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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy										Date: February 2015		
Appropriation/Budget Activity 1319: Research, Development, Test & Evaluation, Navy / BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 Program Element (Number/Name) PE 0603382N / Advanced Combat Systems Tech							
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	62.573	1.510	1.639	1.636	-	1.636	1.775	1.795	1.805	1.842	Continuing	Continuing
0324: Adv Combat System Technology	62.573	1.510	1.639	1.636	-	1.636	1.775	1.795	1.805	1.842	Continuing	Continuing
Program MDAP/MAIS Code: 180												
A. Mission Description and Budget Item Justification												
The Advanced Combat System Technology line is to evolve the technical and business practices for programs to change to an open architecture construct. The program was constructed to mature both technical and business model integration for C5I systems programs of record in an open architecture environment. The priority was incorporating the principles of modular design and design disclosure, reusable application software, interoperability and secure information exchange, lifecycle affordability and encouraging competition and collaboration.												
Project Unit 0324: Funding is to maintain and update an information exchange environment to improve transparency of design disclosure and information exchange on past and current investments to support the principle of cross-program reuse, and to provide the tools and leadership for assisting programs through the transition to Naval Open Architecture (OA). The other elements of the OA transformation effort are being realized as management efficiencies within programs. Those elements include ensuring that all naval systems, families of systems, and programs move to modular OA in accordance with Department of Defense (DoD) Instruction 5000.1 dated 12 May 2003 which mandates that all DoD programs utilize open systems architectures to rapidly field affordable and interoperable systems. By direction of the Navy Service Acquisition Executive (SAE), PEO IWS was assigned overall responsibility and authority to direct the Navy's OA effort until that duty transferred to DASN (RDTE) in 2011. The Core OA funding line has remained with PEO IWS. That policy established a need to coordinate acquisition strategies, develop guidance and tools, and develop analysis of alternatives to determine OA software reuse practices within and across the Navy Communities of Interest (COI - Surface, Subsurface, Air, Space, C4I, USMC, and ONR). This project facilitates a strategic shift in the acquisition business process to facilitate cooperative competition in cross-domain/COI business relationships. This improves innovation and economies of scale throughout the Navy and Marine Corps. This leadership effort has identified the business case and potential return on investment for moving the Navy towards an open systems approach, supported the development of open systems technologies, and integrated best business and technical practices for open systems development within Naval acquisition. Naval OA ensures Navy-wide system architectures become extensible and scalable in function, capacity, and workload to meet Joint warfighting requirements. This also includes the identification and development of common software components, functions, reuse methodologies, and extensible product lines. In summary, this funding supports the management of a reuse repository and reuse information exchange portal, and the evolving business, systems engineering, and cultural changes required across all Naval programs as they migrate to function in a Joint, net-centric warfare environment.												

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B. Program Change Summary (\$ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	1.563	1.646	1.718	-	1.718
Current President's Budget	1.510	1.639	1.636	-	1.636
Total Adjustments	-0.053	-0.007	-0.082	-	-0.082
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.053	-			
• Program Adjustments	-	-	-0.068	-	-0.068
• Rate/Misc Adjustments	-	-0.007	-0.014	-	-0.014
Change Summary Explanation					
The FY 2016 funding request was reduced by \$.068 million to account for the availability of prior year execution balances.					

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Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0603382N / <i>Advanced Combat Systems Tech</i>				Project (Number/Name) 0324 / <i>Adv Combat System Technology</i>			
COST (\$ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
0324: <i>Adv Combat System Technology</i>	62.573	1.510	1.639	1.636	-	1.636	1.775	1.795	1.805	1.842	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Project Unit 0324: Funding is to maintain and update a information exchange environment to improve transparency of design disclosure and information exchange on past and current investments to support the principle of cross-program reuse, and to provide the tools and leadership for assisting programs through the transition to Naval Open Architecture (OA). The other elements of the OA transformation effort are being realized as management efficiencies within programs. Those elements include ensuring that all naval systems, families of systems, and programs move to modular OA in accordance with Department of Defense (DoD) Instruction 5000.1 dated 12 May 2003 which mandates that all DoD programs utilize open systems architectures to rapidly field affordable and interoperable systems. By direction of the Navy Service Acquisition Executive (SAE), PEO IWS was assigned overall responsibility and authority to direct the Navy's OA effort until the duty transferred to DASN (RDTE) in 2011 The Core OA funding line has remained with PEO IWS. That policy established a need to coordinate acquisition strategies, develop guidance and tools, and develop analysis of alternatives to determine OA software reuse practices within and across the Navy Communities of Interest (COI - Surface, Subsurface, Air, Space, C4I, USMC, and ONR). This project facilitates a strategic shift in the acquisition business process to facilitate cooperative competition in cross-domain/COI business relationships. This improves innovation and economies of scale throughout the Navy and Marine Corps. This leadership effort has identified the business case and potential return on investment for moving the Navy towards an open systems approach, supported the development of open systems technologies, and integrated best business and technical practices for open systems development within Naval acquisition. Naval OA ensures Navy-wide system architectures become extensible and scalable in function, capacity, and workload to meet Joint warfighting requirements. This also includes the identification and development of common software components, functions, reuse methodologies, and extensible product lines. In summary, this funding supports the management of a reuse repository and reuse information exchange portal, and the evolving business, systems engineering, and cultural changes required across all Naval programs as they migrate to function in a Joint, net-centric warfare environment.

