CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-2, RDT&E BUDGET ITEM JUSTIFICATION						DATE February 2008	
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**			R-1 ITEM NOMENCLATURE **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**				
COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Total PE Cost	33.948	34.941	35.999	26.584	32.372	36.639	36.406
0166 / SPS Improvement Program	5.043	1.929	1.711	0.000	0.000	0.000	0.000
2178 / QRCC	12.626	26.200	30.554	24.718	30.243	33.207	33.945
3172 / Joint Non-Lethal Weapons	0.000	4.228	3.734	1.866	2.129	3.432	2.461
9999 / CONGRESSIONAL ADD	16.279	2.584	0.000	0.000	0.000	0.000	0.000

A. MISSION DESCRIPTION:

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 performs marginally 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 within a development structure dedicated to systems engineering.

DETECTION: Improvements in coordinated sensor performance to increase the probability of detecting low altitude, low observable targets is 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) (2178), while sensor improvements are addressed through the SPS Improvements (0166). These provide improvements to both active and passive detection.

CONTROL: Multi-sensor integration, parallel processing and the coordination of hardkill/softkill capabilities in an automated response to the ASCM threat are the cornerstones of Ship Self Defense System (SSDS) being developed through QRCC (2178) efforts. In addition, that project provides for the central system engineering management of SSD developments, including efforts required to integrate SSDS with the Advanced Combat Direction System (CDS) for those ships having a CDS.

Shipboard Protection System (SPS) develops an integrated shipboard, suite of systems designed to detect, identify, and engage asymmetric surface threats.

Joint Non-lethal Weapons scope is to provide the fleet (Ashore, Afloat and Expeditionary) 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.

FY07 Congressional Adds: 9589C Integrated Display Enhanced Architecture; 9852C Shipboard Swimmer Defense System; and 9A52C Reusable Unambiguous Warning Vehicle

FY08 Congressional Adds: 9999: Expeditionary Swimmer Defense and Autonomous Unmanned Surface Vessel

B. PROGRAM CHANGE SUMMARY:

Funding:	FY 2007	FY 2008	FY 2009
FY 2008 President's Budget	26.649	33.064	36.522
FY 2009 President's Budget	33.948	34.941	35.999
Total Adjustments	7.299	1.877	- 0.523
Summary of Adjustments			
- Undistributed General Reductions	-0.601	-0.723	0.000
- Program Adjustment	7.900	0.000	- 0.523
- Congressional Action	0.000	2.600	0.000
Subtotal	7.299	1.877	- 0.523

CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE February 2008		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**				PROJECT NUMBER AND NAME **0166/SPS Improvement Program**		
COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost	5.043	1.929	1.711	0.000	0.000	0.000	0.000
RDT&E Articles Qty	0	0	0	0	0	0	0

A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Shipboard Protection System (SPS) develops an integrated shipboard, suite of systems designed to detect, identify, and engage asymmetric surface threats. Capabilities include: Surface Surveillance System, MK 49 stabilized gun mounts and Non-lethal weapons/devices. The surface surveillance system integrates EO/IR sensors, and radar into a common tactical surveillance system. Stabilized guns: provide integrated lethal engagement capability against asymetric threats. Non-lethal weapons: NLW assist in determining intent and target discrimination. SPS is to be fielded in blocks through evolutionary acquisition. The block approach facilitates the early delivery of enhanced situational awareness capability. Future blocks will introduce lethal and non-lethal effectors with total detect to engage capability integration. The SPS "End State System" will provide Navy vessels with the ability, in foreign and domestic ports, to protect themselves from attacks by asymmetric surface threats. This ability requires that information necessary to seamlessly execute the detect-to-engage sequence be collected, processed, communicated, and acted upon before threats reach their objectives.

CLASSIFICATION:	UNCLASSIFIED	
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION		DATE February 2008
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**	PROJECT NUMBER AND NAME **0166/SPS Improvement Program**

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2007	FY 2008	FY 2009
Accomplishments/Effort/Subtotal Cost	0.000	1.929	1.711
RDT&E Articles Quantity	0	0	0

FY08/09 - Shipboard Protection System - System design, development, integrate, analyze and evaluate the SPS system.

	FY 2007	FY 2008	FY 2009
Accomplishments/Effort/Subtotal Cost	2.043	0.000	0.000
RDT&E Articles Quantity	0	0	0

FY07 - Test the SPS system, to include WESERB Testing, Development Testing (DT), ground based testing, live fire testing, Ship integration test, Ship underway testing and Operational Testing (OT).

	FY 2007	FY 2008	FY 2009
Accomplishments/Effort/Subtotal Cost	3.000	0.000	0.000
RDT&E Articles Quantity	0	0	0

FY07 - Periscope Detection: This program modifies and improves a search radar to provide automatic periscope detection and discrimination while conducting surface search functions, such as navigation and piloting, surface target detection (ships, buoys, etc). The concept is to field a new capability without having to procure and qualify a new radar.

C. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. and Name	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost
OPN LINE 812800 (SPS Program)	11.574	2.752	23.272					CONT.	CONT.

D. ACQUISITION STRATEGY:

Revised acquisition strategy is to provide capability to the fleet in blocks. (Block 1 - Enhanced Situational Awareness and Block 3 - Total System Integration including Lethal and Non-Lethal Engagement). All work is being led and performed by the Warfare Centers.

