Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy										DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*				R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*							
COST ($ in Millions)	**FY 2010**	**FY 2011**	**FY 2012 Base**	**FY 2012 OCO**	**FY 2012 Total**	**FY 2013**	**FY 2014**	**FY 2015**	**FY 2016**	**Cost To Complete**	**Total Cost**
Total Program Element	38.711	34.793	33.621	-	33.621	33.181	33.281	33.612	33.795	Continuing	Continuing
0798: *Allied/Coalition Interoperability and Information Dominance (ACIID)*	0.913	0.853	0.792	-	0.792	0.774	0.788	0.792	0.795	Continuing	Continuing
2144: *Space & Elec Warfare Engineering*	10.761	10.059	9.264	-	9.264	9.114	8.716	8.768	8.591	Continuing	Continuing
2357: *Maritime Battle Center*	27.037	23.881	8.877	-	8.877	8.812	8.958	9.059	9.193	Continuing	Continuing
3319: *Fleet Experimentation*	-	-	14.688	-	14.688	14.481	14.819	14.993	15.216	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element (PE) contains four projects: Maritime Battle Center (MBC), Fleet Experimentation (beginning in FY12 with funding moving from MBC), Over-the-Horizon Targeting (OTH-T), and Space and Electronic Warfare (SEW) Engineering. The MBC project (2357) focuses on fleet experimentation in order to eliminate war fighting gaps and validate Navy Concept of Operations (CONOPS) and doctrine. The MBC also manages the Sea Trial program of fleet experimentation that is administered by the Sea Trial Executive Steering Group (STESG). Both MBC and Sea Trial integrate emergent concepts and technologies through experiments, analysis, modeling and simulation to support war fighting capability development. Sea Trial experimentation is dedicated to providing solutions to near term (within the Fiscal Year Defense Plan) war fighting gaps through focused operational agent (Commander Second Fleet, Commander Third Fleet and Commander Naval Network Warfare Command) led experimentation. The flag level Sea Trial Executive Steering Group prioritizes proposed Sea Trial experiments annually. The MBC will also serve as the Navy representative to the Joint Battle Center and the battle labs of other services.

The OTH-T and SEW Engineering projects (0798 and 2144 respectively) are systems engineering non-acquisition programs to develop, test, implement technical authority, and validate naval Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) architectures to support naval missions in the Joint and Coalition Theater. The mission of these projects are carried out by multiple tasks that are used to ensure naval C4ISR Command and Control Warfare (C2W) components of SEW are effectively integrated into service-oriented architecture delivering net centric warfare capability. Additionally, these projects ensure that (1) the composite operational capabilities of SEW systems (not the individual component systems) conform to the naval C4ISR architecture and enhance war fighting capability as related to the objectives of National Defense Strategy, evolving joint visions and direction, such as net centric capability, and are guided by warfighter requirements; (2) that SEW systems and systems integration efforts involve leading-edge technology transfer of information processing technologies primarily through integration of government and commercial off-the-shelf (GOTS/COTS) products to enhance the Navy's operational capability, interoperability, warfighter effectiveness, flexible reconfiguration, as well as reduce costs; and (3) that SEW systems integration efforts promote the delivery of Information Dominance and the Navy's contribution to the Global Information Grid (GIG).

Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy	DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604707N: *SEW Architecture/Eng Support*

