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Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Navy	Date: February 2015
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Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy I BA 7: Operational Systems Development</i>					R-1 Program Element (Number/Name) PE 0204575N / <i>Elect Warfare Readiness Supt</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
Total Program Element	213.584	18.859	16.567	46.609	-	46.609	124.058	110.407	127.783	86.955	Continuing	Continuing
2263: <i>Information Warfare System</i>	213.584	18.859	16.567	46.609	-	46.609	124.058	110.407	127.783	86.955	Continuing	Continuing

A. Mission Description and Budget Item Justification

Research, assess, and develop information warfare capabilities.

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016 Base</u>	<u>FY 2016 OCO</u>	<u>FY 2016 Total</u>
Previous President's Budget	19.563	22.067	31.510	-	31.510
Current President's Budget	18.859	16.567	46.609	-	46.609
Total Adjustments	-0.704	-5.500	15.099	-	15.099
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-5.500			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.704	-			
• Program Adjustments	-	-	2.900	-	2.900
• Rate/Misc Adjustments	-	-	12.199	-	12.199

Change Summary Explanation

The FY 2016 funding request was reduced by \$1.3 million to account for the availability of prior year execution balances.

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Exhibit R-2A, RDT&E Project Justification: PB 2016 Navy										Date: February 2015		
Appropriation/Budget Activity 1319 / 7					R-1 Program Element (Number/Name) PE 0204575N / <i>Elect Warfare Readiness Supt</i>				Project (Number/Name) 2263 / <i>Information Warfare System</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
2263: <i>Information Warfare System</i>	213.584	18.859	16.567	46.609	-	46.609	124.058	110.407	127.783	86.955	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Note

Funding for this Project Code will be managed by BSO 60 starting in FY14.

A. Mission Description and Budget Item Justification

Information Operations (IO) Counter Measure Capability Research and Development: Develops software to account for antenna modeling, weather calculations, radio frequency modeling, signals mapping and terrain modeling for warfighter use in configuring optimal Electronic Attack (EA) from afloat.

Maritime Cryptologic Systems for the 21st Century Systems Development and Support: Develops and fields spiral Electronic Support, and cyber capabilities against Fleet Forces Command prioritized signals, networks, and target sets. EA capabilities will be integrated into a software architecture baseline that is deployed on subsurface, airborne and surface Information Operations (IO) platforms (Classic Troll, Banshee and Ships Signal Exploitation Equipment Increment E and Increment F) and Office of the Chief of Naval Operations N2/N6 sponsored Pacific Sail (PACSAIL) research project. SCMA - Signal Descriptor File (SDF) Configuration Management Authority (SCMA) is the technical lead for the development, testing and validation of electronic support and electronic attack techniques for Maritime Cryptologic Systems in support of Navy-wide Information Operations planning.

Research, Analysis and Research and Development Technical Support: Conducts vulnerability analysis and reverse engineering on emerging threats and targets and provides specialized technical, engineering and management capabilities to the program management office. (Specific details held at a higher classification level)

Computer Network Operations: Funds development and testing of computer networks for modeling, simulation, and tailoring of Cyber capabilities. Develops specific Cyber tools, techniques, and operators in support of Fleet Cyber Command and Commander, TENTH Fleet requirements. (Specific development details held at a higher classification level). Conducts vulnerability analyses and reverse engineering on improvised explosive devices (Specific details held at a higher classification level)

Task Force Cyber Awakening (TFCA) as directed by the CNO, provides cyber security investments to expand Operation Rolling Tide (ORT) approach to address near term and executable vulnerabilities across Platform IT (PIT) capabilities. These projects and capabilities include the studies and analysis to support PIT improvements to ensure systems are optimally configured to enhance Navy's ability to maneuver in this expanding environment.

Maritime Cyber Operations: Analytical and engineering effort to develop cyber capabilities in the maritime domain. Funds additional development and testing of computer networks for vulnerability analysis, reverse engineering and simulation systems, and closed development networks. Details can be provided separately in an appropriate environment.

