FY 2013 Plans: Continue development of project documentation. Finalize P-SPEC, gain CPD approval, release/award Test Article contracts.			
FY 2014 Plans: Receive Test Articles and begin integrated Test & Evaluation. Gain TEMP approval.			
Accomplishments/Planned Programs Subtotals	1.625	1.177	1.198

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3306: *Integrated Swimmer Defense (ISD)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• OPN/8128: *ISD*	0.000	0.780	1.842		1.842	1.967	3.917	4.426	4.419	Continuing	Continuing

Remarks

D. Acquisition Strategy

The acquisition strategy includes the integration of swimmer/diver detection sensors and using software to fuse the sensor track data thereby creating an end to end combat system capability for swimmer/diver defense. The ISD program of record system configuration will be produced through an Acquisition Category (ACAT) program to procure component systems needed to bring the performance of the UOES prototypes up to the full production requirements.

E. Performance Metrics

User Operational Evaluation Systems (UOES) will culminate defined set of system capabilities and limitations. Define level specifications and technical data packages.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3306: *Integrated Swimmer Defense (ISD)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware/Software Development	WR	NUWC:Keyport	0.000	0.200	Feb 2012	0.300	Feb 2013	0.300	Feb 2014	-		0.300	Continuing	Continuing	Continuing
Hardware/Software Development - FNC	WR	NUWC Newport:Newport RI	0.000	0.100	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
Hardware/Software Development - FNC Detection and Targeting	WR	NUWC Newport:Newport RI	0.000	0.125	Feb 2012	0.000		0.000		-		0.000	Continuing	Continuing	Continuing
		Subtotal	0.000	0.425		0.300		0.300		0.000		0.300			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Services	WR	NUWC:Keyport	0.000	0.679	Feb 2012	0.295	Feb 2013	0.295	Feb 2014	-		0.295	Continuing	Continuing	Continuing
		Subtotal	0.000	0.679		0.295		0.295		0.000		0.295			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	WR	NUWC:Keyport	0.000	0.290	Feb 2012	0.300	Feb 2013	0.300	Feb 2014	-		0.300	Continuing	Continuing	Continuing
		Subtotal	0.000	0.290		0.300		0.300		0.000		0.300			

Management Services ($ in Millions)