B. Program Change Summary ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	40.328	34.793	43.166	-	43.166
Current President's Budget	38.711	34.793	33.621	-	33.621
Total Adjustments	-1.617	-	-9.545	-	-9.545
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-0.800	-			
• SBIR/STTR Transfer	-0.619	-			
• Program Adjustments	-	-	-8.932	-	-8.932
• Section 219 Reprogramming	-0.183	-	-	-	-
• Rate/Misc Adjustments	-	-	-0.613	-	-0.613
• Congressional General Reductions Adjustments	-0.015	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 0798: *Allied/Coalition Interoperability and Information Dominance (ACIID)*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
0798: *Allied/Coalition Interoperability and Information Dominance (ACIID)*	0.913	0.853	0.792	-	0.792	0.774	0.788	0.792	0.795	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Allied/Coalition Interoperability and Information Dominance (ACIID) program advances network centric warfare and Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) interoperability with our Australia, Canada, New Zealand, United Kingdom, United States (AUSCANNZUKUS), North Atlantic Treaty Organization (NATO) and other allied and coalition partners. The program determines allied and coalition maritime operational gaps, identifies Doctrine, Organization, Training, Material, Leadership, Personnel and Facilities (DOTMLPF) solutions with the potential to fill those gaps, and assesses these solutions and associated concepts of operation in laboratory and at-sea environments. The ACIID program includes integration and testing in support of joint and coalition war fighting capabilities, including interoperability testing of C4ISR equipments. Coalition and joint interoperability is critical for future maritime operations, especially as the US Navy expands Internet Protocol (IP) networking throughout the fleet via Consolidated Afloat Networks and Enterprise Services (CANES), Next Generation Networks (NGEN), Multi-National Information Sharing (MNIS) and with the Global Information Grid (GiG). Currently, IP connectivity with AUSCANNZUKUS and other allied/coalition forces are limited, requiring extensive backhaul through ashore infrastructure. Higher bandwidth solutions suitable for use over tactical networks require development and assessment for emerging coalition and joint interoperability requirements, such as Coalition Naval Tactical Networking (CNTN) and Maritime Domain Awareness (MDA). Increases in data throughput are required for the effective exchange of rich data sets and services via Service Oriented Architectures (SOA) within the limitations of High Frequency (HF), Ultra-High Frequency (UHF) and other portions of the radio frequency spectrum, coupled with appropriate Information Assurance and Computer Network Defense (IA/CND) mechanisms. Development and assessment of potential solutions will integrate improved IP capabilities with the Advanced Digital Network Systems (ADNS) and existing international standards (e.g. NATO Standardization Agreements (STANAGS) 5066 and 4693). The continued development and refinement of advanced tactical networking technologies and protocols, as well as automatic link establishment standards, will provide for a significant improvement in data sharing within, and between, coalition maritime elements.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: ADVANCED RELAY CAPABILITIES	-	0.853	0.792
Articles:		0	0
Description: Prior to FY 2011, R-2a activity "Advanced Relay Capabilities" was divided between Advanced Relay/Wireless/ Antenna Technologies and Subnet Relay. With Subnet Relay now a program of record, initiatives to improve the system and its operational use in the coalition context have started to mirror or become a subset of the FY 2010 Advanced Relay/Wireless/ Antenna Technologies effort. Subnet Relay and Advanced Relay initiatives need to address multi-bearer routing, High Assurance Internet Protocol Encryption (HAIPE) and SOA in a similar and integrated manner. For FY 2011 and out, these two efforts have been merged into one integrated program entitled Advanced Relay Capabilities.			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 0798: *Allied/Coalition Interoperability and Information Dominance (ACIID)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
FY 2011 Plans: Continue the development and refinement of advanced relay capabilities that support Coalition Naval Tactical Networking (CNTN). Solutions will address advanced relay technologies, coalition routing architectures (with an emphasis on cipher text or "black core" routing), application architectures/configurations and Information Assurance/Computer Network Defense (IA/CND) solutions that maximize network efficiency using multiple, dissimilar bearers in the CNTN environment on Combined Enterprise Regional Information Exchange System (CENTRIXS). Integrate these advanced solutions with High Assurance Internet Protocol Encryption (HAIPE) devices and SOA in a coalition networking environment. Continue to progress the standardization of Subnet Relay into North Atlantic Treaty Organization Standardization Agreements (STANAGs) 4691 (Subnet Relay) and 5066 Edition 3 High Frequency Internet Protocol (HFIP/Ultra-HFIP multi hop). Continue to refine broadband solutions, such as wide-band Ultrahigh Frequency (UHF) and Spatially Aware Wireless Networking (SPAWN), which enhance throughput and promote allied interoperability. Assess the ability of these solutions to support SOA. Exploit venues of opportunity, such as Trident Warrior, to evaluate and validate the individual technologies as well as integrated solutions through testing, trials and demonstrations. ***FY 2012 Plans:*** Continue the development and refinement of advanced relay capabilities that promote interoperability with Australia, Canada, New Zealand, United Kingdom, United States (AUSCANNZUKUS), North Atlantic Treaty Organization (NATO) and other allied/coalition forces and support CNTN and Network Operations Without Shore (NOWS). Solutions will address higher bandwidth technologies, such as wide-band High Frequency (HF), wide-band UHF and broadband directional communications/networking, advanced relay technologies, coalition routing architectures (with an emphasis on cipher-text or "black core" routing), application and service architectures supporting CNTN/NOWS, and IA/CND solutions. Maximize interoperability and network efficiency using multiple, dissimilar bearers and integrate these advanced solutions with HAIPE devices and SOA in a CNTN/NOWS coalition networking environment. Continue to progress the standardization of Subnet Relay (renamed MARLIN - Maritime Relayed Line of Sight Network) and HFIP into NATO STANAGs 4693 and 5066 respectively. Exploit venues of opportunity, such as Trident Warrior, to evaluate and validate the individual technologies as well as integrated solutions through testing, trials and demonstrations with AUSCANNZUKUS and other allied/coalition partners.			
Title: ADVANCED RELAY/WIRELESS/ANTENNA TECHNOLOGIES ***Articles:*** ***Description:*** The decrease in FY 2011 is due to this activity being realigned to "Advanced Relay Capabilities." ***FY 2010 Accomplishments:*** - Designed, fabricated and tested Generation 6 Spatially Aware Wireless Networking (SPAWN) antennas in an integrated form with wireless network equipment. Performed an Over-the-Horizon Targeting (OTH-T) field demonstration of SPAWN in Trident Warrior or similar venue including airborne relay platforms for a demonstration of high bandwidth Naval Tactical Networking	0.713 0	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 0798: *Allied/Coalition Interoperability and Information Dominance (ACIID)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
(NTN). The demonstration also included the integration of advanced relay technology with Mobile Ad hoc Network (MANET) controllers and HAIPE devices on Combined Enterprise Regional Information Exchange System (CENTRIXS). - Developed advanced routing, application and Information Assurance/Computer Network Defense (IA/CND) architectures and solutions for the coalition Naval Tactical Networking (NTN) environment that maximizes network efficiency using multiple, dissimilar bearers.			
Title: SUBNET RELAY ***Articles:*** ***Description:*** The decrease in FY 2011 is due to this activity being realigned to "Advanced Relay Capabilities." ***FY 2010 Accomplishments:*** As a part of the refinement of Subnet Relay allied interoperability, developed interoperable wide-band Ultrahigh Frequency (UHF) solutions to enhance throughput and progress the standardization of Subnet Relay into a North Atlantic Treaty Organization (NATO) Standardization Agreement (STANAG). Exploited venues of opportunity to evaluate and validate developed portions of Wide-Band Subnet Relay configurations through testing, trials and demonstrations.	0.200 0	-	-
Accomplishments/Planned Programs Subtotals	0.913	0.853	0.792

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Allied/Coalition Interoperability and Information Dominance (ACIID) is a non-acquisition program that promotes US Navy interoperability with allied and coalition forces to achieve the Chief of Naval Operations (CNO) vision by facilitating maritime interoperability in both processes and communications systems, including emerging capabilities, to counter growing high-end asymmetric threats, and is a key enabler of the force multiplying benefits achieved through coalition cooperation among the Australia, Canada, New Zealand, United Kingdom, United States (AUSCANNZUKUS), North Atlantic Treaty Organization (NATO) and other partner nations.

E. Performance Metrics

Advanced Relay Capabilities: In FY11 and FY12, the ACIID program will employ laboratory testing and at-sea demonstrations to assess specific technologies, operational concepts, and integrated Doctrine, Organization, Training, Material, Leadership, Personnel and Facilities (DOTMLPF) solutions pertaining to Coalition Naval Tactical Networking (CNTN), Service Oriented Architectures (SOA), and Maritime Domain Awareness (MDA). These assessments will report on identified capability gaps, link capability gaps to technology/DOTMLPF gaps, identify technologies and DOTMLPF solutions considered ready for deployment and transition to a program of record to enhance Fleet war fighting capability and enhance allied and coalition interoperability.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 0798: *Allied/Coalition Interoperability and Information Dominance (ACIID)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Advanced Relay Capabilities	Various	Various:Various	12.129	-		-		-		-	0.000	12.129	
Advanced Relay Capabilities	WR	SPAWAR:San Diego	-	0.853	Nov 2010	0.792	Jan 2012	-		0.792	Continuing	Continuing	Continuing
Interoperability Requirements	Various	Various:Various	3.266	-		-		-		-	0.000	3.266	
T & E Tools Development	Various	Various:Various	0.429	-		-		-		-	0.000	0.429	
Systems Int. & Interop. Testing (LBTN)	Various	Various:Various	3.862	-		-		-		-	0.000	3.862	
Interoperability Validation	Various	Various:Various	2.748	-		-		-		-	0.000	2.748	
Joint Interoperability	Various	Various:Various	1.174	-		-		-		-	0.000	1.174	
Testing OTH-T Systems	Various	Various:Various	3.069	-		-		-		-	0.000	3.069	
		Subtotal	26.677	0.853		0.792		-		0.792			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Various	Various:Various	1.468	-		-		-		-	0.000	1.468	
ACQ Workforce Fund	Various	Various:Various	0.009	-		-		-		-	0.000	0.009	
		Subtotal	1.477	-		-		-		-	0.000	1.477	