Twisted Web: A developmental capability that improves Fleet ability to safely operate in all ocean areas by reducing adversary capability to engage kinetically

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Funds risk reduction and system engineering development for project initiation. Details available at classified level.						
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Electronic Warfare / Information Operations (IO) Countermeasure Capability Research & Development		4.086	12.698	22.837	-	22.837
Articles:		-	-	-	-	-
Description: Information Operations (IO) Counter Measure Capability Research and Development: Develops and tests IO Countermeasure capabilities across various platforms. Develops specific waveforms to attack adversary systems. Develops and uses modeling and simulation techniques to prototype and test emergent waveforms.						
FY 2014 Accomplishments:						
* Develop and test IO Countermeasures capabilities across various platforms.						
* Develop specific waveforms to attack adversary systems.						
* Develop and use modeling and simulations techniques to prototype and test emergent waveforms.						
* Modeling and Simulation Lab (Applied/projected level of effort).						
* Information Warfare (IW) / Information Operations (IO) Electronic Attack (EA) capability development (Details held at a higher classification level).						
* Waveform Weapon Development.						
FY 2015 Plans:						
* Increased, developed and testing of IO Countermeasures capabilities across various platforms.						
* Increased and developed specific waveforms to attack adversary systems.						
* Increased, developed and used modeling and simulations techniques to prototype and test emergent waveforms.						
* Increased Modeling and Simulation Labs (Applied/projected level of effort).						
* Increased Information Warfare (IW) / Information Operations (IO) Electronic Attack (EA) capability development (Details held at a higher classification level).						
* Increased Waveform Weapon Development.						
* Continued spiral development from proof of concept to prototype development for new IO Countermeasure Capability.						
* Drive integration of developed capability from single terrestrial cite to Fleet assets.						
* Leveraged existing capability to target evolving adversaries capabilities.						
FY 2016 Base Plans:						
* Increased develop and test IO Countermeasures capabilities across various platforms.						

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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
* Increased develop specific waveforms to attack adversary systems. * Increased develop and use modeling and simulations techniques to prototype and test emergent waveforms. * Increased Modeling and Simulation Lab (Applied/projected level of effort). * Increased Information Warfare (IW)/Information Operations (IO) Electronic Attack (EA) capability development (Details held at a higher classification level). * Increased Waveform Weapon Development. * Continued spiral development from proof of concept to prototype development for new IO Countermeasure Capability. * Continued drive integration of developed capability from single terrestrial cite to Fleet assets. * Continued leveraging existing capability to target evolving adversaries capabilities. * Transition of developed capability to Fleet customers through, ships signal exploitation equipment increment F program of record. FY 2016 OCO Plans: N/A						
Title: Electronic Warfare Readiness/MCS-21 Systems Development Articles: Description: Maritime Cryptologic Systems for the 21st Century Systems Development: Develops and fields spiral EA and cyber capabilities against Fleet Forces Command prioritized signals, networks and target sets. Capabilities will be integrated into a software architecture baseline that is deployed on subsurface, airborne and surface Information Operations platforms (Classic Troll Banshee and Ships Signal Exploitation Equipment Increment E and Increment F). SCMA Configuration Management Authority (SCMA) is the technical lead for the development, testing and validation of electronic support and electronic attack techniques for Maritime Cryptologic Systems in support of Navy-wide Information Operations planning. Maritime Cryptologic Systems for the 21st Century Systems Development: Develops and fields spiral EA and cyber capabilities against Fleet Forces Command prioritized signals, networks and target sets. Capabilities will be integrated into a software architecture baseline that is deployed on subsurface, airborne and surface Information Operations platforms (Classic Troll, Banshee and Ships Signal Exploitation Equipment Increment E and Increment F). FY 2014 Accomplishments: * Develop and field spiral EA and cyber capabilities against Fleet Forces Command prioritized signals, networks and targets sets. Capabilities will be integrated into a software architecture baseline that is deployed on		0.637 -	0.302 -	3.502 -	- -	3.502 -