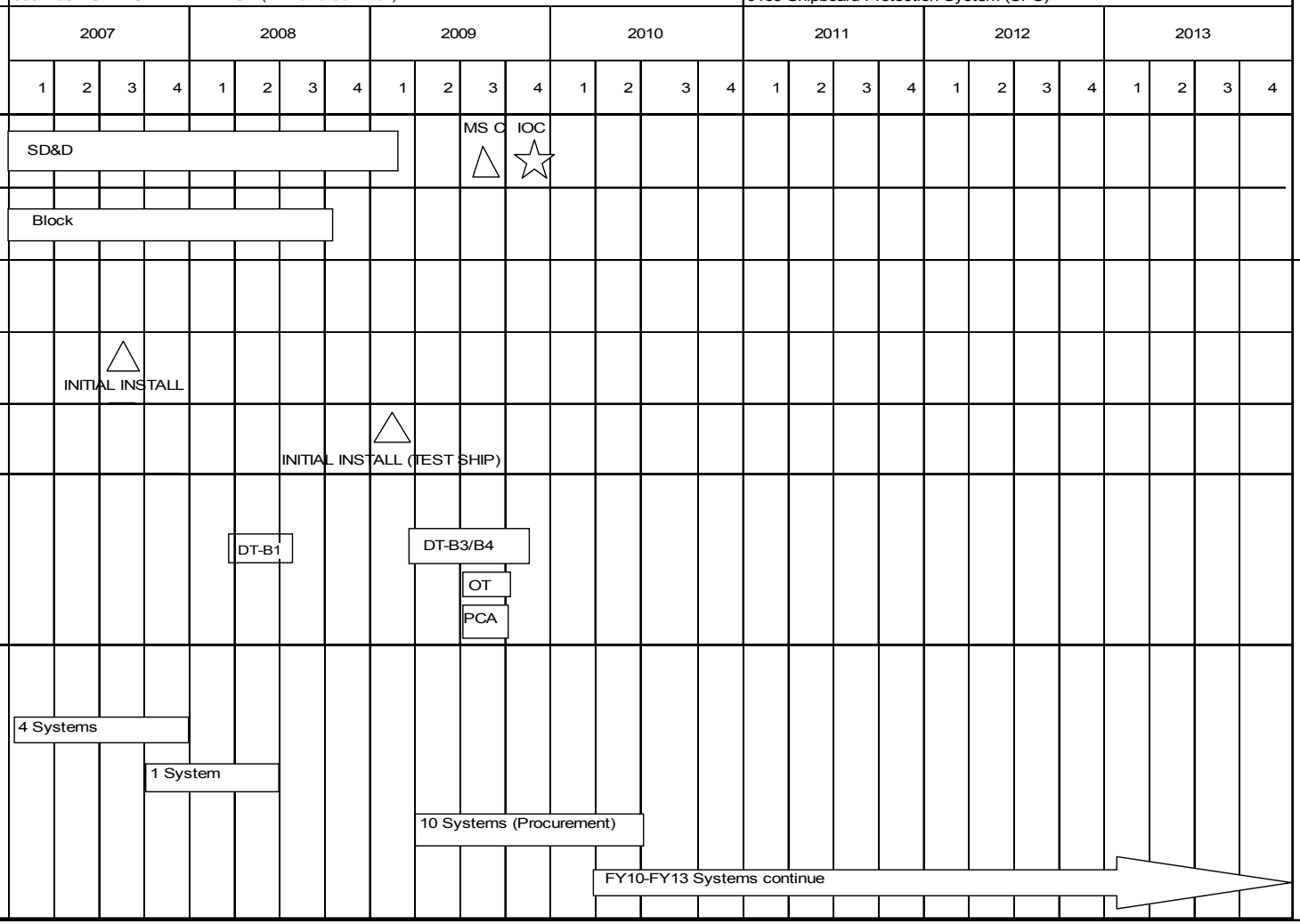
CLASSIFICATION:	UNCLASSIFIED											
EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS									DATE February 2008			
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**		PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**					PROJECT NUMBER AND NAME **0166/SPS Improvement Program**					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost ($000)	FY 2007 Cost ($000)	FY 2007 Award Date	FY 2008 Cost ($000)	FY 2008 Award Date	FY 2009 Cost ($000)	FY 2009 Award Date	Cost to Complete ($000)	Total Cost ($000)	Target Value of Contract
Hardware/Software Development	WR	NSWC Crane	1.100	0.000		0.552	MAR-08	0.277	NOV-08	0.000	1.929	0.000
Hardware/Software Development	WR	NSWC Dahlgren	1.235	0.000		0.553	JAN-08	0.326	NOV-08	0.000	2.114	0.000
Hardware/Software Development	FFP	NORTHROP GRUMMAN	0.236	0.000		0.000		0.000		0.000	0.236	0.000
Hardware/Software Development	WR	NAVAIR/KDH	0.200	0.000		0.000		0.000		0.000	0.200	0.000
Subtotal Product Development			**2.771**	**0.000**		**1.105**		**0.603**		**0.000**	**4.479**	**0.000**
Remarks:												
Engineering Services	WR	NSWC CRANE	0.337	0.400	NOV-07	0.098	MAR-08	0.075	NOV-08	0.000	0.910	0.000
Engineering Services	WR	NSWC DAHLGREN	0.358	0.000		0.098	MAR-08	0.099	NOV-08	0.000	0.555	0.000
Engineering Services	XFER	IWS PERISCOPE DETECT	1.193	3.000	NOV-06	0.000		0.000		0.000	4.193	0.000
ILS FUNCTIONS	WR	NSWC DAHLGREN	0.200	0.480	FEB-07	0.000		0.000		0.000	0.680	0.000
Subtotal Support Costs			**2.088**	**3.880**		**0.196**		**0.174**		**0.000**	**6.338**	**0.000**
Remarks:												
T&E FUNCTIONS	WR	COMOPTEVFOR	0.008	0.000		0.289	MAR-08	0.600	NOV-08	0.000	0.897	0.000
T&E FUNCTIONS	WR	NSWC DAHLGREN	0.065	0.673	FEB-07	0.256	MAR-08	0.260	NOV-08	0.000	1.254	0.000
T&E FUNCTIONS	WR	NSWC CRANE	0.000	0.440	FEB-07	0.000		0.000		0.000	0.440	0.000
Subtotal Test and Evaluation			**0.073**	**1.113**		**0.545**		**0.860**		**0.000**	**2.591**	**0.000**
Remarks:												
MANAGEMENT SUPPORT	VARIOUS	VARIOUS	0.250	0.000		0.049	JAN-08	0.049	NOV-08	0.000	0.348	0.000
TRAVEL			0.073	0.050	NOV-06	0.034	JAN-08	0.025	NOV-08	0.000	0.182	0.000
Subtotal Management Services			**0.323**	**0.050**		**0.083**		**0.074**		**0.000**	**0.530**	**0.000**
Remarks:												
Total Cost			**5.255**	**5.043**		**1.929**		**1.711**		**0.000**	**13.938**	**0.000**