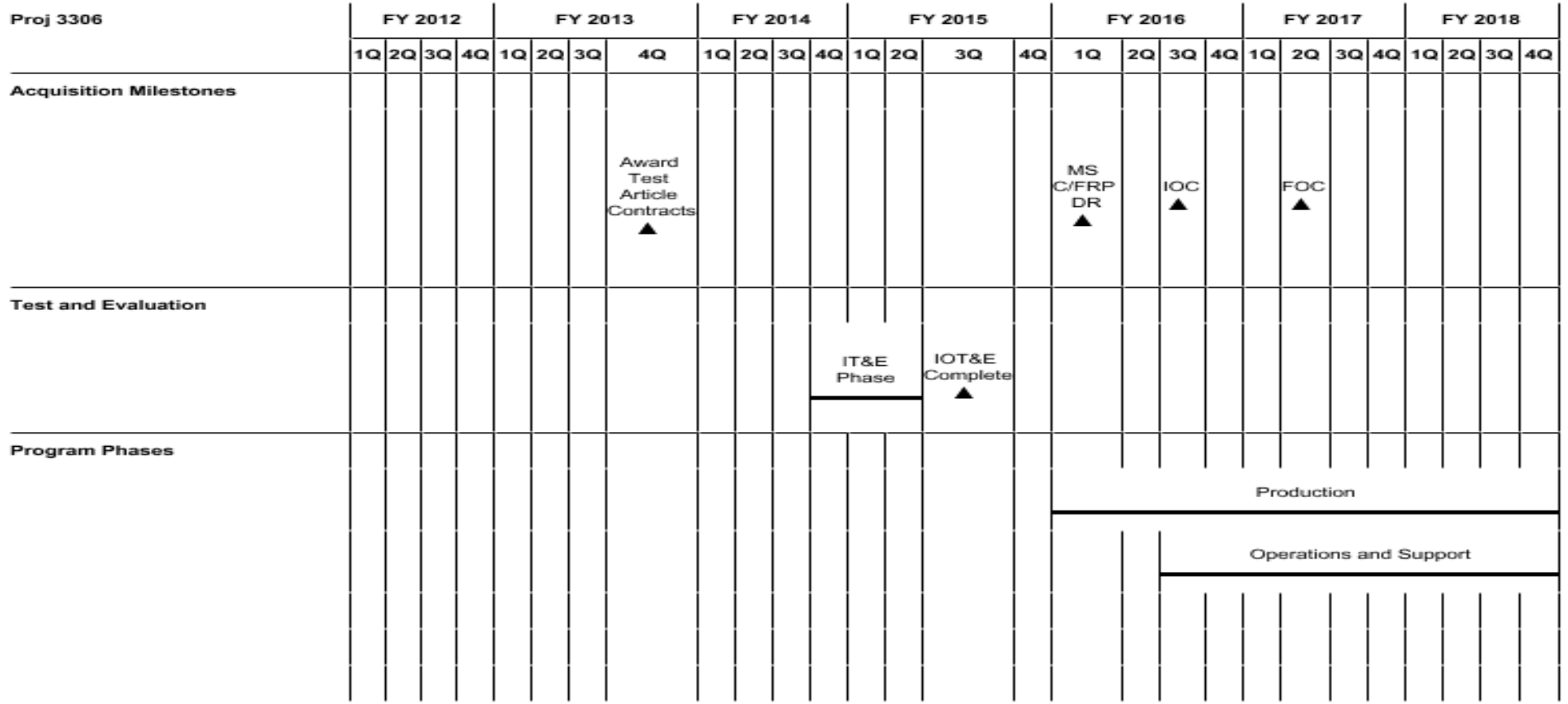
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	WR	NUWC:Keyport	0.000	0.231	Feb 2012	0.282	Feb 2013	0.303	Feb 2014	-		0.303	Continuing	Continuing	Continuing
		Subtotal	0.000	0.231		0.282		0.303		0.000		0.303			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3306: *Integrated Swimmer Defense (ISD)*	

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	1.625		1.177		1.198		0.000		1.198			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3306: *Integrated Swimmer Defense (ISD)*



2014DON - 0604755N - 3306

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604755N: *Ship Self Def (Detect & Cntrl)*	**PROJECT** 3306: *Integrated Swimmer Defense (ISD)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3306				
Acquisition Milestones: IOC	3	2016	3	2016
Acquisition Milestones: MS C/FRPDR	1	2016	1	2016
Acquisition Milestones: FOC	2	2017	2	2017
Acquisition Milestones: Award Test Article Contracts	4	2013	4	2013
Test and Evaluation: IT&E Phase	4	2014	2	2015
Test and Evaluation: IOT&E Complete	3	2015	3	2015
Program Phases: Production	1	2016	4	2018
Program Phases: Operations and Support	3	2016	4	2018

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3358: *SSDS Training Improvement Program*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
3358: *SSDS Training Improvement Program*	0.000	0.000	0.000	1.081	-	1.081	1.120	1.130	1.093	0.600	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0		0	0	0	0	0		

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

The FY 2014 OCO Request will be submitted at a later date

Note

The SSDS Training Improvement Program project (PU 3358) effort is dependent on the execution of the SSDS MK2 ACB-16 / TI-16 effort under PU 2178 (QRCC). PU 3358 funds the integration of Total Ship Training Capability (TSTC) improvements into the SSDS MK2 ACB-16/TI-16 development baseline. The integrated SSDS MK2 TSTC improvements will be included in the SSDS MK2 ACB-16/TI-16 documentation, testing and certification. The planning schedule for SSDS MK2 ACB-16 and TI-16 is documented in QRCC Project (PU 2178).