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	28.154	0.853		0.792		-		0.792			

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 2144: *Space & Elec Warfare Engineering*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
2144: *Space & Elec Warfare Engineering*	10.761	10.059	9.264	-	9.264	9.114	8.716	8.768	8.591	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

OPNAVINST 3050.23 defines the policy to fuse validated and approved Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) architectures and interoperability requirements with joint requirements, milestones and program decisions. C4ISR integrated architectures are the underpinnings for all C4ISR mission areas and capabilities and, as such, requirements and acquisition processes have been reengineered to use these Integrated Architectures for decisional purposes and strategic planning. Furthermore, Office of the Secretary of Defense (OSD) has defined key programs/efforts Global Information Grid (GIG) Baseline Extension (BE), Joint Tactical Radio System (JTRS), Network Centric Enterprise Services (NCES), Information Assurance (IA) and standards that will drive and change the Navy's C4ISR integrated architectures and associated business processes for requirements, budgets and acquisition. To that end, the Space and Electronic Warfare (SEW) provides two main functions: 1) Development of C4ISR integrated architecture products and 2) Supporting C4ISR systems engineering processes and standards. The integrated architecture products are used to support the Navy's C4ISR budget process by providing the critical core architecture and enabling capabilities to the war fighter. The C4ISR systems engineering processes and standards provide the construct for distributed Command and Control (C2) interoperability requirements analyses to identify capability shortfalls/gaps and for systems engineering to compare/test alternatives in a joint end-to-end environment while identifying associated Navy wide C4ISR implications. Processes include developing and applying criteria for use in Systems Engineering Technical Reviews (SETR) and providing technical input to governance bodies. This includes Human Systems Integration (HSI) to provide a mission-centered orientation to ensure effective operational employment of fielded capability. As joint concepts and OSD driving efforts/programs are matured/defined the Navy's C4ISR integrated architectures are refined and the supporting C4ISR systems engineering processes and standards work to engineer and enact C4ISR implementations Navy wide across all C4ISR mission areas.

Products provided:
1) C4ISR integrated architectures
- Integrated Architectures and Standards - Architecture Views (Operational Views, Service Views, Technical Views, System Views)
- Migration roadmaps to the target architectures
- Architecture technical authority, studies, interpretation assistance, and white papers
2) Supporting C4ISR systems engineering processes
- Distributed C2 Interoperability Requirement Analysis - Gaps Analysis, Overlap Analysis, System Priority Lists, C4ISR Metrics and Models, Analysis of Alternatives, Requirements Database, Assessment Repository, Resource Implications Studies, Baseline Performance Models, Mission Task Analysis, HSI assessments.
- End-to-End Systems Engineering and Integrated Design - Operational feasibility studies, technical feasibility studies, technical roadmap engineering validations, Architectures and Assessment traceability matrices.

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 2144: *Space & Elec Warfare Engineering*

- Joint and Coalition interoperability trials - Joint End-to-End prototyping trials, and joint/coalition interoperability demonstrations, interoperability assessments and metrics, and interoperability studies via the Coalition Warrior Interoperability Demonstration (CWID). United States Navy (USN) provides funding to the general CWID operating budget and participates by operating a USN demonstration site.

3) Compliance and alignment reports with Navy Enterprise Architecture/Data Strategy and ASN RDA system engineering policies generated during systems engineering technical reviews (SETRs).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: C4ISR SYSTEMS ENGINEERING	5.084	4.400	3.339
Articles:	0	0	0

FY 2010 Accomplishments:

- Navy C4ISR Transformation/Strategic Planning within Navy/Joint/Department of Defense (DoD) Framework: Assessed existing and emerging capabilities; developed and evaluated Navy-wide policies, plans, requirements, and compliance; developed integration and investment strategies; and accelerated innovation, testing, assessment and fielding of material and non-material solutions for enhanced operational capability, joint/allied/coalition interoperability and application/enforcement of enterprise requirements/architectures/standards toward greater Net-Centric Operations/Warfare (NCO/W) capability.
- Implemented and validated FORCEnet requirements: Performed Systems Engineering Technical Reviews (SETR) utilizing validated assessment tools, system engineering methodologies and Compliance Action Lists to ensure standard engineering processes (e.g., Information Assurance (IA), data strategy, architecture, modeling, Service Oriented Architecture development (SOA)) are developed and utilized to ensure FORCEnet compliance.

FY 2011 Plans:

- Navy C4ISR Transformation/Strategic Planning within Navy/Joint/DoD Framework: Assess existing and emerging capabilities; develop and evaluate Navy-wide policies, plans, requirements, and compliance; develop integration and investment strategies; and accelerate innovation, testing, assessment and fielding of material and non-material solutions for enhanced operational capability, joint/allied/coalition interoperability and application/enforcement of enterprise requirements/architectures/standards toward greater NCO/W capability.
- Implement and validate interoperability requirements: Perform SETR utilizing validated assessment tools, system engineering methodologies and Compliance Action Lists to ensure standard engineering processes (e.g., IA, data strategy, architecture, modeling, SOA development) are being developed and utilized to ensure interoperability compliance to statutory and regulatory directives and guidance.

FY 2012 Plans:

- Navy C4ISR Transformation/Strategic Planning within Navy/Joint/DoD Framework: Assess existing and emerging capabilities; develop and evaluate Navy-wide policies, plans, requirements, and compliance; develop integration and investment strategies; and accelerate innovation, testing, assessment and fielding of material and non-material solutions for enhanced operational

