Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy											Date: March 2014	
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*					R-1 Program Element (Number/Name) PE 0604707N / *SEW Architecture/Eng Support*							
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	223.485	26.279	31.256	22.393	-	22.393	27.558	27.543	28.502	29.240	Continuing	Continuing
0798: *Allied/Coalition Interoperability and Information Dominance (ACIID)*	29.779	0.687	0.779	0.737	-	0.737	0.747	0.761	0.776	0.792	Continuing	Continuing
2144: *Space & Elec Warfare Engineering*	172.159	8.259	8.041	7.543	-	7.543	7.547	7.659	7.846	8.025	Continuing	Continuing
2356: *Maritime Concept Generation & Development*	0.000	4.941	10.194	7.190	-	7.190	8.458	8.738	8.888	9.057	Continuing	Continuing
3319: *Fleet Experimentation*	21.547	12.392	12.242	6.923	-	6.923	10.806	10.385	10.992	11.366	Continuing	Continuing

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

This Program Element (PE) contains four projects: Maritime Concept Generation and Development (CGCD), Fleet Experimentation , Allied/Coalition Interoperability and Information Dominance (ACIID), and Space and Electronic Warfare (SEW) Engineering.

The CGCD project (2356) focuses on the generation, development and validation of warfighting concepts, Concept of Operations (CONOPS) and doctrine in order to eliminate war fighting gaps. The CGCD project also includes, for FY14 and FY15, funding for the CNO's Rapid Innovation Cell (CRIC), a small group of disruptive thinkers managed by the Navy Warfare Development Command (NWDC) to identify and quickly test in an operational environment, innovative ideas and technologies that are outside the traditional development and acquisition processes. NWDC also manages the Fleet Experimentation program (formerly Sea Trial) under the guidance of Commander USFF and COMPACFLT.

The FLEX project (3319) (formerly Sea Trial) develops new or improved warfighter capabilities through the experimentation of high payoff initiatives, technologies and concepts, Fleet Concepts of Operations (CONOPS), doctrine, and new tactics, techniques and procedures (TTP). The objective of FLEX is to produce recommended changes in doctrine, organization, training, materiel, leadership development, personnel, facilities, and policy (DOTMLPF-P) actions, with an emphasis on non-materiel solutions. Focusing on war fighting capability improvement through experimentation aimed at delivering potential solutions in support of current Operations Plans (OPLANs), FLEX spans both operational and tactical levels of warfare and reaches across the full range of military operations to enhance war fighting capabilities or fill current or future capability gaps.

The ACIID 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

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Navy	Date: March 2014
Appropriation/Budget Activity 1319: *Research, Development, Test & Evaluation, Navy I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 Program Element (Number/Name)** PE 0604707N *I SEW Architecture/Eng Support*

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).