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

	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Align the Naval Enterprise Across All Domains to Implement OA	0.257	0.272	0.292	-	0.292
Articles:	-	-	-	-	-
FY 2014 Accomplishments:					
Supported the execution of Naval OSA Policy and Strategy, including OSAET meetings for the enterprise (as scheduled) and OSA program reporting requirements. Specifically, this included OSAET reporting of action items to DASN RDT&E, quarterly OSA Reports to Congress via ASN RDA, as well as the annual OSA budget submission and financial reporting for this project. Alignment across the Naval Enterprise also included the development and management of all other activities as DASN RDT&E or ASN RDA directs. The OSA					

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
program also successfully completed the execution of another war game using the "Massive Multiplayer Online War Game Leveraging the Internet" (MMOWGLI), to help solve issues surrounding data rights and Intellectual Property in DoD acquisitions. FY 2015 Plans: Establish transition of programs to fully utilize the principles and practices of OA in accordance with the ASN(RDA) approved Naval OSA Strategy of November 2012. Transition the sustainment of the OSA initiative from a unique OA Executive forum to a permanent organization; the Systems Engineering Stakeholders Group. Continue to coordinate and develop the quarterly OA Report to Congress, annual budget submission and financial reporting for this project. By FY-15 the Naval OSA Strategy will need to be revisited and updated to stay current with changes in best practices to include all other activities as the SESG, DASN RDT&E or ASN(RDA) directs. FY 2016 Base Plans: Continue FY2015 Plan in addition to: Implement Enterprise architecture of modular development and maximum reuse. Promote tailor-able open standards relative to Technical Reference Frameworks attributes. FY 2016 OCO Plans: N/A						
Title: Change the Naval and Marine Corps Cultures to Institutionalize OA Principle Articles:		0.302 -	0.373 -	0.378 -	- -	0.378 -
FY 2014 Accomplishments: The OSA program enabled the institutional adoption of OSA principles and practices through stakeholder management, communications, mentoring, training, and curriculum adjustment. Key activities included maintenance of Defense Acquisition University (DAU) online OSA training modules, working with DAU to incorporate OSA principles into existing coursework materials, presentation of existing training courses, and participation in symposia and panels to discuss OSA implementation, and using other communication vehicles to promulgate OSA standards and methodologies for inclusion into Naval systems acquisition. FY 2015 Plans: Continue with direct engagement with programs to improve OA principles and practices through stakeholder management, communications, mentoring, training, and curriculum adjustment. Establish and maintain communication and transparency across programs to highlight new opportunities for enterprise product reuse						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)						
		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
and improved interoperability. Sustain a strong message to the public and industry on the value of OA for cost-effective management of the acquisition portfolio.						
FY 2016 Base Plans: Continue with FY2015 Plan in addition to:						
Adjust funding techniques for cross-Enterprise co-development. Identify best practices and collaborative forums to increase the likelihood of transitioning maturing technology into programs of record.						
FY 2016 OCO Plans: N/A						
Title: OA Systems Engineering Leadership		0.332	0.375	0.395	-	0.395
Articles:		-	-	-	-	-
FY 2014 Accomplishments: The OSA program supported systems engineering collaboration across the Naval Enterprise to facilitate the fielding of interoperability capabilities, including a) the further alignment of PEO architectures; b) provided guidance for government-to-government coordination of OSA implementation efforts to ensure standardized and disciplined processes, interfaces, and services were utilized; c) worked with the Science and Technology (S&T) community to ensure OSA is being incorporated into emerging technologies; and d) worked with the Test and Evaluation (T&E) community, academia, and industry partners to identify opportunities to reduce T&E expenses through the use of OSA principles and practices. The Core OSA/OSAET continued to work with, and across PEOs to adopt automated test and analysis tools.						