CLASSIFICATION:

EXHIBIT R4, Schedule Profile

DATE: **February 2008**

APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	0604755N SHIP SELF DEFENSE (DETECT & CONTROL)	0166 Shipboard Protection System (SPS)



CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-4a, SCHEDULE DETAIL					DATE February 2008		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**			PROJECT NUMBER AND NAME **0166/SPS Improvement Program**			
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
PCA			3RD QTR				
SD&D	1ST - 4TH QTR	1ST - 4TH QTR	1ST QTR				
DT-B1		2ND QTR					
OT			3RD QTR				
MILESTONE C/FRP			3RD QTR				
IOC			4TH QTR				
DT-B3/B4			2ND - 4TH QTR				

CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE February 2008		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**				PROJECT NUMBER AND NAME **2178/QRCC**		
COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost	12.626	26.200	30.554	24.718	30.243	33.207	33.945
RDT&E Articles Qty	0	0	0	0	0	0	0

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 AN/UYQ-70 standard display and command tablefor human-system interface, commercially available local area network access units and circuit cards, and commercially available fiberoptic cabling.

SSDS MK1 integrates the SPS-49A(V)1 radar, SPS-67(V)1 radar, AN/SLQ-32A electronic countermeasures system, Combat Identification, Friend or Foe-Self Defense (CIFF-SD), Rolling Airframe Missile 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 to integrate with ACDS and Cooperative Engagement Capability (CEC) on CV(N), LPD-17, LHD and LHA ship classes.

SSDS MK2 facilitates the incremental evolution and implementation of follow-on modifications. Development of SSDS MK2 consists of leveraging critical experiments and re-use of technology and software from SSDS MK1. SSDS MK2 is in development and integrates other ship self defense elements, such as CEC, AN/SPQ-9B radar, NATO Sea-sparrow system 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 also introduces new shipboard tactical displays and support equipment, and integrates advanced systems such as Evolved NATO Sea-sparrow missile system and SLQ-32 SEWIP.

In order to meet the Navy's warfighting capabilities and modernization concepts described in SEA POWER 21, Navy Open Architecture (NOA) is being introduced. This is the first step in unifying a set of warfighting functions into a single architecture shared among many ship classes. This principle of commonality is a major mechanism for cost control and avoidances in the Navy's future warfighting systems. SSDS MK 2 would rehost existing tactical computer program applications to the Open Architecture Computing Environment

(OACE) specifications/ equipment suite in conjunction with P3I Commercial off the Shelf (COTs) Tech Refresh cycles, prior to full migration and integration with other OA applications for implementation on future classes of ships. Tech Refresh cycles are driven by COTs obsolescence.

Follow on Operational Test and Evaluation of SSDS MK 2 has been conducted on the CVN Class and is being conducted on the LPD Class SSDS Combat Systems in FY07/08. Follow on Operational Test and Evaluation of the ESSM Integration with SSDS MK 2 is also being conducted on the CVN Class in FY08. Live Fire, Combat System end-to-end testing is being conducted on the Self Defense Test Ship in FY07/08. The SSDS MK 2 Self Defense Combat System is being tested on the Self Defense Test Ship against Anti Ship Cruise Missile threats in the LPD 17 and CVN/LHD Class configurations to support this effort. These tests will serve as a transition phase to the Ship Self Defense Capstone Air Warfare T&E Enterprise. Additional Self Defense Test Ship Live Fire tests against Anti Ship Cruise Missile threats are planned in FY10/11 in the CVN/ESSM and LHA 6 configurations, per the Ship Self Defense Capstone Air Warfare T&E Enterprise and DOT&E direction. Follow on Operational Test and Evaluation of SSDS MK 2 will also be conducted on the LHD 7/8 in FY09, CVN Class (P3I) in FY09 and LHA 6 Class in FY12/13. These tests will provide statistical information for Open Architecture Migration and Probability of Raid Annihilation (Pra) calculations.

CLASSIFICATION:	UNCLASSIFIED	
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION		DATE February 2008
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**	PROJECT NUMBER AND NAME **2178/QRCC**

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2007	FY 2008	FY 2009
Accomplishments/Effort/Subtotal Cost	11.396	13.200	16.554
RDT&E Articles Quantity	0	0	0

Prepare and conduct comprehensive Land Based combat system tests on SSDS MK 2 CVN, LPD 17, LHD 7/8, LHA 6 and P3I COTs Tech Refresh OACE configurations at Wallops Island, including test preparation, integration, engineering and development tests, data collection and analysis, correction and verification of deficiencies in FY06 through FY13 in support of SSDS Combat System Certification, TEMP and Ship Self Defense Air Warfare Capstone Enterprise at-sea test events.

Prepare, conduct and analyze At-Sea combat system tests for SSDS MK2 in LPD 17 and 18 and live fire testing on the Self Defense Test Ship in FY07/08. Prepare, conduct and analyse At-Sea combat system tests in support of the Ship Self Defense Air Warfare Capstone Enterprise for the ESSM integration in FY07/08, P3I COTs Tech Refresh OACE integration in FY07/08/09, SSDS MK2 LHD 7/8 configuration in FY08/09, LHA 6 configuration in FY 10/11/12 and live fire testing on the Self Defense Test Ship in FY 10/11. Design Agent test, analyze, and fix for the computer software program in support of testing and Operation of the Ship Self Defense Facility Wallops Island will also be done as required to successfully complete MK 2 development.