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	31.549	38.327	39.218	-	39.218
Current President's Budget	26.279	31.256	22.393	-	22.393
Total Adjustments	-5.270	-7.071	-16.825	-	-16.825
• Congressional General Reductions	-	-0.071			
• Congressional Directed Reductions	-	-7.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.452	-			
• SBIR/STTR Transfer	-0.737	-			
• Program Adjustments	-	-	-0.345	-	-0.345
• Rate/Misc Adjustments	0.001	-	-16.480	-	-16.480
• Congressional General Reductions Adjustments	-2.386	-	-	-	-
• Congressional Directed Reductions Adjustments	-2.600	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy											Date: March 2014	
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0604707N / *SEW Architecture/Eng Support*				Project (Number/Name) 0798 / *Allied/Coalition Interoperability and Information Dominance (ACIID)*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
0798: *Allied/Coalition Interoperability and Information Dominance (ACIID)*	29.779	0.687	0.779	0.737	-	0.737	0.747	0.761	0.776	0.792	Continuing	Continuing
Quantity of RDT&E Articles	0.000	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Allied/Coalition Interoperability and Information Dominance (ACIID) program advances Information Warfare (IW) (to include Command, Control, Communications, Computers; Intelligence, Surveillance and Reconnaissance (C4ISR); Electronic Warfare (EW); and Cyber Warfare), interoperability with Australia, Canada, New Zealand, United Kingdom, United States (AUSCANNZUKUS), North Atlantic Treaty Organization (NATO) and other Allied and Coalition partners. The program determines maritime operational gaps with our allies, 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 Allied war fighting capabilities, including interoperability testing of IW equipment. Allied and joint interoperability is critical for future maritime operations, especially as the United States 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 is 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 Anti-Access Area Denial (A2AD), Network Operations Without Shore (NOWS) and Maritime Domain Awareness (MDA). Increases in data throughput are required for the effective exchange of rich Information Dominance (ID) 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. Allied Communications Publication 200, NATO Standardization Agreements 5066 and 4691). The continued development and refinement of advanced tactical networking technologies and protocols, as well as automatic link establishment (ALE) 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 2013	FY 2014	FY 2015
Title: Advanced Relay Capabilities	0.687	0.779	0.737
Articles:	-	-	-
FY 2013 Accomplishments: -Continued the development and refinement of advanced relay and communication capabilities that promote interoperability with AUSCANNZUKUS, NATO and other Allied/Coalition forces and support A2AD and NOWS. Solutions addressed higher bandwidth technologies, such as wide-band HF, High Data Rate UHF and 3G/4G wireless.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 0798 / *Allied/Coalition Interoperability and Information Dominance (ACIID)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
-Secure coalition routing architectures incorporating High Assurance Internet Protocol Encryptor (HAIPE) devices that support tactical networking and Anti-Access Area Denial (A2AD) were developed along with distributed Service Oriented Architecture (SOA) applications and services architectures and advanced Information Assurance and Computer Network Defense (IA/CND) solutions. The overall goal was to maximize interoperability and network efficiency using multiple, dissimilar bearers and integrate these advanced solutions into an A2AD/Network Operations Without Shore (NOWS) Allied/Coalition tactical networking environment that would also include tactical data links, such as Link-22. -Progressed the North Atlantic Treaty Organization (NATO) standardization of Maritime Relayed Line of Sight Network Standardization Agreements (STANAG 4691) and High Frequency Internet Protocol (STANAG 5066 Edition 3). -Venues of opportunity, such as Trident Warrior (now known as Fleet Experimentation (FLEX)), were exploited to assess and validate the individual technologies, integrated solutions, and associated Doctrine, Organization, Training, Material, Leadership, Personnel and Facilities (DOTMLPF) through experimentation, trials and demonstrations with Australia, Canada, New Zealand, United Kingdom, United States (AUSCANNZUKUS) and other Allied/Coalition partners.			
FY 2014 Plans: -Continue the development and refinement of advanced networking and communication capabilities that promote Allied interoperability and support A2AD and NOWS. Solutions will address higher bandwidth technologies, such as wide-band High Frequency (HF), High Data Rate Ultra-High Frequency (UHF) and 3G/4G wireless. -Secure routing architectures incorporating HAIPE devices that support tactical networking and A2AD will be developed along with distributed SOA applications and services architectures and advanced IA/CND solutions. The overarching goal is to maximize interoperability and network efficiency using multiple, dissimilar bearers and integrate these advanced solutions into an A2AD/NOWS Allied/Coalition tactical networking environment that would also include tactical data links, such as Link-22. -Assess Information Warfare interoperability gaps with AUSCANNZUKUS nations, to include Intelligence, Surveillance and Reconnaissance (ISR), Electronic Warfare (EW) and Cyber, in appropriate venues. -Continue to progress NATO standardization of Maritime Relayed Line of Sight Network Standardization Agreements (STANAG 4691) and High Frequency Internet Protocol (STANAG 5066 Edition 3). -Progress Allied Information Warfare (IW) interoperability with other joint and maritime multi-national forums, such as the Combined Communications Electronics Board (CCEB), Multinational Maritime Internet Protocol (IP) Interoperability Steering Group (M2I2) and the Multinational Information Sharing program (MNIS). -Venues of opportunity, such as FLEX, will be exploited to assess and validate the individual technologies, integrated solutions, and associated DOTMLPF through experimentation, trials and demonstrations with AUSCANNZUKUS and other Allied/Coalition partners.			
FY 2015 Plans: -Continue the development and refinement of advanced networking and communication capabilities that promote Allied interoperability and support Anti-Access Area Denial (A2AD) and Network Operations Without Shore (NOWS). Solutions will			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 0798 / *Allied/Coalition Interoperability and Information Dominance (ACIID)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
address higher bandwidth technologies across the Radio Frequency (RF) and Optical spectrum, such as wide-band High Frequency (HF), High Data Rate Ultra-High Frequency (UHF) and other high-data rate wireless technologies. -Develop and assess secure and interoperable multibearer routing, distributed application and service architectures and advanced Information Assurance and Computer Network Defense (IA/CND) solutions that support tactical networking and A2AD requirements. The overarching goal is to maximize interoperability and network efficiency using multiple, dissimilar bearers and integrate these advanced solutions into an A2AD/NOWS Allied/Coalition tactical networking environment that can also include tactical data links, such as Link-22. -Assess Information Warfare interoperability gaps with Australia, Canada, New Zealand, United Kingdom, United States (AUSCANNZUKUS) nations, to include Intelligence, Surveillance and Reconnaissance (ISR), Position, Navigation and Timing (PNT), Electronic Warfare (EW) and Cyber, in appropriate venues. This will include assured PNT and Unmanned aerial vehicle (UAV) interoperability and IA/CND Blue/Red Teaming in Satellite Communications (SATCOM)-denied environments. -Continue to progress the standardization and operationalization of North Atlantic Treaty Organization (NATO) Maritime Relayed Line of Sight Network Standardization Agreements (STANAG 4691) and High Frequency Internet Protocol (STANAG 5066 Edition 3). -Progress Allied Information Warfare (IW) interoperability with other joint and maritime multi-national forums, such as the Combined Communications Electronics Board (CCEB), Multinational Maritime Information-system Interoperability Steering Group (M2I2) and the Multinational Information Sharing program (MNIS). -Venues of opportunity, such as Fleet Experimentation (FLEX), will be exploited to assess and validate the individual technologies, integrated solutions, and associated Doctrine, Organization, Training, Material, Leadership, Personnel and Facilities (DOTMLPF) through experimentation, trials and demonstrations with AUSCANNZUKUS and other Allied/Coalition partners.			
Accomplishments/Planned Programs Subtotals	0.687	0.779	0.737