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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
subsurface, airborne, and surface IP platforms (Classic Troll, Banshee, and Ships Exploitation Increment E and Increment F). * Continue IW/IO EA capability development & integration (Details held at higher classification level). * Continue Research and Analysis (Details held at higher classification level). * Continue IW/IO EA capability development & integration (Details held at higher classification level). * Continue Research and Analysis (Details held at higher classification level). FY 2015 Plans: * Develop and test IO Countermeasures capabilities across various platforms. * Develop specific waveforms to attack adversary systems. * Develop and use modeling and simulations techniques to prototype and test emergent waveforms. * Modeling and Simulation Lab (Applied/projected level of effort). * Information Warfare (IW) / Information Operations (IO) Electronic Attack (EA) capability development (Details held at a higher classification level). * Waveform Weapon Development. FY 2016 Base Plans: * Continue to develop and test IO Countermeasures capabilities across various platforms. * Continue to develop specific waveforms to attack adversary systems. * Continue to develop and use modeling and simulations techniques to prototype and test emergent waveforms * Modeling and Simulation Lab (Applied/projected level of effort). * Information Warfare (IW) / Information Operations (IO) Electronic Attack (EA) capability development (Details held at a higher classification level). * Waveform Weapon Development. * Redirect internal funding to reduce risk created by elimination of funds from other organizations to support SCMA. * Upgrade current SDF development and validation systems to maintain concurrency with systems on maritime platforms. * Purchase a system to support next generation electronic support and electronic attack capability development * Increase development and testing of electronic attack capabilities across maritime platforms * Upgrade systems and infrastructure to support next generation electronic support and electronic attack capability development * Full Operating Capability for Remoted SDF capability						

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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
* Increase the number of priority signals that can be demodulated and decoded.						
FY 2016 OCO Plans: N/A						
Title: Electronic Warfare/Research, Analysis and R&D Technical Support		5.696	1.936	4.509	-	4.509
Articles:		-	-	-	-	-
Description: Research, Analysis and Research and Development Technical Support: Conducts vulnerability analysis and reverse engineering on emerging threats and targets and provides specialized technical, engineering and management capabilities to the program management office. (Specific details held at a higher classification level)						
FY 2014 Accomplishments:						
* Conduct vulnerability analysis and reverse engineering on emerging threats and targets and provide specialized technical, engineering and management capabilities to the program management office. (Specific development details held at a higher classification level).						
* Technical and intelligence related studies and contractor engineering, technical and management capabilities.						
* Research and Analysis (Specific development details held at higher classification level).						
FY 2015 Plans:						
* Conduct vulnerability analysis and reverse engineering on emerging threats and targets and provide specialized technical, engineering and management capabilities to the program management office. (Specific development details held at a higher classification level).						
* Technical and intelligence related studies and contractor engineering, technical and management capabilities.						
* Research and Analysis (specific development details held at higher classification level).						
FY 2016 Base Plans:						
* Restores FY15 HAC reductions in support of the development of specific signal detection capability for two new, distinct signal sets, as well as IO technique development.						
* Develop a capability study against new technology widely deployed in adversary theaters.						
* Conduct Operational testing and deployment tasks.						
* Develop and test IO Countermeasures capabilities across various platforms.						
* Develop specific waveforms to attack adversary systems.						
* Develop and use modeling and simulations techniques to prototype and test emergent waveforms.						
* Modeling and Simulation Lab (Applied/projected level of effort).						

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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
* Information Warfare (IW) / Information Operations (IO) Electronic Attack (EA) capability development (Details held at a higher classification level). * Waveform Weapon Development FY 2016 OCO Plans: N/A						
Title: Electronic Warfare/Computer Network Operations (CNO) Articles: Description: Computer Network Operations (CNO): Funds development and testing of computer networks for modeling, simulation, and tailoring of Cyber capabilities. Develops specific Cyber tools, techniques, and operators in support of Fleet Cyber Command and Commander, TENTH Fleet requirements. (Specific development details held at a higher classification level) FY 2014 Accomplishments: * Develop Cyber tools, techniques, and operators in support of Fleet Cyber Command and Commander, TENTH Fleet requirements. (Specific development details held at a higher classification level). * CNO Research and Development Integration Testing Facility. * Computer Network Attack Capabilities (Details held at a higher classification level). * Demonstration of Advanced Computer Network Operations Concept (Details held at a higher classification level). FY 2015 Plans: * Conduct vulnerability analysis and reverse engineering on emerging threats and targets and provide specialized technical engineering and management capabilities to the program management office. (Specific details held at a higher classification level). * Technical and intelligence related studies and contractor engineering, technical and management capabilities. FY 2016 Base Plans: * Develop and test IO Countermeasures capabilities across various platforms. * Develop specific waveforms to attack adversary systems. * Develop and use modeling and simulations techniques to prototype and test emergent waveforms. * Modeling and Simulation Lab (Applied/projected level of effort). * Information Warfare (IW) / Information Operations (IO) Electronic Attack (EA) capability development (Details held at a higher classification level).		8.440 -	1.631 -	4.961 -	- -	4.961 -