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 2144: *Space & Elec Warfare Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
capability, joint/allied/coalition interoperability and application/enforcement of enterprise requirements/architectures/standards toward greater NCO/W capability. - Implement and validate interoperability requirements: Perform SETR reviews utilizing validated assessment tools, system engineering methodologies and Compliance Action Lists to ensure standard engineering processes (e.g., IA, data strategy, architecture, modeling, SOA development) are being developed and utilized to ensure interoperability compliance to statutory and regulatory directives and guidance.			
Title: COALITION WARRIOR INTEROPERABILITY DEMONSTRATION (CWID) ***Articles:*** ***FY 2010 Accomplishments:*** Focused exclusively on joint capability gaps. As directed by the Coalition Warrior Interoperability Demonstration (CWID) Joint Management Office (JMO), funding was provided to the various joint organizations for execution of the joint portions of the CWID effort. The Navy site evaluated known Navy capability gaps and performed demonstration management, planning, installation/de-installation, security certification and accreditation, infrastructure (Networks, Crypto, laboratories, etc.), data collection and analysis, final report, and documentation. ***FY 2011 Plans:*** Demonstrate cutting-edge industry and government technologies and transition them to the end-user, including Non-Governmental Organizations (NGOs), coalition partners, and the joint services. Provide interoperability between existing and cutting-edge Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems. End-users will benefit from specific C4ISR information, not previously possessed in its pre-fused and uncorrelated state, but nonetheless required to complete their various missions. This newly-interoperable fused information will be critical in supporting tactical and strategic decision making and operational execution, directly impacting the outcome of ongoing global conflicts. Integrate directly with Program Executive Office (PEO) C4I and the combatant commanders at the Technical Director, Acquisition Program Manager, and Science Advisor levels, and the State and Federal First Responder Agencies at all levels. Commence with technology selection, experimental objective design, and experiment execution to influence and direct design efforts, focused on satisfying war fighter capability gaps. Year-round connectivity will be maintained with end-users, vetting capability requirements and ongoing technology efforts relevant to each organization. Experiment results will be directly integrated into developmental design and engineering efforts of individual technologies to accelerate the delivery of needed capability based on Joint Urgent Operational Need Statements (JUONs). Utilize operationally-relevant classified laboratory environments for joint	1.290 0	1.700 0	1.535 0

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
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B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
and coalition war fighter technology experiments, while real-world field environments will be utilized for technologies related to Humanitarian Assistance Disaster Relief, Homeland Security, and Homeland Defense. ***FY 2012 Plans:*** Continue to demonstrate cutting-edge industry and government technologies and transition them to the end-user, including NGOs, coalition partners, and the joint services. Continue to provide interoperability between existing and cutting-edge C4ISR systems. Continue to integrate directly with PEO C4I and the combatant commanders at the Technical Director, Acquisition Program Manager, and Science Advisor levels, and the State and Federal First Responder Agencies at all levels. Continue with technology selection, experimental objective design, and experiment execution to influence and direct design efforts, to satisfy some war fighter capability gaps. Year-round connectivity will be maintained with end-users, vetting capability requirements and ongoing technology efforts relevant to each organization. Experiment results will be directly integrated into developmental design and engineering efforts of individual technologies to accelerate the delivery of needed capability based on JUONs. Utilize operationally-relevant classified laboratory environments for joint/ coalition war fighter technology experiments, while real-world field environments will be utilized for technologies related to Humanitarian Assistance Disaster Relief, Homeland Security, and Homeland Defense.			
Title: SYSTEMS ENGINEERING AND INTEGRATION REVITALIZATION	1.229	1.108	1.229
Articles:	0	0	0
FY 2010 Accomplishments: - Certified competency standards for systems engineering qualification. - Delivered an assessment of systems engineering capability and recommend improvements. - Increased access to systems engineering training resources. ***FY 2011 Plans:*** - Implement system engineering capability recommendations. - Provide increased access to systems engineering training resources. ***FY 2012 Plans:*** - Implement system engineering capability recommendations. - Provide increased access to systems engineering training resources.			
Title: SYSTEMS ENGINEERING STANDARDS AND PROCESSES	3.158	2.851	3.161
Articles:	0	0	0
FY 2010 Accomplishments: - Developed processes, model, and collected data to link probability of program success to systems engineering performance.			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 2144: *Space & Elec Warfare Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
- Improved process for using modeling and simulation in Systems Engineering Technical Review (SETR). - Improved linkage between requirements analysis and enterprise architecture products. ***FY 2011 Plans:*** - Define the interfaces between program office systems engineering and enterprise systems engineering and optimize the total value of systems engineering in product delivery. - Develop processes to inject systems engineering discipline into the acquisition cycle earlier. - Incorporate lessons learned from recent and emerging program issues. ***FY 2012 Plans:*** Continue to define and implement technical authority for the interfaces between program office systems engineering and enterprise systems engineering and optimize the total value of systems engineering in product delivery. - Continue to develop processes to inject systems engineering discipline into the acquisition cycle earlier. - Continue to incorporate lessons learned from recent and emerging program issues.			
Accomplishments/Planned Programs Subtotals	10.761	10.059	9.264

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Space and Electronic Warfare (SEW) Engineering is a non-acquisition program that develops, tests, implements technical authority, and validates naval Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR); provides integrated architecture products and supports C4ISR systems engineering processes and standards.

E. Performance Metrics

In FY11 and FY12, the SEW engineering program will employ rigorous and consistent system engineering planning practices to develop architecture-based, model-validated solutions, plans, and recommendations for enterprise-wide network reconciliation, common platform networks, and standardized operation center configuration.

Coalition Warrior Interoperability Demonstration (CWID) Performance Metrics: Three key metrics: (1) Interoperability and compliance with Naval, joint, coalition and other non-governmental organization (NGO) architectures, systems and equipment; (2) Compliance with Defense Information Services Agency (DISA), National Security Agency (NSA), and other joint and coalition information assurance and security standards; and (3) war fighter utility assessment across the joint and coalition spectrum. Specific metrics validate performance of individual technologies participating in CWID.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 2144: *Space & Elec Warfare Engineering*	

Support ($ in Millions)