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

Allied/Coalition Interoperability and Information Dominance (ACIID) is a non-acquisition program that promotes United States Navy (USN) 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 cooperation among the Australia, Canada, New Zealand, United Kingdom, United States (AUSCANNZUKUS), North Atlantic Treaty Organization (NATO) and other partner nations. Activities include acquiring intellectual capital in emerging technical areas through contracts providing technical engineering expertise and surge capacity for emerging tasks.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 0798 / *Allied/Coalition Interoperability and Information Dominance (ACIID)*

E. Performance Metrics

Advanced Relay Capabilities: 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 Anti-Access Area Denial (A2AD), Network Operations Without Shore (NOWS), Maritime Domain Awareness (MDA) and other aspects of Information Dominance (ID). These assessments will report on identified capability gaps, link capability gaps to technology/DOTMLPF gaps, identify technologies and DOTMLPF solutions considered ready for deployment, transition to a program of record to enhance Fleet war fighting capability and enhance Allied interoperability.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy												Date: March 2014
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0604707N / *SEW Architecture/Eng Support*				Project (Number/Name) 2144 / *Space & Elec Warfare Engineering*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
2144: *Space & Elec Warfare Engineering*	172.159	8.259	8.041	7.543	-	7.543	7.547	7.659	7.846	8.025	Continuing	Continuing
Quantity of RDT&E Articles	0.000	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

As of FY 2014, the Coalition Warrior Interoperability Demonstration (CWID) effort is referred to as Coalition Warrior Interoperability eXploration, eXperimentation, eXamination, eXercise (CWIX).

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 Baseline Extension, Joint Tactical Radio System, Network Centric Enterprise Services, Information Assurance 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 provides three main functions: 1) Perform System of Systems and platform technical evaluations to establish the alignment with the N2/N6 Information Dominance vision for the Navy on the whole and identify performance and operational risks associated with the integration of multiple systems to provide a robust, mission based capability. 2) Develop C4ISR/Information Technology (IT)/ Information Dominance (ID) integrated architecture products and 3) Support C4ISR/IT/ID systems engineering processes and standards. The integrated architecture products are used to support the Navy's budget process by providing the critical core architecture and enabling capabilities to the war fighter. The 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/IT/ID implications. Processes include developing and applying criteria for use in Systems Engineering Technical Reviews 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 engineer processes and standards work to engineer and enact C4ISR implementations Navy-wide across all C4ISR mission areas.

Products provided:
1) C4ISR/IT/ID integrated architectures
- Integrated Architectures and Standards - Architecture Views (Operational Views, Service Views, Technical Views, System Views)
- Migration roadmaps to the target architectures

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 2144 / *Space & Elec Warfare Engineering*

- Architecture technical authority, studies, interpretation assistance, and white papers

2) Supporting C4ISR/IT/ID 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.
- 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 eXploration, eXperimentation, eXamination, eXercise (CWIX) formerly 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.
- Joint cloud enabled, two security domain environment using thin client devices that allow secure and cost effective operations at the point of need. Cloud Computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g. networks, servers, storage, apps and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.
- Integration and Interoperability (I&I)- Support Assistant Secretary of the Navy for Research, Development, and Acquisition (ASN(RDA)) initiatives in development of I&I. Assist in completion of Systems Engineering Technical Reviews (SETRs) and provide recommendations for updates to Acquisition policies and guidance.
- Information Technology Procurement Request (ITPR)- Review of Navy ITPRs for developing systems to ensure adherence to Navy Information Technology (IT) Standards.