	FY 2007	FY 2008	FY 2009
Accomplishments/Effort/Subtotal Cost	1.230	0.000	0.000
RDT&E Articles Quantity	0	0	0

Analysis, correction and test of deficiencies in SSDS MK2 MOD 1 and 2 software identified during Developmental/Operational Test and Evaluation and Certification. This also includes migration of SSDS MK 2 to OA Computing Environment (OACE), in conjunction with P3I Commercial off the Shelf (COTs) Tech Refresh cycles with conduct of Factory Qualification Testing and Environmental Qualification Testing, before delivery to combat system facilities for System Integration Test, Initial Verification & Validation, and Combat System integration and certification testing.

	FY 2007	FY 2008	FY 2009
Accomplishments/Effort/Subtotal Cost	0.000	13.000	14.000
RDT&E Articles Quantity	0	0	0

Conduct System Engineering, Design, Development, Software Rehost, Hardware/Software integration and Factory and Environmental Qualification of P3I COTs Tech Refresh cycle for SSDS MK1 and MK2 upgrades to MOD 1C/2C/3C/4C/( )C configurations. This Tech Refresh cycle includes the first major refresh of SSDS MK1 (designated as MOD C) and migration to OACE. After FQT/EQT completion, system will be delivered for Test and Evaluation.

CLASSIFICATION:	UNCLASSIFIED		
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION (CONTINUATION)			DATE February 2008
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**	PROJECT NUMBER AND NAME **2178/QRCC**	

C. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. and Name	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost
SSDS OPN/523900,523905,523906	56.186	31.380	46.687					CONT	CONT
PE 0603382N / 0324 (Advanced Combat System Technology)	18.988	9.130	4.367					CONT	CONT
PE 0603658N / 2039 (Cooperative Engagement Capibility (CEC))	41.816	32.538	38.316					CONT	CONT
PE 0604307N / K1447 (Aegis Surf Combatant Combat Sys Imp)	140.812	139.686	188.500					CONT	CONT
PE 0603582N / 0164 (Common Network Interface (CNI))	57.447	52.282	54.401					CONT	CONT

D. ACQUISITION STRATEGY:

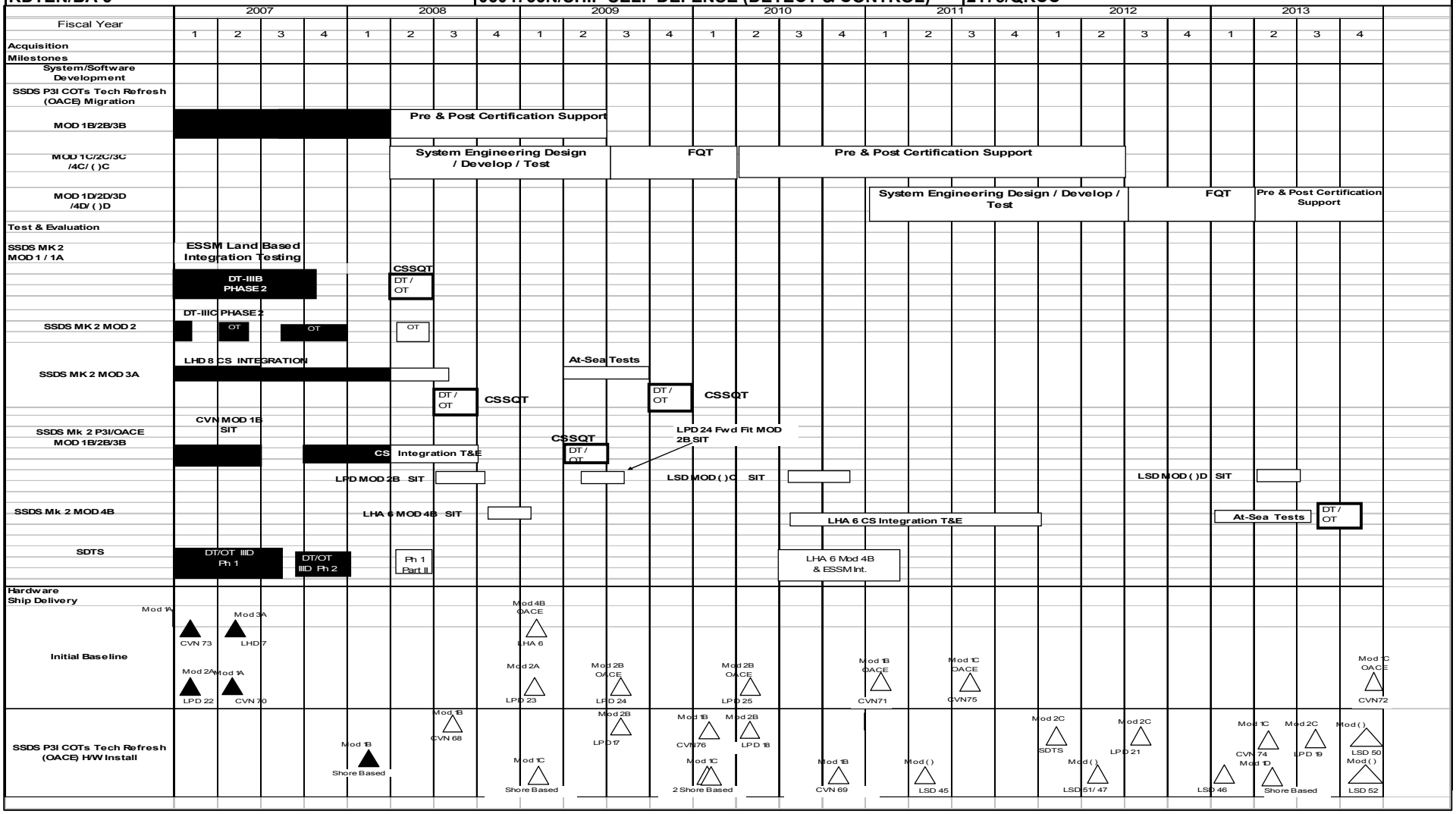
The first SSDS MK 2 system procurements took place under a Cost Plus Award Fee contract in FY99 for the CVN 76, LPD 17, LPD 18 and CVN 69. Follow-on procurements for additional ships of the CV(N), LPD and LHD classes are awarded on FFP contracts with the exception of those ships that will be receiving P3I COTS Tech Refresh hardware suites, where the initial system Tech Refresh Development will occur under a CPFF type contract with ship COTs conversion equipment/kits procured on FFP contracts.