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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
*Develop Cyber Infrastructure that will host teams of intelligence analysts, technical linguists, tool developers, and engineering experts. *Develop Integrated Testing / Cyber Foundry in support of capability development, testing, and evaluation FY 2016 OCO Plans: N/A						
Title: Twisted Web Articles: Description: A developmental capability that improves Fleet ability to safely operate in all ocean areas by reducing adversary capability to engage kinetically. Funds risk reduction and system engineering development for project initiation. Details available at classified level. FY 2014 Accomplishments: N/A FY 2015 Plans: N/A FY 2016 Base Plans: * New project kickoff * Technical, engineering, and intelligence related studies. * Leverage existing capabilities to characterize evolving adversary capabilities. * Evaluation of Fleet capabilities and operations that affect system specifications * Develop and use modeling and simulation techniques to prototype system and characterize operating environment. * Develop deployable system specifications and infrastructure. FY 2016 OCO Plans: N/A		- -	- -	3.000 -	- -	3.000 -
Title: Maritime Cyber Operations Articles:		- -	- -	7.800 -	- -	7.800 -

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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
Description: Produces CNO capabilities and accesses to meet COCOM/USCYBERCOM/C10F requirements. Enables development of new operating systems to ensure access and cyber weapons delivery. Details can be provided separately in an appropriate environment. FY 2014 Accomplishments: N/A FY 2015 Plans: N/A FY 2016 Base Plans: * Develop intelligence analysis to determine specific technical vulnerabilities for Computer Network Operations (Specific development details held at a higher classification level). * Funds development and testing of computer networks for modeling, simulation, and tailoring of Cyber capabilities. (Specific development details held at a higher classification level). FY 2016 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	18.859	16.567	46.609	-	46.609

C. Other Program Funding Summary (\$ in Millions)											
Line Item	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
• RDTEN/0604270N/1742: <i>Electronic Warfare</i> <i>Technical Development</i>	1.352	1.652	1.642	-	1.642	1.665	1.596	-	-	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
These programs are designated non-ACAT and operate under streamlined acquisition. This designation supports a streamlined acquisition process using the Advanced Concept Technology Demonstration documentation of the Defense Acquisition Guidance.											