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

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: C4ISR Systems Engineering	3.035	3.252	3.066
Articles:	-	-	-
FY 2013 Accomplishments: -Continued Navy Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) and Information Dominance (ID) Transformation/Strategic Planning within Navy/Joint/Department of Defense 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 and ID capability. -Continued to establish, develop, and validate interoperability requirements: Performed SETRs utilizing validated assessment tools, system engineering methodologies and SETR checklists tracing system design to standards and requirements (e.g., Information Assurance (IA), data strategy, architecture, modeling, Open Architecture, Configuration Management, Service Oriented Architectures (SOAs) development, Anti-tamper, etc.) ensuring interoperability compliance to statutory and regulatory directives and guidance. Ensured continuous improvement of SETR Checklists by incorporating the latest policy, guidance, standards, and specifications.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 2144 / *Space & Elec Warfare Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
-Performed System of Systems (SoS) and platform technical evaluations to integrate the alignment with the N2/N6 ID vision and identified performance and operational risks associated with the integration of multiple systems to provide a robust, mission based capability. -Continued to conduct document reviews (of Systems Engineering Plans, Information Support Plans, Interoperability Control Document/Competitive Design Development/Consolidated Programming Document, IA Strategies, Acquisition Strategies, etc.) for Office of the Chief of Naval Operations (CNO), Assistant Secretary of the Navy for Research, Development and Acquisition (ASN(RDA)), and the Program Executive Offices (PEOs), and other services to ensure sound systems engineering analysis and design principles have been applied to system planning requirements, design, testing, and supportability. -Continued to perform engineering evaluation and provide buy/no-buy decisions for proposed Deviations from Specification for afloat platforms to determine performance and operational impacts of the proposed change and their effects on the platforms mission. -Continued to provide engineering evaluation and validation of Business Information Technology (IT) applications and IT infrastructure in order to combine, consolidate, and eliminate unnecessary or underutilized business systems for the Naval enterprise. -Continued to provide engineering evaluation and validation of programs and ensure adherence to technical standards in the following technical domains: communications, networks, Information Storage and Retrieval/Information Surveillance Reconnaissance/Information Operations, afloat platforms (both large and small decks), submarines, shore and Maintenance Operations Center capability, command and control, and space systems. -Continued to conduct Command, Control, Communications, Computers, Intelligence (C4I) Certifications through design and testing analysis ensuring C4I delivery to the platform (shore, surface ship, submarine) was validated to meet the operational need and is interoperable with platform, force level, joint/allied/coalition forces.			
FY 2014 Plans: -Continue Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) and Information Dominance (ID) Transformation/Strategic Planning within Navy/Joint/Department of Defense 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 Net-Centric Operations/Warfare and ID capability. -Continue to establish, develop, and validate interoperability requirements: Continue to perform Systems Engineering Technical Reviews (SETRs) utilizing validated assessment tools, system engineering methodologies and SETR checklists tracing system design to standards and requirements (e.g., Information Assurance (IA), data strategy, architecture, modeling, Open Architecture, Configuration Management (CM), Service Oriented Architecture (SOA) development, Anti-tamper, etc.) ensuring interoperability compliance to statutory and regulatory directives and guidance.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 2144 / *Space & Elec Warfare Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
-Continue to ensure continuous improvement of SETR Checklists by incorporating the latest policy, guidance, standards, and specifications. -Continue to perform System of Systems (SoS) and platform technical evaluations to integrate the alignment with the N2/N6 Information Dominance (ID) vision and identify performance and operational risks associated with the integration of multiple systems to provide a robust, mission based capability. -Continue to conduct document reviews (of Systems Engineering Plans, Information Support Plans, Interoperability Control Document/Competitive Design Development/Consolidated Programming Document, Information Assurance Strategies, Acquisition Strategies, etc.) for Office of the Chief of Naval Operations (CNO), Assistant Secretary of the Navy for Research, Development and Acquisition (ASN(RDA)), and the Program Executive Offices (PEOs), and other services to ensure sound systems engineering analysis and design principles have been applied to system planning requirements, design, testing, and supportability. -Continue to perform engineering evaluation and provide buy/no-buy decisions for proposed Deviations from Specification for afloat platforms to determine performance and operational impacts of the proposed changes and their effects on the platform's mission. -Continue to provide engineering evaluation and validation of Business Information Technology (IT) applications and IT infrastructure in order to combine, consolidate, and eliminate unnecessary or underutilized business systems for the Naval Enterprise. -Continue to provide engineering evaluation and validation of programs and ensure adherence to technical standards in the following technical domains-communications, networks, Information Storage and Retrieval/Information Surveillance Reconnaissance/Information Operations, afloat platforms (both large and small decks), submarines, shore and Maintenance Operations Center capability, command and control, and space systems. -Continue to conduct Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) Certifications through design and testing analysis ensuring C4ISR delivery to the platform (shore, surface ship, submarine) is validated to meet the operational need and is interoperable with platform, force level, joint/allied/coalition forces. -Provide technical support to the Department of the Navy Chief Information Office (DoN CIO) assessment of compliance with Department of Navy Enterprise Architecture (DoN EA) as part of Title 40/Clinger-Cohen Act confirmation process.			
FY 2015 Plans: -Continue C4ISR and ID Transformation/Strategic Planning within Navy/Joint/Department of Defense 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 Net-Centric Operations/Warfare and ID capability.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 2144 / *Space & Elec Warfare Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