				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	Various	Various:Various	4.554	-		-		-		-	0.000	4.554	
SEW/C4I Technology Integration	Various	Various:Various	12.985	-		-		-		-	0.000	12.985	
MDA Prototype SE Support	Various	Various:Various	17.376	-		-		-		-	0.000	17.376	
Systems Engineering & Integration Revitalization	Various	Various:Various	2.174	-		-		-		-	0.000	2.174	
Systems Engineering & Integration Revitalization	C/CPFF	Unknown:Unknown	-	-		0.751	Feb 2012	-		0.751	Continuing	Continuing	Continuing
Systems Engineering & Integration Revitalization	C/CPFF	METRON:Reston, VA	-	0.316	Dec 2010	-		-		-	0.000	0.316	
Systems Engineering & Integration Revitalization	C/CPFF	SAIC:San Diego, CA	-	0.316	Dec 2010	-		-		-	0.000	0.316	
Systems Engineering & Integration Revitalization	WR	SSC LANT:Charleston, NC	-	0.133	Jan 2011	0.133	Feb 2012	-		0.133	Continuing	Continuing	Continuing
Systems Engineering & Integration Revitalization	WR	SSC PAC:San Diego, CA	-	0.343	Dec 2010	0.345	Feb 2012	-		0.345	Continuing	Continuing	Continuing
Systems engineering Standards & Processes	Various	Various:Various	5.588	-		-		-		-	0.000	5.588	
Systems engineering Standards & Processes	C/CPFF	Unknown:Unknown	-	-		1.932	Feb 2012	-		1.932	Continuing	Continuing	Continuing
Systems engineering Standards & Processes	C/CPFF	METRON:Reston, VA	-	0.813	Dec 2010	-		-		-	0.000	0.813	
Systems engineering Standards & Processes	C/CPFF	SAIC:San Diego, CA	-	0.812	Dec 2010	-		-		-	0.000	0.812	
Systems engineering Standards & Processes	WR	SSC LANT:Charleston, NC	-	0.342	Jan 2011	0.343	Feb 2012	-		0.343	Continuing	Continuing	Continuing
Systems engineering Standards & Processes	WR	SSC PAC:San Diego, CA	-	0.884	Dec 2010	0.886	Feb 2012	-		0.886	Continuing	Continuing	Continuing
Systems A&E and Validation	Various	Various:Various	13.188	-		-		-		-	0.000	13.188	
Distributed C2 Interoperability Requirement analysis	Various	Various:Various	16.583	-		-		-		-	0.000	16.583	
	Various	Various:Various	14.268	-		-		-		-	0.000	14.268	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 2144: *Space & Elec Warfare Engineering*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
C4ISR Architecture and Standards													
End-to-End System Engineering and Integrated Design	Various	Various:Various	10.994	-		-		-		-	0.000	10.994	
Info. Repository/Naval Architecture	Various	Various:Various	4.000	-		-		-		-	0.000	4.000	
C4ISR Systems Engineering	Various	Various:Various	5.157	-		-		-		-	0.000	5.157	
C4ISR Systems Engineering	C/CPFF	Unknown:Unknown	-	2.200	Feb 2011	1.766	Feb 2012	-		1.766	Continuing	Continuing	Continuing
C4ISR Systems Engineering	WR	SSC LANT:Charleston, NC	-	0.440	Feb 2011	0.314	Feb 2012	-		0.314	Continuing	Continuing	Continuing
C4ISR Systems Engineering	WR	SSC PAC:San Diego, CA	-	1.188	Feb 2011	0.849	Feb 2012	-		0.849	Continuing	Continuing	Continuing
C4ISR Systems Engineering	WR	NAVAIR:Patuxent River, MD	-	0.088	Feb 2011	0.063	Feb 2012	-		0.063	Continuing	Continuing	Continuing
C4ISR Systems Engineering	MIPR	CECOM:Fort Monmouth, NJ	-	0.264	Feb 2011	0.189	Feb 2012	-		0.189	Continuing	Continuing	Continuing
C4ISR Systems Engineering	MIPR	AF:Hill AFB, UT	-	0.220	Feb 2011	0.158	Feb 2012	-		0.158	Continuing	Continuing	Continuing
		Subtotal	106.867	8.359		7.729		-		7.729			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SEW Eng/CWID	Various	Various:Various	30.171	-		-		-		-	0.000	30.171	
SEW Eng/CWID	MIPR	Defense Information Systems Agency:Arlington, VA	-	0.107	Apr 2011	0.067	Apr 2012	-		0.067	Continuing	Continuing	Continuing
SEW Eng/CWID	WR	Joint Interoperability Test Command:Fort Huachuca, AZ	-	0.720	Mar 2011	0.595	Mar 2012	-		0.595	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 2144: *Space & Elec Warfare Engineering*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SEW Eng/CWID	WR	SSC Pacific:San Diego, CA	-	0.758	Dec 2010	0.758	Dec 2011	-		0.758	Continuing	Continuing	Continuing
SEW Eng/CWID	MIPR	US Northern Command:Peterson AFB, CO	-	0.115	Dec 2010	0.115	Dec 2011	-		0.115	Continuing	Continuing	Continuing
SEW Eng/JRAE	Various	Various:Various	15.978	-		-		-		-	0.000	15.978	
		Subtotal	46.149	1.700		1.535		-		1.535			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ACQ Workforce Fund	Various	Various:Various	0.071	-		-		-		-	0.000	0.071	
		Subtotal	0.071	-		-		-		-	0.000	0.071	

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	153.087	10.059		9.264		-		9.264			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604707N: *SEW Architecture/Eng Support*	**PROJECT** 2144: *Space & Elec Warfare Engineering*

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604707N: *SEW Architecture/Eng Support*	**PROJECT** 2144: *Space & Elec Warfare Engineering*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2144				
CWID: Schedule as directed by the Joint Management Office (JMO) during execution year.	1	2010	4	2016

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 2357: *Maritime Battle Center*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
2357: *Maritime Battle Center*	27.037	23.881	8.877	-	8.877	8.812	8.958	9.059	9.193	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Funding Sea Trial funding has been moved to a new project - 3319 Fleet Experimentation. The funding decrease in FY 2012 is due to realignment of funds for higher priority requirements.

A. Mission Description and Budget Item Justification

Funds the development of new or improved war fighting capabilities through the Concept Generation and Concept Development (CG/CD) program. The priorities for the CG/CD program are to explore near-/far-term technological and non-technological solutions to war fighting gaps across all naval warfare areas. The CG/CD experimentation efforts include planning, systems engineering and integration, execution, data collection, analysis, and assessment requirements for a wide range of experiment venues, such as workshops, seminars, wargames, limited objective experiments, limited technical experiments, and live force events. Where appropriate, CG/CD experimentation will be conducted in a joint, or coalition environment.

Also supports the fleet's experimentation program (Sea Trial) by providing planning, systems engineering and integration, execution, data collection, and analysis support to the Sea Trial Operational Agents where appropriate and as available. This support is focused on experimentation contained in the annual Sea Trial Execution Plan.