A new design agent and Life Cycle Maintenance CPFF contract was awarded in FY05 to support future SSDS MK 2 system/software maintenance and systems corrections.

CLASSIFICATION:		UNCLASSIFIED										
EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS									DATE February 2008			
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**		PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**					PROJECT NUMBER AND NAME **2178/QRCC**					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost ($000)	FY 2007 Cost ($000)	FY 2007 Award Date	FY 2008 Cost ($000)	FY 2008 Award Date	FY 2009 Cost ($000)	FY 2009 Award Date	Cost to Complete ($000)	Total Cost ($000)	Target Value of Contract
Systems Engineering	WR/WX	NSWC DD-Dalhgren, VA	40.474	0.000		1.099	OCT-07	1.052	OCT-08	CONT	CONT	0.000
Systems Engineering	SS/FP	JHU/APL - Laurel MD	37.813	0.000		2.500	OCT-07	2.500	OCT-08	CONT	CONT	0.000
Systems Engineering	WR/WX	NSWC PHD Pt Hueneme CA	18.903	0.000		0.000		0.000		CONT	CONT	0.000
Systems Engineering	WR/WX	CDSA DN Dam Neck VA	9.222	0.000		0.900	OCT-07	0.950	OCT-08	CONT	CONT	0.000
Systems Engineering	WR/WX	NSWC IH-Indian Head, MD	3.056	0.000		0.000		0.000		CONT	CONT	0.000
Display Development Kits	SS/FP	Lockheed Martin St Paul MN	3.958	0.000		0.400	OCT-07	0.400	OCT-08	CONT	CONT	0.000
Systems Eng/Dev/Integrate	SS/CPFF	RSC (5110) San Diego CA	12.463	0.000		7.500	OCT-07	8.500	OCT-08	CONT	CONT	0.000
Systems Eng/Dev/Integrate	SS/CPAF	RSC (5132) San Diego CA	20.576	0.000		0.000		0.000		CONT	CONT	0.000
Award Fees	SS/CPAF	RSC (5132) San Diego CA	3.603	0.000		0.000		0.000		CONT	CONT	0.000
Systems Eng/Dev/Integrate	SS/CPAF	RSC (5108) San Diego CA	98.130	0.000		0.000		0.000		CONT	CONT	0.000
Systems Eng/Dev/Integrate	SS/CPAF	RSC (5466) San Diego CA	20.353	0.000		0.000		0.000		CONT	CONT	0.000
Systems Eng/Dev/Integrate	SS/CPFF	RSC (5104) San Diego CA	23.685	0.000		0.000		0.000		CONT	CONT	0.000
Award Fees	SS/CPAF	RSC (5108) San Diego CA	11.208	0.000		0.000		0.000		CONT	CONT	0.000
Award Fees	SS/CPAF	RSC (5466) San Diego CA	2.163	0.000		0.000		0.000		CONT	CONT	0.000
RisK Reduction/EMD	Various	Various	76.366	0.000		0.000		0.000		CONT	CONT	0.000
Misc.	Various	Various	2.456	0.000		0.000		0.000		CONT	CONT	0.000
Subtotal Product Development			**384.429**	**0.000**		**12.399**		**13.402**		**CONT**	**CONT**	**0.000**
Remarks:												
QA/RMA	WR/WX	NWAS Corona	9.954	0.000		0.000		0.000		CONT	CONT	0.000
Subtotal Support Costs			**9.954**	**0.000**		**0.000**		**0.000**		**CONT**	**CONT**	**0.000**
Remarks:												
Development Test & Evaluation	WR/WX	NSWC PHD Pt Hueneme CA	50.854	5.194	OCT-06	5.326	OCT-07	7.652	OCT-08	CONT	CONT	0.000
Development Test & Evaluation	WR/WX	NSWC DD-Dalhgren, VA	3.370	1.241	OCT-06	0.225	OCT-07	0.270	OCT-08	CONT	CONT	0.000
Development Test & Evaluation	WR/WX	NSWC DD-Wallops Is, VA	25.152	0.700	OCT-06	2.500	OCT-07	2.700	OCT-08	CONT	CONT	0.000
Development Test & Evaluation	SS/FP	JHU/APL - Laurel MD	7.835	1.941	APR-07	1.970	OCT-07	2.400	OCT-08	CONT	CONT	0.000
Development Test & Evaluation	WR/WX	NSWC Corona - Corona, CA	0.998	0.140	OCT-06	0.220	OCT-07	0.235	OCT-08	CONT	CONT	0.000
Development Test & Evaluation	WR/WX	OPTEVFOR - Norfolk, VA	1.736	0.144	OCT-06	0.260	OCT-07	0.270	OCT-08	CONT	CONT	0.000