-Continue to establish, develop, and validate interoperability requirements: Continue to perform Systems Engineering Technical Reviews (SETRs) utilizing validated assessment tools, system engineering methodologies and SETR checklists tracing system design to standards and requirements (e.g., Information Assurance (IA), data strategy, architecture, modeling, Open Architecture, Configuration Management (CM), Service Oriented Architecture (SOA) development, Anti-tamper, etc.) ensuring interoperability compliance to statutory and regulatory directives and guidance. -Continue to ensure continuous improvement of Systems Engineering Technical Review (SETR) Checklists by incorporating the latest policy, guidance, standards, and specifications. -Continue to perform System of Systems (SoS) and platform technical evaluations to integrate the alignment with the N2/N6 Information Dominance (ID) vision and identify performance, interoperability, and operational risks associated with the integration of multiple systems to provide a robust, mission based capability. -Continue to conduct document reviews (of Systems Engineering Plans, Information Support Plans, Interoperability Control Document/Competitive Design Development/Consolidated Programming Document, Enterprise Architectures & Strategies, Information Assurance Strategies, Acquisition Strategies, etc.) for Office of the Chief of Naval Operations (CNO), Assistant Secretary of the Navy for Research, Development and Acquisition (ASN(RDA)), and the Program Executive Offices (PEOs), and other services to ensure sound systems engineering analysis and design principles have been applied to system planning requirements, design, testing, and supportability. -Continue to perform engineering evaluation and provide buy/no-buy decisions for proposed Deviations from Specification for afloat platforms to determine performance and operational impacts of the proposed changes and their effects on the platform's mission. -Continue to provide engineering evaluation and validation of Business Information Technology (IT) applications and IT infrastructure in order to combine, consolidate, and eliminate unnecessary or underutilized business systems for the Naval Enterprise. -Continue to provide engineering evaluation and validation of programs and ensure adherence to technical standards in the following technical domains-communications, networks, Information Storage and Retrieval/Information Surveillance Reconnaissance/Information Operations, afloat platforms (both large and small decks), submarines, shore and Maintenance Operations Center capability, command and control, and space systems. -Continue to conduct Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) Certifications through design and testing analysis ensuring C4ISR delivery to the platform (shore, surface ship, submarine) is validated to meet the operational need and is interoperable with platform, force level, joint/allied/coalition forces. -Continue to provide technical support to the Department of the Navy Chief Information Office (DoN CIO) assessment of compliance with Department of Navy Enterprise Architecture (DoN EA) as part of Title 40/Clinger-Cohen Act confirmation process.			
Title: Coalition Warrior Interoperability eXploration, eXperimentation, eXamination, eXercise (CWIX) (Formerly known as CWID)	1.367	0.971	0.878
Articles:	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 2144 / *Space & Elec Warfare Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
FY 2013 Accomplishments: -Developed coalition and interagency interoperability and information sharing through coalition engagement, technology, demonstrations, and assessments leading to improvements of Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems within the Navy and in conjunction with Joint Services and Coalition efforts. -Demonstrated cutting-edge industry and government technologies and transitioned them to the end-user, including Non-Governmental Organizations (NGOs), coalition partners, and the joint services. -Provided interoperability between existing and cutting-edge C4ISR systems. Integrated directly with Navy Program Managers (i.e. Program Executive Office Command, Control, Communications, Computers, Intelligence (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. -Validated technology selection, experimental objective design, and experiment execution to influence and direct design efforts, to satisfy some warfighter capability gaps. Year-round connectivity was maintained with end-users, vetting capability requirements and ongoing technology efforts relevant to each organization. -Experiment results were directly integrated into developmental design and engineering efforts of individual technologies to accelerate the delivery of needed capability based on Joint Urgent Operational Needs (JUONs). -Established operationally relevant classified laboratory environments for joint/coalition war fighter technology experiments, while real-world field environments were created for emergent naval technologies related to Humanitarian Assistance Disaster Relief, Homeland Security, and Homeland Defense.			
FY 2014 Plans: -Develop coalition and interagency interoperability and information sharing through coalition engagement, technology, demonstrations, and assessments leading to improvements of C4ISR systems within the Navy and in conjunction with Joint Services and Coalition efforts. -Leverage Coalition Interoperability and Assurance Validate (CIAV) Future Mission Network (FMN) efforts in order to develop operationally relevant experiments focused on Navy mission enhancement in a Coalition environment. -Develop experiments integrated with North Atlantic Treaty Organization (NATO) and Troop Contributing Nation (TCN) partners in conjunction with the Coalition Warrior Interoperability eXploration, eXperimentation, eXamination, eXercise (CWIX) infrastructure (formerly Coalition Warrior Interoperability Demonstration (CWID)). -Enhance integration and engagement with Pacific Rim Coalition partners by leveraging existing experimentation and exercise venues in order to develop operationally relevant experiments focused on enhancing Navy missions. -Demonstrate cutting-edge technologies and transition them to the end-user, including Coalition Partners, and the Joint Services. -Continue to provide interoperability between existing and cutting-edge Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems. Integrate directly with Navy Program Managers (i.e. Program			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 2144 / *Space & Elec Warfare Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Executive Office Command, Control, Communications, Computers, Intelligence (PEO C4I) and the combatant commanders at the Technical Director, Acquisition Program Manager, and Science Advisor levels. -Validate technology selection, experimental objective design, and execution to influence and direct design efforts and to satisfy warfighter capability gaps in a Coalition setting. -Continue to develop operationally relevant classified laboratory environments for Joint/Coalition war fighter technology experiments. Year-round connectivity will be continued with end-users in order to provide a