This program historically does not meet established execution benchmarks. It differs from other Research, Development, Test and Evaluation (RDT&E) programs because it relies upon fleet participation, and thus is scheduled around fleet or staff availability. Because that availability frequently occurs during the spring and summer operational schedules, the overall RDT&E obligation/expenditure rates do not align with OSD practice. As a result, this project's obligation rates do not begin to approach benchmark until the program nears the fiscal year's end while its expenditure rates generally do not approach benchmark until midway through the second year of its appropriation.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: FBE ANALYSIS AND CORE SUPPORT	27.037	23.881	8.877
Articles:	0	0	0
Description: Because of the synergistic relationship between Maritime Battle Center experimentation efforts and the fleet's Sea Trial experimentation efforts, funding for both endeavors have been combined under one project, the Maritime Battle Center. The Sea Trial aspect of this project's mission is driven by annual priorities. The priorities are further prioritized and approved by the Sea Trial Executive Steering Group (STESG).			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 2357: *Maritime Battle Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
FY 2010 Accomplishments: - Continued participation in JFCOM experimentation continuum. - Continued Limited Objective Experiments. - Continued CONOPS Development Experiments. - Continued the Sonar/Radar Data Comparison experiment. - Continued the Millimeter Wave Chaff experiment. - Continued the Surface Action Group Modeling experiment. - Continued the Harpoon Seeker Modeling in an Electronic Attack environment experiment. - Continued the Fast Attack Craft/Fast Inshore Attack Craft experiment. - Continued the multi-year series of Littoral Force Protection experiments. - Continued the final spiral of the multi-year series of Tactical Tomahawk 3rd Party Targeting experiments. - Continued the multi-year series of Surface Ship Periscope Detection experiments. - Continued the multi-year series of Submarine Unmanned Aerial System experiments. - Continued the multi-year series of Submarine Communications at Speed and Depth experiments. - Continued the multi-year series of Mine Countermeasures in Support of Homeland Defense experiments. - Continued the multi-year series of Littoral Combat Ship Mine Warfare Mission Modules experiments. - Continued the multi-year series of SPIKE experiments. - Continued the Sonar Active Target Evaluation experiment. - Continued the multi-year series of Project Guillotine experiments. - Continued the multi-year series of Submarine/Unmanned Underwater Vehicle Communications experiments. - Initiated and executed Sea Trial Experiments, War Games, and Seminars. - Initiated and completed the ASW Employment of Emerging Technology experiment. - Initiated and completed the FY10 spiral of the multi-year series of Computer Network Defense experiments. - Initiated and completed the FY10 spiral of the multi-year series of Electronic Warfare Improvement experiments. - Initiated and completed the FY10 spiral of the multi-year series of Persistent ISR (Intelligence, Surveillance and Reconnaissance) experiments. - Initiated and completed the FY10 spiral of the multi-year series of Globally Networked Maritime Operations Center experiments. - Initiated and completed the Palantir experiment. - Initiated and completed the FY10 spiral of the multi-year series of Operational Level Command and Control experiments. - Initiated and completed the CONOPS for Employment of Unmanned Surface Vessels for Force Protection experiment. - Initiated and completed the FY10 spiral of the multi-year series of Maritime Domain Awareness experiments. - Initiated and completed the FY10 spiral of the multi-year series of Long Range Anti-Ship Missile Weapon experiments. - Initiated and completed the Tactical Tomahawk/Network Enabled Weapon experiment.			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 2357: *Maritime Battle Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
- Initiated and completed the FY10 spiral of the multi-year series of Naval Oceanography Mine Warfare Center Employment of Emerging Technology experiments. - Initiated and completed the FY10 spiral of the multi-year series of Fusion Correlation experiments. - Initiated and completed the ASW Distributed Force experiment. - Initiated and completed the Tactical Tomahawk Ship to Objective Maneuver Coordination experiment. - Initiated and completed the JFMCC-MEB Command and Control experiment. - Initiated and completed the Non-Lethal Weapons for Expeditionary Maritime Forces experiment. - Initiated and completed the FY10 spiral of the multi-year series of Coalition Information Sharing experiments. - Initiated and completed the Compact Low Frequency Active Off-Board Active Source Expendable experiment. - Initiated and completed the FY10 spiral of the multi-year series of Electric E-Fields experiments. - Initiated and completed the FY10 spiral of the Unmanned Surface Vehicle Decoys experiments. - Initiated and completed the ASW Non-Traditional Sensor experiment. - Initiated and completed the Maritime Force Application/Fires Computer Information Environment experiment. - Initiated and completed the FY10 spiral of the multi-year series of Navy Laser Weapons Systems experiments. - Initiated and completed the Carrier Strike Group/Surface Action Group Takedown experiment. - Initiated and completed the Seabasing Wargame. - Initiated and completed the FY10 spiral of the multi-year series of Data Throughput experiments. - Initiated and completed the FY10 spiral of the multi-year series of Tactical Communications experiments. - Initiated and completed the FY10 spiral of the multi-year series of Offensive Information Operations experiments. - Initiated and completed the FY10 spiral of the multi-year series of Network Management experiments. - Initiated and completed the FY10 spiral of the multi-year series of Real-Time Collaboration experiments. - Initiated and completed the FY10 spiral of the multi-year series of Submarine Launched Small Tactical Unmanned Aerial Systems experiments. - Initiated and completed the Lethal Weapons for Expeditionary Maritime Forces experiments. - Initiated and completed the FY10 spiral of the multi-year series of Satellite Communications experiments. - Initiated and completed the APS-145 Counter Deceptive Electronic Attack experiment. - Initiated and completed the Sealift 10 Navy Logistics Cell experiment. - Initiated and completed the FY10 spiral of the multi-year series of Information Assurance experiments. - Initiated and completed the Logistics Common Operating Picture experiment. - Initiated and completed the FY10 spiral of the multi-year series of Naval Obscurant System experiments. - Initiated and completed the Over the Horizon Detection of Naval Radar experiment. - Initiated and completed the FY10 spiral of the multi-year series of Cross Domain Solutions experiments.			

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 2357: *Maritime Battle Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
- Initiated and completed the Reconfigurable Autonomous Classification System experiment. ***FY 2011 Plans:*** - Continue all FY 2010 efforts less those noted as completed above. - Initiate and execute Sea Trial Experiments, War Games, and Seminars based on the Execution Plan 11, currently being developed. - Initiate and execute experiments in support of the CNO-directed Concept Generation and Concept Development effort. ***FY 2012 Plans:*** - Continue all FY 2011 efforts less those noted as completed above. - Initiate and execute Sea Trial Experiments, War Games, and Seminars based on the Execution Plan 12.			
Accomplishments/Planned Programs Subtotals	27.037	23.881	8.877

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

There is no acquisition strategy - this is not an acquisition program nor is materiel purchased with this funding. This funding is used to buy people to generate/develop/validate concepts, or to build and analyze the results of experiments focused on improved processes and tactics/techniques/procedures to mitigate identified war fighting gaps. The majority of this funding buys a core group of contractors who provide experiment design, execution and analysis support while the remainder is used to buy specific skill sets that are not part of the core group, and also cover some of the engineering and integration costs associated with certain experiments.