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E. Performance Metrics Measures include quality and impact of new ideas and approaches, the success of the technology application in satisfying Combatant Commanders and Fleet requirements, and successful cost effective transition of the capability into operational systems. The goal of these investments is to provide to Commanders non-kinetic options to influence adversaries and prevent escalation of crises. Due to the nature and classification of these efforts, qualitative measures are used. It is the intent through the development of modeling and simulation scenarios and capabilities to develop quantitative metrics. The success of this depends heavily on the insight obtained via various intelligence community efforts.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy												Date: February 2015			
Appropriation/Budget Activity 1319 / 7						R-1 Program Element (Number/Name) PE 0204575N / <i>Elect Warfare Readiness Supt</i>				Project (Number/Name) 2263 / <i>Information Warfare System</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
Primary Hardware Development	Various	Classified-1 : Classified	23.128	4.079	Oct 2013	2.200	Oct 2014	6.914	Oct 2015	-		6.914	Continuing	Continuing	Continuing
System Engineering	SS/CPFF	Applied Research Laboratory : University Park, PA	1.935	0.500	Nov 2013	3.589	Oct 2014	5.957	Oct 2015	-		5.957	-	11.981	-
Systems Engineering	WR	NRL : Washington, DC	4.179	0.850	Oct 2013	3.084	Oct 2014	9.340	Oct 2015	-		9.340	-	17.453	-
Training Development (Classified)	Reqn	Classified : Classified	0.000	-		0.500	Oct 2014	0.810	Oct 2015	-		0.810	-	1.310	-
Training Development (CDL)	Reqn	NAVICP : Philadelphia, PA	0.000	-		0.061	Oct 2014	0.098	Oct 2015	-		0.098	-	0.159	-
Subtotal			29.242	5.429		9.434		23.119		-		23.119	-	-	-
Remarks															
Training Development: Contract Method is Goverment Purchase Card (GPC).															
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
Development Support	SS/CPFF	ARGON-1 : Fairfax, VA	14.224	0.250	Oct 2013	0.234	Oct 2014	0.370	Oct 2015	-		0.370	-	15.078	-
Software Development	SS/CPFF	L3 Communications : New York, NY	65.782	0.333	Dec 2013	-		-		-		-	-	66.115	-
Development Support	WR	SSC PAC : San Diego, VA	0.000	0.368	Oct 2013	-		-		-		-	-	0.368	-
Software Development	SS/CPFF	ARGON-2 : Fairfax, VA	0.000	0.834	Nov 2013	-		-		-		-	-	0.834	-
Development Support	WR	NRL-1 : Washington, DC	3.610	0.620	Nov 2013	1.169	Oct 2014	3.520	Oct 2015	-		3.520	-	8.919	-
Development Support	Various	Classified-1 : Classified	11.110	3.033	Nov 2013	1.800	Oct 2014	2.920	Oct 2015	-		2.920	-	18.863	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Navy												Date: February 2015			
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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
Studies & Analysis	WR	NRL-2 : Washington, DC	0.000	1.654	Oct 2013	-		-		-		-	-	1.654	-
Software Development	SS/CPFF	ARL : University Park, PA	3.900	0.250	Nov 2013	-		-		-		-	-	4.150	-
Software Development	SS/CPFF	ARGON-3 : Fairfax, VA	19.842	-		-		-		-		-	-	19.842	-
Software Development	Various	Classified-2 : Classified	28.737	4.209	Oct 2013	-		3.100	Oct 2015	-		3.100	-	36.046	-
Research, Studies and Vulnerability	WR	NRL-4 : Washington, DC	16.414	-		-		-		-		-	-	16.414	-
Development Support	WR	SSC PAC : San Diego, CA	3.675	-		-		-		-		-	-	3.675	-
Integrated Logistics Support (ILS)	Reqn	NAVICP : Philadelphia, PA	0.000	-		0.046	Oct 2014	0.074	Oct 2015	-		0.074	-	0.120	-
Technical Data (Software Programs & Ref Materials)	Reqn	NPWC : Chesapeake, VA	0.000	-		0.025	Nov 2014	0.040	Oct 2015	-		0.040	-	0.065	-
Development Support	MIPR	Classified : Classified	0.000	-		-		2.000	Oct 2015	-		2.000	-	2.000	-
Software Development	MIPR	Classified : Classified	0.000	-		-		4.700	Oct 2015	-		4.700	-	4.700	-
Studies & Analysis	MIPR	Classified : Classified	0.000	-		-		1.975	Oct 2015	-		1.975	-	1.975	-
Comm'l Drivers Licenses (CDL)	Reqn	Classified : Classified	0.000	-		0.009	Oct 2014	0.001	Oct 2015	-		0.001	-	0.010	-
Subtotal			167.294	11.551		3.283		18.700		-		18.700	-	200.828	-
Remarks															
CDL, ILS & Tech Data: Contract Method is Government Purchase Card (GPC).															
CDLs are required for Command Personnel to drive Command Vehicles supporting the installation of mission hardware.															