distributed Coalition experimentation environment focused enhancement of Navy missions. ***FY 2015 Plans:*** -Develop interoperability and information sharing through coalition engagement, technology, demonstrations, and assessments leading to improvements of C4ISR systems within the Navy and in conjunction with Joint Services and Coalition efforts. -Leverage Coalition Interoperability and Assurance Validate (CIAV) Mission Partner Environment (MPE) efforts in order to develop operationally relevant experiments and assessments focused on Navy mission enhancement in a Coalition environment. -Continue development of a Navy experimentation environment that can be leveraged to provide Navy focused Assurance and Validation support to the CIAV community. -Develop experiments integrated with North Atlantic Treaty Organization (NATO) and Troop Contributing Nation (TCN) partners in conjunction with the Coalition Warrior Interoperability eXploration, eXperimentation, eXamination, eXercise (CWIX) infrastructure. -Enhance integration and engagement with Pacific Rim Coalition partners by leveraging existing experimentation and exercise venues (such as Rim of the Pacific (RIMPAC), Cooperation Afloat Readiness and Training (CARAT), Foal Eagle, and Cobra Gold) in order to develop operationally relevant experiments focused on enhancing Navy missions. -Demonstrate and evaluate cutting-edge technologies and transition them to the end-user, including Coalition Partners, and the Joint Services. -Continue to provide interoperability between existing and cutting-edge C4ISR systems. Integrate directly with Navy Acquisition Programs (i.e. PEO C4I and the Component/ Combatant Commanders at the Technical Director and Science Advisor levels. -Validate technology selection, experimental objective design, and execution to influence and direct design efforts and to satisfy warfighter capability gaps in a Coalition setting. -Continue to develop operationally relevant classified laboratory environments for Joint/Coalition war fighter technology experiments. Year-round connectivity will be continued with end-users in order to provide a distributed Coalition experimentation environment focused enhancement of Navy missions.			
Title: Systems Engineering and Integration Revitalization	1.080	1.061	1.000
Articles:	-	-	-
FY 2013 Accomplishments: -Began transition of system engineering capability into a System of Systems (SoS) engineering view.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 2144 / *Space & Elec Warfare Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
-Implemented SoS integration certification in support of platform level design. -Developed and conducted pilot SoS engineering development training. ***FY 2014 Plans:*** -Develop Integration and Interoperability (I&I) Systems Engineering Technical Reviews (SETR) checklist in support of Assistant Secretary of the Navy for Research, Development, and Acquisition (ASN(RDA)). -Conduct I&I SETR events to validate and refine I&I checklist items. -Review all Navy Information Technology Procurement Requests (ITPR) for developing systems to ensure adherence to Navy Information Technology (IT) standards and capture and report metric information to support moving to bulk IT procurement to take advantage of economies of scale across the Department of the Navy. ***FY 2015 Plans:*** -Continue to refine the I&I SETR checklist in support of ASN(RDA). -Continue to conduct I&I SETR events to validate and refine I&I checklist items. -Continue to review all Navy ITPR for developing systems to ensure adherence to Navy IT standards and capture and report metric information to support moving to bulk IT procurement to take advantage of economies of scale across the Department of the Navy. -Provide Command, Control, Communications, Computers, Intelligence (C4I) and Information Assurance Certifications (Naval Warfare Systems Certification (NWSCP)) and Department of Defense Information Assurance Certification and Accreditation Process (DIACAP)).			
Title: Systems Engineering Standards and Processes	2.777	2.757	2.599
Articles:	-	-	-
FY 2013 Accomplishments: -Developed processes to integrate System of Systems (SoS) engineering technical assessments to identify cross system dependencies. -Incorporated lessons learned from prior year system engineering efforts to ensure multi-systems processes were intuitive and met the mission of the Navy. ***FY 2014 Plans:*** -Continue to develop processes to integrate SoS engineering technical assessments to identify cross system dependencies. -Continue to incorporate lessons learned from prior year system engineering efforts to ensure multi-systems processes are intuitive and meet the mission of the Navy. -Develop Joint cloud-enabled, secure domain environment using virtual desktop technology that allow secure and cost effective operations at the point of need, creating improved efficiencies, enhanced cyber operations and improved capabilities across a range of military operations.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 2144 / *Space & Elec Warfare Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
-Develop Utility Cloud, Storage Cloud and plan and execute risk reduction for UNCLASSIFIED/SECRET/TOPSECRET/Sensitive Compartmented Information (SCI) Data Cloud providing secure access to other users. -Develop mission effectiveness of a data centric architecture. -Develop secure thin client (enterprise applications) device capability integration with the current Navy enterprise. -Develop the future Navy cloud architecture to inform Navy acquisition programs on cloud technologies. -Develop Continental United States (CONUS)/Outside Continental United States (OCONUS) cloud-based capabilities. ***FY 2015 Plans:*** -Continue to develop/refine processes to integrate SoS engineering technical assessments to identify cross system dependencies and potential interoperability and integration issues. -Continue to incorporate lessons learned from prior year system engineering efforts to ensure multi-systems processes are intuitive and meet the mission of the Navy. -Continue efforts to develop Joint cloud-enabled, secure domain environment using virtual desktop technology that allow secure and cost effective operations at the point of need, creating improved efficiencies, enhanced cyber operations and improved capabilities across a range of military operations. -Develop Information Technology (IT) and Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) requirements and interface specifications and standards. -Develop Information Assurance (IA) requirements and interface specifications and standards. -Develop/refine processes for Information Technology (IT) and Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) Technical Authority (TA) implementation. -Develop/refine processes for Information Assurance (IA) TA implementation. -Establish an online repository of Systems of Systems (SoS) IT and IA Engineering Policies, Requirements, Standards, and Best Practices to facilitate consistent SoS Engineering across all Navy activities. -Update the future Navy cloud architecture to inform Navy acquisition programs on cloud technologies.			
Accomplishments/Planned Programs Subtotals	8.259	8.041	7.543