A. Mission Description and Budget Item Justification

The SSDS Training Improvement Program project is for the integration of Total Ship Training Capability (TSTC) improvements into the SSDS MK2 Advanced Capability Build (ACB-16) and Technology Insertion (TI-16) development efforts. The TSTC improvements encompass physical and functional upgrades to the existing SSDS MK2 onboard training capabilities implemented with Battle Force Tactical Trainer (BFTT). Planned TSTC improvements include a common method for integrated control of simulated air and surface vehicles including Identification Friend and Foe (IFF) and SSDS MK2 Combat System LAN upgrade support for an Integrated Air Asset Simulation / Stimulation unit.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: New Accomplishment/Planned Program Entry	0.000	0.000	1.081
Articles:			0
FY 2014 Plans: For SSDS MK2 ACB-16/TI-16, initiate full scale development of SSDS MK2 ACB16 warfighting improvements, including integration of Total Ship Training Capabilities (TSTC) improvements, based on planned award of competitive contract. Conduct System Requirements Review (SRR) for ACB-16 software development. For TI-16, conduct SRR, System Functional Review (SFR), and Preliminary Design Review (PDR) for SSDS MK2 TI-16 physical architecture and equipment.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	1.081

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3358: *SSDS Training Improvement Program*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

For the SSDS MK2 ACB16 software development including the integration of TSTC software improvements and the software migration to TI-16, a competitive contract is planned for award in the second quarter of FY14 for a Combat System Engineering Agent (CSEA) and SSDS Design Agent (DA). For TI-16, the SSDS project will leverage common enterprise COTS Open Architecture Computing Environment (OACE) products for computing, storage, display, network, conversion, and information assurance.

E. Performance Metrics

Requirement Documents
- Ship Self Defense System (SSDS) Operational Requirement Document (ORD) approved April 1995 and validated in 1997.
- SSDS MK2 KPPs were promulgated in OPNAV N76 letter SER N766/1S649367 of 18 Dec 01.
* Subject: Ship Self Defense System (SSDS) Requirement Clarification of Key Performance Parameters (KPP) and Measures of Suitability.
* Included the Interoperability KPP for CVN/LPD/LHD
- SSDS MK2 KPPs were clarified in OPNAV N86 letter SER N86F/7U178266 of 13 Nov 07.
* Subject: Ship Self Defense System (SSDS) Requirement Clarification of Key Performance Parameters (KPPs) and Measures of Suitability and Effectiveness
* Included Force Protection and Survivability KPPs
- Test and Evaluation Master Plan (TEMP No. 1400) For Ship Self Defense System (SSDS) Revision B, 5 Mar 2008.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *System Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3358: *SSDS Training Improvement Program*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ACB-16 SW Dev / CSEA	C/CPIF	TBD:TBD	0.000	0.000		0.000		1.081	Mar 2014	-		1.081	Continuing	Continuing	Continuing
Sys Eng / Training Dev (PHD)	C/BA	NSWC - PHD:Pt. Hueneme, CA	0.000	0.000		0.000		0.000	Oct 2013	-		0.000	Continuing	Continuing	Continuing
Sys Eng / Safety - Dahlgren	C/BA	NSWC - DD:Dahlgren, VA	0.000	0.000		0.000		0.000	Oct 2013	-		0.000	Continuing	Continuing	Continuing
Sys Eng / ILS - (CDSA - DN)	C/BA	CDSA - DN:Dam Neck, VA	0.000	0.000		0.000		0.000	Oct 2013	-		0.000	Continuing	Continuing	Continuing
		Subtotal	0.000	0.000		0.000		1.081		0.000		1.081			

Remarks

The SSDS Training Improvement Program project (PU 3358) effort is dependent on the execution of the SSDS MK2 ACB-16 / TI-16 effort under PU 2178 (QRCC). PU 3358 funds the integration of Total Ship Training Capability (TSTC) improvements into the SSDS MK2 ACB-16/TI-16 development baseline. The integrated SSDS MK2 TSTC improvements will be included in the SSDS MK2 ACB-16/TI-16 documentation, testing and certification. The planning schedule for SSDS MK2 ACB-16 and TI-16 is documented in QRCC Project (PU 2178).

	All Prior Years	FY 2012		FY 2013		FY 2014 Base		FY 2014 OCO		FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		0.000		1.081		0.000		1.081			

Remarks