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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
Developmental Test & Evaluation	WR	NAWC : China Lake, CA	5.602	0.440	Oct 2013	0.226	Dec 2014	0.360	Dec 2015	-		0.360	-	6.628	-
Subtotal			5.602	0.440		0.226		0.360		-		0.360	-	6.628	-
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
System Engineering and Program Management	Various	Classified-1 : Classified	7.121	-		-		-		-		-	-	7.121	-
Program Management Support	Various	Classified-2 : Classified	0.000	0.530	Nov 2013	0.480	Nov 2014	0.850	Nov 2015	-		0.850	-	1.860	-
Program Engineering	Various	Classified-3 : Classified	0.000	0.909	Nov 2013	-		-		-		-	-	0.909	-
Project Engineering	Various	Classified-4 : Classified	4.325	-		-		-		-		-	-	4.325	-
Overhead	Various	Classified : Classified	0.000	-		2.164	Dec 2014	2.164	Oct 2015	-		2.164	-	4.328	-
Contractor Engineering Services	Various	Classified : Classified	0.000	-		0.480	Oct 2014	0.770	Oct 2015	-		0.770	-	1.250	-
Program Management Personnel (Classified)	Various	Classified : Classified	0.000	-		0.500	Oct 2014	0.646	Nov 2015	-		0.646	-	1.146	-
Subtotal			11.446	1.439		3.624		4.430		-		4.430	-	20.939	-
			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			213.584	18.859		16.567		46.609		-		46.609	-	-	-
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy

Date: February 2015

Appropriation/Budget Activity

1319 / 7

R-1 Program Element (Number/Name)

PE 0204575N / Elect Warfare Readiness
Supt

Project (Number/Name)

2263 / Information Warfare System

	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
Information Warfare System																												
Development Work: Waveforms: 1- Waveforms																												
Development Work: Waveforms: 2- Waveforms																												
Development Work: Waveforms: 3 - Waveforms - Target Research & Technical Development (TRTD)																												
Development Work: Waveforms: 4- Waveforms - Classified																												
Development Work: Waveforms: 5 - Waveforms - Classified																												
Development Work: Waveforms: 6 - Waveforms - Classified																												
Development Work: Waveforms: 7 - Waveforms - Classified																												
Development Work: Unique Access (UA): 1 - Unique Access - Cyber Network Operations (CNO) - Proof of Concept (POC)																												
Development Work: Unique Access (UA): 2 - Unique Access - Classified																												
Development Work: Unique Access (UA): 3 - Unique Access - Classified																												
Development Work: Unique Access (UA): 4 - Unique Access - Classified																												
TESTING: Prototypes: 1-Prototypes																												
TESTING: Prototypes: 2-Prototypes																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy

Date: February 2015

Appropriation/Budget Activity

1319 / 7

R-1 Program Element (Number/Name)

PE 0204575N / *Elect Warfare Readiness Supt*

Project (Number/Name)

2263 / *Information Warfare System*

	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
TESTING: Prototypes: 3 - Prototypes - Factory Acceptance Testing (FAT), TRTD, CNO Unique Access																												
TESTING: Prototypes: 4 - Prototypes - Classified																												
TESTING: Prototypes: 5 - Prototypes - Classified																												
TESTING: Prototypes: 6 - Prototypes - Classified																												
TESTING: Prototypes: 7 - Prototypes - Classified																												
TESTING: Maritime Cryptological System (MCS-21) Integration: 1 - MCS-21 Integration Factory Acceptance Testing (FAT), Operational Testing																												
TESTING: Maritime Cryptological System (MCS-21) Integration: 2 - MCS-21 Integration - Classified																												
TESTING: Maritime Cryptological System (MCS-21) Integration: 3 - MCS-21 Integration - Classified																												
TESTING: Maritime Cryptological System (MCS-21) Integration: 4 - MCS-21 Integration - Classified																												
TESTING: Maritime Cryptological System (MCS-21) Integration: 5 - MCS-21 Integration - Classified																												
DELIVERIES: Information Operations Capabilities (IOC): Information Operations Capabilities (IOC) Modeling & Simulation Lab																												