E. Performance Metrics

Maritime Battle Center:
- Refine concepts and identify key performance levels necessary for implementation.
- Demonstrate feasibility and discriminate among competing concepts and implementation alternatives.
- Understand potential military effectiveness and risk.
- Evaluate how much of the new capability and attendant force structure is needed.
- Learn how to operate the new force and combine it with the legacy force.
- Develop recommended Doctrine, Organization, Training, Materiel, Leadership, and Personnel (DOTMLP) changes.
- Develop fleet war fighting requirements for submission to the OPNAV Navy Capabilities Development Process (NCDP) to inform Navy acquisition decisions.
- Integrate emergent concepts and technologies, leading to rapid introduction of needed war fighting capabilities in the fleet.
- Rapidly mature Sea Shield, Sea Strike, Sea Basing, and FORCEnet concepts, technologies, and doctrine.
- Focus on near, mid and long term war fighting challenges to realize increased war fighting effectiveness.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 2357: *Maritime Battle Center*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Test and Evaluation	MIPR	Defense Technical Information Center:Ft Belvoir VA	246.277	2.000	Nov 2010	-		-		-	0.000	248.277	2.000
System Test and Evaluation	C/FFP	NAVSEA:Washington DC	-	2.000	Dec 2010	-		-		-	0.000	2.000	2.000
System Test and Evaluation	C/FFP	SPAWAR:San Diego CA	-	2.000	Mar 2011	2.012	Jan 2012	-		2.012	Continuing	Continuing	Continuing
System Test and Evaluation	C/FFP	SPAWARSYSCEN Atlantic:Charleston SC	-	3.500	Mar 2011	2.500	Mar 2012	-		2.500	Continuing	Continuing	Continuing
System Test and Evaluation	C/FFP	SPAWARSYSCEN Pacific:San Diego CA	-	2.000	Mar 2011	-		-		-	0.000	2.000	2.000
System Test and Evaluation	C/FFP	Naval Underwater Warfare Center:Newport RI	-	1.000	Mar 2011	-		-		-	0.000	1.000	1.000
System Test and Evaluation	C/FFP	Naval Surface Warfare Center:CA, IN, MD, VA	-	1.500	Mar 2011	-		-		-	0.000	1.500	1.500
System Test and Evaluation	C/FFP	Naval Postgraduate School:Monterey CA	-	2.000	Mar 2011	-		-		-	0.000	2.000	2.000
System Test and Evaluation	C/FFP	Navy Warfare Development Command:Norfolk VA	-	3.882	Oct 2010	3.000	Jan 2012	-		3.000	Continuing	Continuing	Continuing
		Subtotal	246.277	19.882		7.512		-		7.512			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	C/FFP	Navy Warfare Development Command:Norfolk VA	50.063	1.000	Oct 2010	1.365	Jan 2012	-		1.365	Continuing	Continuing	Continuing
Program Management	C/FFP	Naval Postgraduate School:Monterey CA	-	1.000	Nov 2010	-		-		-	0.000	1.000	1.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 2357: *Maritime Battle Center*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	C/FP	SPAWAR:San Diego CA	-	1.999	Dec 2010	-		-		-	0.000	1.999	1.999
ACQ Workforce Fund	Various	Various:Various	0.148	-		-		-		-	0.000	0.148	
		Subtotal	50.211	3.999		1.365		-		1.365			

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	296.488	23.881		8.877		-		8.877			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 2357: *Maritime Battle Center*

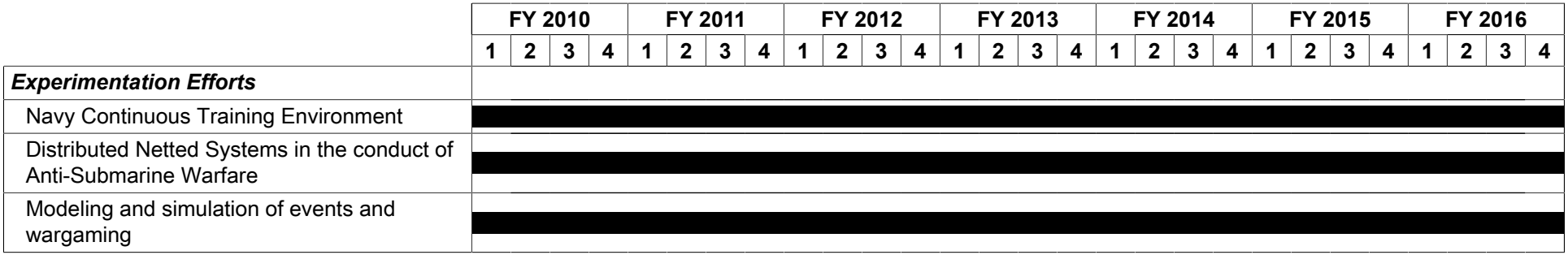

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604707N: *SEW Architecture/Eng Support*	**PROJECT** 2357: *Maritime Battle Center*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Experimentation Efforts				
Navy Continuous Training Environment	1	2010	4	2016
Distributed Netted Systems in the conduct of Anti-Submarine Warfare	1	2010	4	2016
Modeling and simulation of events and wargaming	1	2010	4	2016

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 3319: *Fleet Experimentation*	

COST ($ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
3319: *Fleet Experimentation*	-	-	14.688	-	14.688	14.481	14.819	14.993	15.216	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Since FY-06 the funding for Fleet Experimentation (Sea Trial) has been contained in Project 2357 - Maritime Battle Center. In FY-12 Project 2357 has been split with the funding for NWDC experimentation remaining in 2357 while Fleet Experimentation (Sea Trial) funding has been moved to this new project - 3319 Fleet Experimentation. The funding decrease in FY 2012 is due to realignment of funds for higher priority requirements.

A. Mission Description and Budget Item Justification

The mission of the Sea Trial (Fleet Experimentation) program is the development of new or improved war fighting capabilities. Sea Trial evaluates and validates emerging Navy concepts, concepts of operations (CONOPS), doctrine and technologies through focused experimentation, rigorous analysis, and assessment and is dedicated to providing solutions to near term (within the Fiscal Year Defense Plan) war fighting gaps. Sea Trial efforts are prioritized by the flag level Sea Trial Executive Steering Group (STESG), approved by Commander, U.S. Fleet Forces, and contained in the Sea Trial annual execution plan.

Sea Trial conducts experiments that examine both technological and non-technological solutions to war fighting gaps across all naval warfare areas. Sea Trial experiments run the gamut from workshops and seminars to fleet experiments, and involve all facets of experimentation including planning, systems engineering and integration, execution, data collection, analysis, and assessment. While Navy-centric, Sea Trial efforts include joint and coalition partners when appropriate.