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

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

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 2144 / *Space & Elec Warfare Engineering*

engineering processes and standards. Activities include acquiring intellectual capital in emerging technical areas through contracts providing technical engineering expertise and surge capacity for emerging tasks.

E. Performance Metrics

The SEW engineering program will employ rigorous and consistent system engineering practices in an evolving value model to support development and deployment of shipboard, undersea, and land based capabilities based on mission and performance requirements, integrated enterprise architectures, model-validated solutions, and sustainment and supportability needs for the Command and Control, Intelligence, Networks, Communications, Space, and Business Information Technology domains.

Coalition Warrior Interoperability eXploration, eXperimentation, eXamination, eXercise (CWIX) Performance Metrics: Three key metrics: (1) Interoperability and compliance with Naval, joint, coalition and other non-governmental organization 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 CWIX.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy											Date: March 2014	
Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0604707N / *SEW Architecture/Eng Support*				Project (Number/Name) 2356 / *Maritime Concept Generation & Development*			
COST ($ in Millions)	**Prior Years**	**FY 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
2356: *Maritime Concept Generation & Development*	-	4.941	10.194	7.190	-	7.190	8.458	8.738	8.888	9.057	Continuing	Continuing
Quantity of RDT&E Articles	0.000	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

Beginning in FY 2013 this project replaced Project 2357 (Maritime Battle Center), which more accurately reflectes the current mission of Navy Warfare Development Command (NWDC) experimentation.

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 and the related experimentation. 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 (Fleet Experimentation - FLEX) by providing planning, systems engineering and integration, execution, data collection, and analysis support to the Mission/Warfare Area Office of Primary Responsibility where appropriate and as available. This support conducts experimentation in support of the Comander's Guidance for Fleet Experimentation promulgated by Commander, U.S. Fleet Forces. 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 2013	FY 2014	FY 2015
Title: Maritime Concept Generation and Development	4.941	10.194	7.190
Articles:	-	-	-
Description: The increase in funding from FY 2013 to FY 2014 reflects a new CNO directed effort to establish a CNO Rapid Innovation Cell (CRIC), managed by NWDC and supported by the Office of Naval Research. The CRIC is intended to identify new, innovative ideas and technologies outside of the mainstream Navy development and acquisition process, and get them to the Fleet for rapid testing and evaluation.			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 2356 / *Maritime Concept Generation & Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
The decrease in funding from FY2014 to FY2015 is the result of the Department of Navy re-prioritization due to budget constraints. ***FY 2013 Accomplishments:*** - Continued participation in Joint Forces Command (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 based on the Execution Plan 13, currently being developed. - Initiated and executed experiments in support of the CNO-directed Concept Generation and Concept Development effort. ***FY 2014 Plans:*** - Continue all efforts of FY13. - Support the USFF/CPF approved FLEX execution plan for FY14. - Execute the CNO Rapid Innovation Cell (CRIC) projects. ***FY 2015 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 2356 / *Maritime Concept Generation & Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
- Continue all efforts of FY14.			
Accomplishments/Planned Programs Subtotals	4.941	10.194	7.190

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

D. Acquisition Strategy

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 Concept Generation and Development:
- 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 concepts, technologies, and doctrine.
- Focus on near, mid and long term war fighting challenges to realize increased war fighting effectiveness.

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy			Date: March 2014
Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0604707N / *SEW Architecture/Eng Support*	Project (Number/Name) 3319 / *Fleet Experimentation*	

COST ($ in Millions)	Prior Years	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO #	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
3319: *Fleet Experimentation*	21.547	12.392	12.242	6.923	-	6.923	10.806	10.385	10.992	11.366	Continuing	Continuing
Quantity of RDT&E Articles	0.000	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

A. Mission Description and Budget Item Justification

The Fleet Experimentation (FLEX) (formerly Sea Trial) program develops new or improved warfighter capabilities through the experimentation of high payoff initiatives, technologies and concepts, Fleet Concepts of Operations (CONOPS), doctrine, and new tactics, techniques and procedures (TTP). The objective of FLEX is to produce recommended changes in doctrine, organization, training, materiel, leadership development, personnel, facilities, and policy (DOTMLPF-P) actions, with an emphasis on non-materiel solutions. Focusing on war fighting capability improvement through experimentation aimed at delivering potential solutions in support of current Operations Plans (OPLANs), FLEX spans both operational and tactical levels of warfare and reaches across the full range of military operations to enhance war fighting capabilities or fill current or future capability gaps. FLEX is dedicated to providing solutions to these near term (within the Fiscal Year Defense Plan) prioritized war fighting gaps as defined by the Commander, U.S. Fleet Forces (CUSFF)/Commander, Pacific Fleet (CPF) Fleet Experimentation annual guidance. With recommendations from Commander, Navy Warfare Development Command (NWDC), experimentation campaigns are approved by CUSFF/CPF each year thus establishing the annual experimentation execution plan.

Fleet experimentation runs the gamut from campaigns workshops and seminars to limited objective/technical experiments, to advanced war fighting experiments. The campaigns involve all facets of experimentation including design, planning, systems engineering and integration, execution, data collection, analysis, assessment, and the delivery of tangible products for the fleet. While Navy-centric, FLEX efforts include joint and coalition partners when appropriate.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
Title: Fleet Experimentation	12.392	12.242	6.923
Articles:	-	-	-
Description: The Fleet Experimentation (FLEX) (formerly Sea Trial) program develops new or improved warfighter capabilities through the experimentation of high payoff initiatives, technologies and concepts, Fleet Concepts of Operations (CONOPS), doctrine, and new tactics, techniques and procedures (TTP). Funding for FY15 was reduced as a result of the Department of the Navy re-prioritization due to budget constraints. ***FY 2013 Accomplishments:*** - Initiated and completed experiments in support of the CNO-directed Concept Generation and Concept Development program. - Initiated and completed experiments tasked by U.S. Fleet Forces in support of Fleet Experimentation. ***FY 2014 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 3319 / *Fleet Experimentation*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2013	FY 2014	FY 2015
- Continue all efforts of FY13. - Continue to conduct operational experiments, evaluate and validate emerging technologies, Navy/Fleet Concepts of Operations (CONOPS), doctrine, and new tactics, techniques, and procedures (TTP) with the objective to address and mitigate significant identified warfighter capability gaps as defined by the Commander, U.S. Fleet Forces (CUSFF)/Commander, Pacific Fleet (CPF) Guidance. ***FY 2015 Plans:*** - Continue all efforts of FY14.			
Accomplishments/Planned Programs Subtotals	12.392	12.242	6.923