FY 2015 Plans: Key activities of the third year of the strategy include; inter-program alignment toward the use of common technical frameworks. Establish transition of programs to fully utilize the principles and practices of OA in accordance with the ASN(RDA) approved Naval OSA Strategy of November 2012. Establish collaboration and cooperation incentives, and improve techniques for finding and using modular capabilities. Complete the transformation of oversight and governance of programs that are implementing or have implemented OA principles and practices through mechanisms such as Community of Interest forums, Technical Authority, Technical Warrant Holders and Product DASN engagements.						
FY 2016 Base Plans: Continue FY2015 Plan in addition to:						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Adjust incentives for collaboration and cooperation between programs. Establish reward mechanisms for programs and personnel successful in achieving OSA implementations that rapidly integrate innovation and lower total ownership costs.						
FY 2016 OCO Plans: N/A						
Title: Knowledge Products for Implementing OSA		0.619	0.619	0.571	-	0.571
Articles:		-	-	-	-	-
FY 2014 Accomplishments: The OSA program worked to improve System Reuse and Business Practices using the following tactics: a) development and refinement of policies, guidance, and terminology establishing a consistent approach for OSA across the Enterprise; b) the development and maintenance of analytical toolsets to assist Milestone Decision Authorities, Program Managers, and Resource Sponsors in assessing program openness and making informed OSA investment decisions; and c) the facilitation of design disclosure, information sharing, and cross domain component reuse to reduce costs and enable more effective technology insertion, including the administration of the OSA Information Exchange Portal hosted at Forge.mil. The Core OSA/OSAET worked with, and across, the PEOs to adopt automated test and analysis tools.						
FY 2015 Plans: Evolve the Program Managers OSA Workbook and other associated knowledge products to position Naval Programs to take advantage of consistent business and technical practices. Establish collaboration forums so that best practices can be shared so that the OA related knowledge products are kept up to date with the latest innovations being used in program execution. This includes working with outside organizations such as DISA's Forge.mil as well as the Navy's NSERC/NARS environments. Ensure that DAU is addressing training on OSA as directed to them under the Better Buying Power implementation memo that assigns DASN RDT&E the lead for providing baseline information for curriculum development. Continue to develop new training on OA, including deployment of Naval unique training on OA throughout the SYSCOMs and PEOs.						
FY 2016 Base Plans: Continue FY2015 Plan in addition to: Minimize DAU courses to fill needed knowledge gaps. Establish an OSA mentoring program for acquisition professionals.						
FY 2016 OCO Plans:						

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)					
	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
N/A					
Accomplishments/Planned Programs Subtotals	1.510	1.639	1.636	-	1.636
C. Other Program Funding Summary (\$ in Millions) N/A					
Remarks					
D. Acquisition Strategy This risk reduction effort evolved and shifted from a PEO IWS 1.0 task to Naval Surface Warfare Center (NSWC)/Dahlgren to an Assistant Secretary of the Navy, Research, Development & Acquisition (ASN-RDA) directed task to fund the Navy's OA Enterprise effort from this core OA Budget line (policy statement dated 5 August 2004). The strategy was further refined in the Deputy Chief of Naval Operations (DCNO) requirement of 23 December 2005 (N6/7) with guidance for this effort to assist the Milestone Decision Authority (MDA), program managers, and resource sponsors in assessing enterprise program assets where appropriate. Office of the Chief of Naval Operations (OPNAV) has directed this program to provide objective, measurable, performance based assessments as Business Case Analysis (BCA) baselines for future system changes and spiral developments.					
E. Performance Metrics Change Naval Processes and business practices to cost-effectively innovate and deploy improved warfighting capability based on fleet requirements. Provide OA Systems Engineering to field common, interoperable capabilities; Change Navy and Marine Corps Business processes to Institutionalize OA Principles.					