CLASSIFICATION:	UNCLASSIFIED											
EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS									DATE February 2008			
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**		PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**					PROJECT NUMBER AND NAME **2178/QRCC**					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost ($000)	FY 2007 Cost ($000)	FY 2007 Award Date	FY 2008 Cost ($000)	FY 2008 Award Date	FY 2009 Cost ($000)	FY 2009 Award Date	Cost to Complete ($000)	Total Cost ($000)	Target Value of Contract
Development Test & Evaluation	SS/CPFF	RSC(5110)-San Diego, CA	4.125	2.030	MAY-07	1.200	OCT-07	1.525	OCT-08	CONT	CONT	0.000
Development Test & Evaluation	SS/CPFF	RSC(5466)-Tucson, AZ	2.180	0.000		0.000		0.000		CONT	CONT	0.000
Development Test & Evaluation	WR/WX	CDSA DN Dam Neck VA	0.000	0.280	JAN-07	0.600		0.600	OCT-08	CONT	CONT	0.000
Miscellaneous	Various	Various	5.354	0.192		0.000		0.000		CONT	CONT	0.000
Subtotal Test and Evaluation			**101.604**	**11.862**		**12.301**		**15.652**		**CONT**	**CONT**	**0.000**
Remarks:												
Program Management Support			13.531	0.764		1.500		1.500		CONT	CONT	0.000
Subtotal Management Services			**13.531**	**0.764**		**1.500**		**1.500**		**CONT**	**CONT**	**0.000**
Remarks:												
Total Cost			**509.518**	**12.626**		**26.200**		**30.554**		**CONT**	**CONT**	**0.000**

CLASSIFICATION:	UNCLASSIFIED	
EXHIBIT R-4, SCHEDULE PROFILE		DATE February 2008
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**	PROJECT NUMBER AND NAME **2178/QRCC**



CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-4a, SCHEDULE DETAIL					DATE February 2008		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**			PROJECT NUMBER AND NAME **2178/QRCC**			
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
SSDS MK1/MK2 MOD 1B/2B/3B/4B TECH REFRESH DEVELOPMENT							
- ENVIRONMENTAL QUALIFICATION TEST	1Q						
- FACTORY SYSTEM INTEGRATION TEST							
- FACTORY QUALIFICATION TEST							
SSDS T&E LAND BASED TESTING							
- SYSTEM INTEGRATION TESTING	1Q-4Q	1Q-3Q					
- FINAL CERTIFICATION READINESS REVIEW			2Q				
- CERTIFICATION TESTING			1Q-3Q				
SSDS MK1/MK2 MOD 1C/2C/3C/4C TECH REFRESH DEVELOPMENT							
- SRR		2Q					
- PDR		4Q	1Q				
- CRITICAL DESIGN REVIEW			2Q				
- TEST READINESS REVIEW				1Q			
- ENVIRONMENTAL QUALIFICATION TEST			3Q-4Q	1Q-3Q			
- SOFTWARE/HARDWARE INTEGRATION TEST		4Q	1Q-3Q				
- FACTORY SYSTEM INTEGRATION TEST			3Q-4Q				
- FACTORY QUALIFICATION TEST			3Q-4Q	1Q			
SSDS T&E LAND BASED TESTING							
- SYSTEM INTEGRATION TESTING				2Q			
- FINAL CERTIFICATION READINESS REVIEW				2Q			
- CERTIFICATION TESTING				3Q-4Q	1Q-2Q		
SSDS MK1/MK2 MOD 1D/2D/3D/4D TECH REFRESH DEVELOPMENT							
- SRR					2Q		
- PDR					4Q	1Q	
- CRITICAL DESIGN REVIEW						2Q	
- TEST READINESS REVIEW							1Q
- ENVIRONMENTAL QUALIFICATION TEST						3Q-4Q	1Q-3Q
- SOFTWARE/HARDWARE INTEGRATION TEST					4Q	1Q-3Q	
- FACTORY SYSTEM INTEGRATION TEST						3Q-4Q	
- FACTORY QUALIFICATION TEST							1Q

CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-4a, SCHEDULE DETAIL (CONTINUATION)					DATE February 2008		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**			PROJECT NUMBER AND NAME **2178/QRCC**			
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
SSDS T&E LAND BASED TESTING							
- SYSTEM INTEGRATION TESTING							2Q
- FINAL CERTIFICATION READINESS REVIEW							2Q
- CERTIFICATION TESTING							3Q-4Q
SSDS MK2 MOD1 (CV/CVNs)-CVN76 Lead Ship (Legacy + ESSM)							
- FORMAL QUALIFICATION TEST (ESSM Integration)							
- ESSM INTEGRATION/DEVELOPMENTAL TESTS	1Q-2Q						
- COMBAT SYSTEM CERTIFICATION TESTING	1Q-4Q						
- SHIPBOARD TEST EVENTS		1Q-2Q					
-CSSQT		2Q					
SSDS MK2 MOD 2 (LPDs)							
- FORMAL QUALIFICATION TEST (FQT)				1Q			
- INTEGRATION/DEVELOPMENTAL TEST	4Q	1Q		2Q-3Q			
- COMBAT SYSTEM CERTIFICATION TESTING	1Q		4Q	4Q			
- SHIPBOARD TEST EVENTS	3Q-4Q	1Q-2Q			2Q		
- CSSQT	4Q				3Q		
SSDS MK 2 MOD 3A (LHDs) LHD 8-Leadh Ship (SCN)							
- ENGINEERING TESTING	1Q-4Q	1Q-4Q					
- LHD 7 Backfit TEST READINESS REVIEW (TRR)							
- LHD 7 Backfit CS CERTIFICATION TESTING			1Q				
- LHD 8 CS CERTIFICATION TESTING			1Q-3Q				
- SHIPBOARD TEST EVENTS			2Q-4Q				
CSSQT LHD 7		3Q					
CSSQT LHD 8			4Q				
SSDS MK2 MOD 4B LHA 6-Lead Ship (SCN)							
- SYS ENGINEERING/SYSTEM DEVELOPMENT	4Q	1Q-4Q	1Q-4Q				

CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-4a, SCHEDULE DETAIL (CONTINUATION)					DATE February 2008		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**			PROJECT NUMBER AND NAME **2178/QRCC**			
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
- INTEGRATION TESTING				3Q-4Q	1Q-4Q	1Q	
- ENGINEERING TESTING					1Q-4Q	1Q-3Q	
- COMBAT SYSTEM CERTIFICATION TESTING							2Q-3Q
- SHIPBOARD TEST EVENTS							1Q-3Q
- CSSQT LHA 6							3Q-4Q
SSDS OA Cat 3 Migration - CVN 68 Lead Ship							
- FORMAL QUALIFICATION TEST (FQT)							
- INTEGRATION TESTING	1Q-2Q						
- ENGINEERING TESTING	1Q-4Q	1Q-4Q		3Q-4Q	1Q		
- COMBAT SYSTEM CERTIFICATION TESTING	4Q	3Q-4Q					
- SHIPBOARD TEST EVENTS			2Q-3Q				
- CSSQT			3Q				
SDTS							
- DT/OT - IIID Ph 1 and 2	1Q-4Q	2Q					
- ESSM Integration with Mod 1				3Q-4Q	1Q-2Q		
- LHA 6 (SSDS MK 2 Mod 4B)				3Q-4Q	1Q-2Q		

CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION					DATE February 2008		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**				PROJECT NUMBER AND NAME **3172/Joint Non-Lethal Weapons**		
COST (In Millions)	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Project Cost	0.000	4.228	3.734	1.866	2.129	3.432	2.461
RDT&E Articles Qty	0	0	0	0	0	0	0

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 System (ISDS) system to engage combat swimmers/divers or unknown individuals underwater once they have been detected. The ISDS 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 (ISDS) 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). ISDS will be designed to detect, track, classify, warn, deter and neutralize divers and swimmers threats. ISDS is important to protecting high value assets within harbors from the increasing threat of waterborne terrorist or combatants' attacks.

CLASSIFICATION:	UNCLASSIFIED	
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION		DATE February 2008
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**	PROJECT NUMBER AND NAME **3172/Joint Non-Lethal Weapons**

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2007	FY 2008	FY 2009
Accomplishments/Effort/Subtotal Cost	0.000	3.721	2.219
RDT&E Articles Quantity	0	0	0

FY08/09 - Design, development, analyze and evaluate a portable Maritime Swimmer Engagement System and integrate into the swimmer detection system to complete the end to end swimmer defense program.

	FY 2007	FY 2008	FY 2009
Accomplishments/Effort/Subtotal Cost	0.000	0.507	1.515
RDT&E Articles Quantity	0	0	0

FY08/09 - Test the swimmer engagement system, to include Development Testing (DT), ship integration test, ship underway testing, expeditionary testing, facilities testing and Operational Testing (OT).

C. OTHER PROGRAM FUNDING SUMMARY:

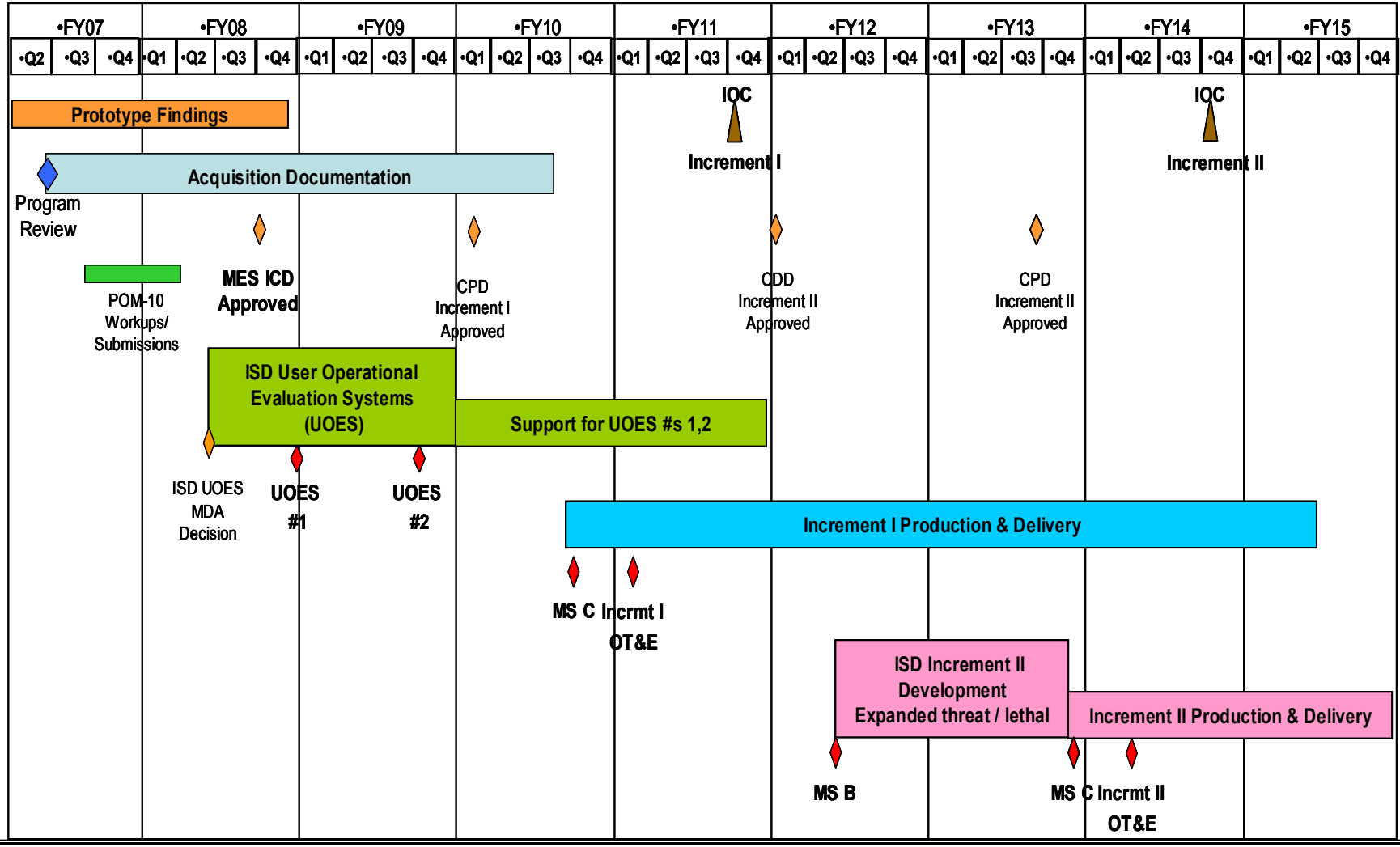
Line Item No. and Name	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	To Complete	Total Cost
OPN 8120 Naval Coastal Warfare	0.000	0.000	0.000					Cont.	Cont.