This program historically does not meet established execution benchmarks. Sea Trial experimentation differs from other Research, Development, Test and Evaluation (RDT&E) programs because it is based upon Fleet operational availability vice independently scheduled through war fighting labs. Because Fleet experimentation frequently must occur during the spring and summer operational schedules, the overall RDT&E obligation/expenditure rates do not align with OSD practice. As a result, Sea Trial's obligation rates do not begin to approach benchmark until the program nears the fiscal year's end while its expenditure rates generally do not approach benchmark until midway through the second year of its appropriation.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
Title: Fleet Experimentation	-	-	14.688
Articles:			0
FY 2012 Plans: - Initiate and complete experiments in support of the CNO-directed Concept Generation and Concept Development program. - Initiate and complete experiments tasked by U.S. Fleet Forces in support of Fleet Experimentation.			
Accomplishments/Planned Programs Subtotals	-	-	14.688

Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604707N: *SEW Architecture/Eng Support*	**PROJECT** 3319: *Fleet Experimentation*

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

There is no acquisition strategy - this is not an acquisition program nor is materiel purchased with this funding. This funding is used for between 30 and 40 experimental initiatives annually, focused on addressing fleet identified capability gaps, and primarily buys the people to design and execute the experiments and analyze the results.

E. Performance Metrics

Fleet Experimentation:

- Refine concepts and identify key performance levels necessary for implementation.
- Demonstrate feasibility and discriminate among competing concepts and implementation alternatives.
- Understand potential military effectiveness and risk.
- Evaluate how much of the new capability and attendant force structure is needed.
- Learn how to operate the new force and combine it with the legacy force.
- Develop recommended Doctrine, Organization, Training, Materiel, Leadership, and Personnel (DOTMLP) changes.
- Develop fleet war fighting requirements for submission to the OPNAV Navy Capabilities Development Process (NCDP) to inform Navy acquisition decisions.
- Integrate emergent concepts and technologies, leading to rapid introduction of needed war fighting capabilities in the fleet.
- Rapidly mature Sea Shield, Sea Strike, Sea Basing, and FORCEnet concepts, technologies, and doctrine.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 3319: *Fleet Experimentation*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Test and Evaluation	MIPR	Defense Technical Information Center:Ft Belvoir VA	-	-		1.000	Jan 2012	-		1.000	Continuing	Continuing	Continuing
Systems Test and Evaluation	C/FFP	NAVSEA:Washington DC	-	-		2.000	Jun 2012	-		2.000	Continuing	Continuing	Continuing
Systems Test and Evaluation	C/FFP	SPAWAR:San Diego CA	-	-		1.838	Mar 2012	-		1.838	Continuing	Continuing	Continuing
Systems Test and Evaluation	C/FFP	SPAWARSYSCEN Atlantic:Charleston SC	-	-		1.823	Mar 2012	-		1.823	Continuing	Continuing	Continuing
Systems Test and Evaluation	C/FFP	SPAWARSYSCEN Pacific:San Diego CA	-	-		2.300	Mar 2012	-		2.300	Continuing	Continuing	Continuing
Systems Test and Evaluation	C/FFP	Naval Underwater Warfare Center:Newport RI	-	-		0.500	Jan 2012	-		0.500	Continuing	Continuing	Continuing
Systems Test and Evaluation	C/FFP	Naval Surface Warfare Center:CA, IN, MD, VA	-	-		1.000	Jun 2012	-		1.000	Continuing	Continuing	Continuing
Systems Test and Evaluation	C/FFP	Naval Postgraduate School:Monterey CA	-	-		1.500	Jun 2012	-		1.500	Continuing	Continuing	Continuing
Systems Test and Evaluation	C/FFP	Navy Warfare Development Command:Norfolk VA	-	-		0.500	Mar 2012	-		0.500	Continuing	Continuing	Continuing
		Subtotal	-	-		12.461		-		12.461			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011 Cost	FY 2011 Award Date	FY 2012 Base Cost	FY 2012 Base Award Date	FY 2012 OCO Cost	FY 2012 OCO Award Date	FY 2012 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	C/FFP	SPAWAR:San Diego CA	-	-		1.527	Jan 2012	-		1.527	Continuing	Continuing	Continuing
Program Management	C/FFP	Naval Postgraduate School:Monterey CA	-	-		0.700	Jun 2012	-		0.700	Continuing	Continuing	Continuing
		Subtotal	-	-		2.227		-		2.227			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 3319: *Fleet Experimentation*

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		14.688		-		14.688			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604707N: *SEW Architecture/Eng Support*	PROJECT 3319: *Fleet Experimentation*

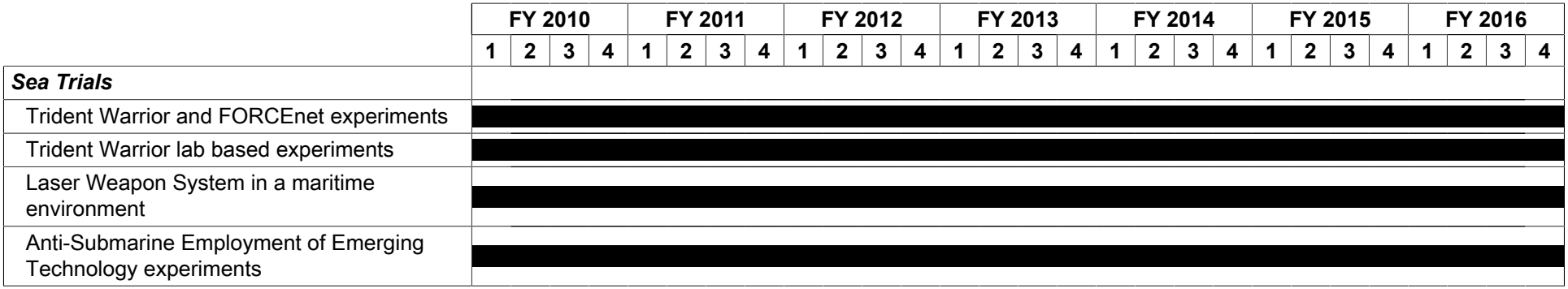

Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604707N: *SEW Architecture/Eng Support*	**PROJECT** 3319: *Fleet Experimentation*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Sea Trials				
Trident Warrior and FORCEnet experiments	1	2010	4	2016
Trident Warrior lab based experiments	1	2010	4	2016
Laser Weapon System in a maritime environment	1	2010	4	2016
Anti-Submarine Employment of Emerging Technology experiments	1	2010	4	2016