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy												Date: February 2015			
Appropriation/Budget Activity 1319 / 4						R-1 Program Element (Number/Name) PE 0603382N / <i>Advanced Combat Systems Tech</i>				Project (Number/Name) 0324 / <i>Adv Combat System Technology</i>					
Product Development (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SE/OA Domain Support	C/FP	APL/ IET Contract : VARIOUS	1.388	0.619	Nov 2013	0.626	Nov 2014	0.653	Nov 2015	-		0.653	-	3.286	Continuing
Systems Engineering	MIPR	NSWC / Dahlgren : Dahlgren, VA	12.839	0.220	Nov 2013	0.248	Nov 2014	0.261	Nov 2015	-		0.261	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC/CRANE, Carderock, DISA : VARIOUS	2.597	0.257	Dec 2013	0.265	Dec 2014	0.210	Dec 2015	-		0.210	-	3.329	Continuing
Systems Engineering	C/CPAF	ASSETT; Lockheed Martin, NJ; Gartner, VA : Washington DC	5.114	-	Nov 2013	-		-		-		-	-	5.114	Continuing
OA DOMAIN SUPPORT	WR	NUWC/Newport, Spawar, Navair : VARIOUS	11.931	-		-		-		-		-	-	11.931	Continuing
SE/Signal Processor	C/CPAF	Lockheed Martin : VARIOUS	6.000	-		-		-		-		-	-	6.000	Continuing
SE/Signal Processor	C/CPAF	BAE : VARIOUS	0.300	-		-		-		-		-	-	0.300	Continuing
SE/Signal Processor	C/CPAF	Raytheon : VARIOUS	0.100	-		-		-		-		-	-	0.100	Continuing
SE/Signal Processor	WR	NSWC/DD, NRL, PHD : VARIOUS	0.600	-		-		-		-		-	-	0.600	Continuing
Subtotal			40.869	1.096		1.139		1.124		-		1.124	-	-	-
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Industry Development	C/FP	IBM, ANGLE, TBD (New IET Contract) : VARIOUS	9.130	0.302	Nov 2013	0.373	Nov 2014	-		-		-	-	9.805	Continuing
Technical Data-Academia	WR	NPS-Monterey/DAU : MONTEREY, CA	2.109	0.112	Nov 2013	0.127	Nov 2014	-		-		-	-	2.348	Continuing

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy													Date: February 2015		
Appropriation/Budget Activity				R-1 Program Element (Number/Name)						Project (Number/Name)					
1319 / 4				PE 0603382N / Advanced Combat Systems Tech						0324 / Adv Combat System Technology					
Support (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	C/FP	TRIDENT, ASSET : VARIOUS	0.309	-		-		-		-		-	-	0.309	Continuing
Subtotal			11.548	0.414		0.500		-		-		-	-	12.462	-
Test and Evaluation (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation	WR	NSWC/DD : DAHLGREN, VA	2.216	-		-		-		-		-	-	2.216	Continuing
OA Asset Repository (SBIR Account)	WR	Miscellaneous : VARIOUS	0.150	-		-		-		-		-	-	0.150	Continuing
Subtotal			2.366	-		-		-		-		-	-	2.366	-
Management Services (\$ in Millions)				FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPAF	Miscellaneous : VARIOUS	3.021	-		-		0.378	Nov 2015	-		0.378	Continuing	Continuing	Continuing
SBIR Assessment (Cong Add)	WR	NSWC/DD : DAHLGREN, VA	4.748	-		-		0.134	Nov 2015	-		0.134	-	4.882	Continuing
DAWDF	TBD	TBD : TBD	0.021	-		-		-		-		-	-	0.021	Continuing
Subtotal			7.790	-		-		0.512		-		0.512	-	-	-
			Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			62.573	1.510		1.639		1.636		-		1.636	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy			Date: February 2015		
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	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Proj 0324																												
Incorporate OA Principles in Acquisition Strategies and Contracts																												
Change Culture through OA Education, Outreach and Training																												
Conduct Program Assessments																												
Adapt ONR Technologies																												
Publish Contract Guidebook Update																												
Host Contracting/Industry Symposium																												
Deliver Report to Congress																												
Host OA Lead Council Meeting																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy			Date: February 2015
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 0324				
Incorporate OA Principles in Acquisition Strategies and Contracts	1	2014	3	2018
Change Culture through OA Education, Outreach and Training	1	2014	4	2018
Conduct Program Assessments	2	2014	2	2018
Adapt ONR Technologies	1	2014	3	2018
Publish Contract Guidebook Update	3	2014	3	2018
Host Contracting/Industry Symposium	4	2014	4	2018
Deliver Report to Congress	1	2014	4	2018
Host OA Lead Council Meeting	1	2014	4	2018