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. A Navy technical team will complete the concept refinement and technology development phase through the release of User Operational Evaluation Systems (UOES) and they will partner with industry for each UOES. In order to further refine the ISDS requirements for a validated ISDS Capability Production Document, two ISDS User Operational Evaluation Systems (UOES) will be developed and evaluated. UOES 1 will be developed during FY-08 and will be delivered to designated MESF units in September 2008. A mature near production ready UOES 2 will be delivered in September 2009. The ISDS program of record system configuration will be produced through an Acquisition Category (ACAT) program commencing at the start of FY10 to procure systems that meet the requirements of the validated ISDS CPD.

CLASSIFICATION:	UNCLASSIFIED											
EXHIBIT R-3, RDT&E PROJECT COST ANALYSIS									DATE February 2008			
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**		PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**					PROJECT NUMBER AND NAME **3172/Joint Non-Lethal Weapons**					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY Cost ($000)	FY 2007 Cost ($000)	FY 2007 Award Date	FY 2008 Cost ($000)	FY 2008 Award Date	FY 2009 Cost ($000)	FY 2009 Award Date	Cost to Complete ($000)	Total Cost ($000)	Target Value of Contract
Hardware/Software Development	WR	NUWC Newport	0.000	0.000		3.000	FEB-08	2.450	FEB-09	0.000	5.450	0.000
Subtotal Product Development			**0.000**	**0.000**		**3.000**		**2.450**		**0.000**	**5.450**	**0.000**
Remarks:												
Engineering Services	WR	NUWC Newport	0.000	0.000		0.828	FEB-08	0.807	FEB-09	0.000	1.635	0.000
Subtotal Support Costs			**0.000**	**0.000**		**0.828**		**0.807**		**0.000**	**1.635**	**0.000**
Remarks:												
Test and Evaluation	WR	NUWC Newport	0.000	0.000		0.200	FEB-08	0.277	FEB-09	0.000	0.477	0.000
Subtotal Test and Evaluation			**0.000**	**0.000**		**0.200**		**0.277**		**0.000**	**0.477**	**0.000**
Remarks:												
Progam Management	WR	NUWC Newport	0.000	0.000		0.200	FEB-08	0.200	FEB-09	0.000	0.400	0.000
Subtotal Management Services			**0.000**	**0.000**		**0.200**		**0.200**		**0.000**	**0.400**	**0.000**
Remarks:												
Total Cost			**0.000**	**0.000**		**4.228**		**3.734**		**0.000**	**7.962**	**0.000**

CLASSIFICATION:	UNCLASSIFIED	
EXHIBIT R-4, SCHEDULE PROFILE		DATE February 2008
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**	PROJECT NUMBER AND NAME **3172/Joint Non-Lethal Weapons**



CLASSIFICATION:	UNCLASSIFIED						
EXHIBIT R-4a, SCHEDULE DETAIL					DATE February 2008		
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**			PROJECT NUMBER AND NAME **3172/Joint Non-Lethal Weapons**			
Schedule Profile	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Increment I CR/TD Phase User Operational Eval Systems (UOES)		2ND QTR					
ISDS INCREMENT I CPD				1ST QTR			
INCREMENT I - MS C				4TH QTR			
DT/OT					1ST QTR		
ISDS INCREMENT I IOC					4TH QTR		
ISDS INCREMENT II CDD						1ST QTR	
ISDS INCREMENT II MS B SD&D						2ND QTR	
INCREMENT II - MS C							4TH QTR

CLASSIFICATION:	UNCLASSIFIED	
EXHIBIT R-2a, RDT&E PROJECT JUSTIFICATION		DATE February 2008
APPROPRIATION/BUDGET ACTIVITY **RDTEN/BA 5**	PROGRAM ELEMENT NUMBER AND NAME **0604755N/SHIP SELF DEFENSE (DETECT & CONTROL)**	PROJECT NUMBER AND NAME **9999/Congressional Add**

B. ACCOMPLISHMENTS/PLANNED PROGRAM:

	FY 2007	FY 2008	FY 2009
9589C Integrated Display Enhanced Architecture	9.855	0.000	0.000
RDT&E Articles Quantity	0	0	0
Congressional Add: Architecture for SSDS/ACDS to be utilized for the development of a software-based capability in accordance with Navy OA standards to share displays across Naval subsystems and provide SSDS/ACDS System Information Assurance improvements.			

	FY 2007	FY 2008	FY 2009
9852C Shipboard Swimmer Defense System	2.332	0.000	0.000
RDT&E Articles Quantity	0	0	0
Congressional Add: Evaluate commercial swimmer detection systems to further provide risk reduction in support of the Navy's GWOT.			

	FY 2007	FY 2008	FY 2009
9999 Expeditionary Swimmer Defense	0.000	1.590	0.000
RDT&E Articles Quantity	0	0	0
Congressional Add: FY08 $1.590: Develop a system to protect critical infrastructure and military assets from surprise maritime terrorist attacks against surface and subsurface threats.			

	FY 2007	FY 2008	FY 2009
9999 Autonomous Unmanned Surface	0.000	0.994	0.000
RDT&E Articles Quantity	0	0	0
Congressional Add: FY08 $.994: Develop/analyze concept demonstrator to support ATFP missions; protect harbors, coastal facilities (airports, nuclear power plants, inland waterways).			

	FY 2007	FY 2008	FY 2009
9A52N Reusable Unambiguous Warning Vehicle	4.092	0.000	0.000
RDT&E Articles Quantity	0	0	0
Congressional Add: The RUSWV will provide US naval forces with an unambiguous warning to unidentified swimmer and vehicle threats documented in existence today and those currently emerging.			