C. Other Program Funding Summary ($ in Millions)

N/A

Remarks

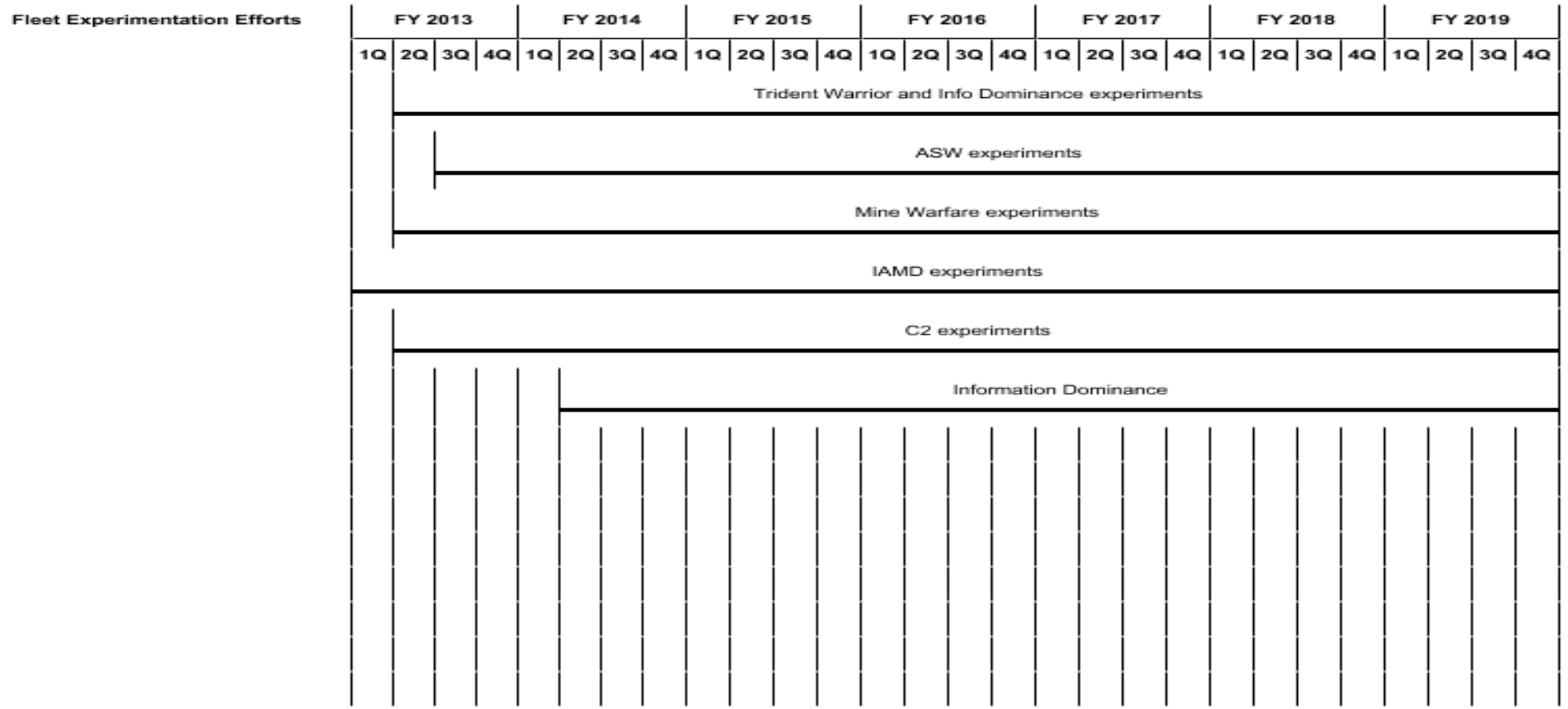
D. Acquisition Strategy

This funding is used for between 30 and 40 experimental initiatives annually, focused on addressing fleet identified capability gaps. The majority of this funding is used to acquire intellectual capital in emerging technical areas through contracts providing engineering expertise, experiment design, execution and analysis support, and also used to buy some engineering and integration costs associated with certain experiments.

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 concepts, technologies, and doctrine.

Exhibit R-4, RDT&E Schedule Profile: PB 2015 Navy		Date: March 2014
Appropriation/Budget Activity 1319 / 4	**R-1 Program Element (Number/Name)** PE 0604707N / *SEW Architecture/Eng Support*	**Project (Number/Name)** 3319 / *Fleet Experimentation*



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