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy																				Date: February 2015																	
Appropriation/Budget Activity 1319 / 7										R-1 Program Element (Number/Name) PE 0204575N / Elect Warfare Readiness Supt										Project (Number/Name) 2263 / Information Warfare System																	
										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
DELIVERIES: Information Operations Capabilities (IOC): 1 - MCS-21 IOC - Spiral Enhancements																																					
DELIVERIES: Information Operations Capabilities (IOC): 2 - MCS-21 IOC - Classified																																					
DELIVERIES: Information Operations Capabilities (IOC): 3 - MCS-21 IOC - Classified																																					
DELIVERIES: Information Operations Capabilities (IOC): 4 - MCS-21 IOC - Classified																																					
DELIVERIES: Information Operations Capabilities (IOC): 5 - MCS-21 IOC - Classified																																					
DELIVERIES: Cyber Network Operations (CNO) Capabilities: 1-CNO Capabilities - Spiral Enhancements																																					
DELIVERIES: Cyber Network Operations (CNO) Capabilities: 2-CNO Capabilities - Spiral Enhancements / Full Operational Capability (FOC)																																					
DELIVERIES: Cyber Network Operations (CNO) Capabilities: 3 -CNO Capabilities - Classified																																					
DELIVERIES: Cyber Network Operations (CNO) Capabilities: 4 - CNO Capabilities - Classified																																					

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Exhibit R-4, RDT&E Schedule Profile: PB 2016 Navy																				Date: February 2015																	
Appropriation/Budget Activity 1319 / 7										R-1 Program Element (Number/Name) PE 0204575N / <i>Elect Warfare Readiness Supt</i>										Project (Number/Name) 2263 / <i>Information Warfare System</i>																	
										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
DELIVERIES: Maritime Cryptological System (MSC-21): MCS-21 Product Line - Full Operational Capability (FOC)																																					

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy			Date: February 2015
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204575N / <i>Elect Warfare Readiness Supt</i>	Project (Number/Name) 2263 / <i>Information Warfare System</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Information Warfare System</i>				
Development Work: Waveforms: 1-Waveforms	4	2014	4	2014
Development Work: Waveforms: 2-Waveforms	4	2015	4	2015
Development Work: Waveforms: 3 - Waveforms - Target Research & Technical Development (TRTD)	4	2016	4	2016
Development Work: Waveforms: 4- Waveforms - Classified	4	2017	4	2017
Development Work: Waveforms: 5 - Waveforms - Classified	4	2018	4	2018
Development Work: Waveforms: 6 - Waveforms - Classified	4	2019	4	2019
Development Work: Waveforms: 7 - Waveforms - Classified	4	2020	4	2020
Development Work: Unique Access (UA): 1 - Unique Access - Cyber Network Operations (CNO) - Proof of Concept (POC)	1	2014	4	2014
Development Work: Unique Access (UA): 2 - Unique Access - Classified	3	2015	2	2016
Development Work: Unique Access (UA): 3 - Unique Access - Classified	1	2017	4	2017
Development Work: Unique Access (UA): 4 - Unique Access - Classified	2	2018	3	2018
TESTING: Prototypes: 1-Prototypes	3	2014	3	2014
TESTING: Prototypes: 2-Prototypes	2	2015	2	2015
TESTING: Prototypes: 3 - Prototypes - Factory Acceptance Testing (FAT), TRTD, CNO Unique Access	3	2014	3	2014
TESTING: Prototypes: 4 - Prototypes - Classified	3	2015	3	2015
TESTING: Prototypes: 5 - Prototypes - Classified	3	2016	3	2016
TESTING: Prototypes: 6 - Prototypes - Classified	3	2017	3	2017
TESTING: Prototypes: 7 - Prototypes - Classified	3	2018	3	2018

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Navy			Date: February 2015		
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 0204575N / Elect Warfare Readiness Supt		Project (Number/Name) 2263 / Information Warfare System		
	Start		End		
Events by Sub Project	Quarter	Year	Quarter	Year	
TESTING: Maritime Cryptological System (MCS-21) Integration: 1 - MCS-21 Integration Factory Acceptance Testing (FAT), Operational Testing	4	2014	1	2015	
TESTING: Maritime Cryptological System (MCS-21) Integration: 2 - MCS-21 Integration - Classified	4	2015	1	2016	
TESTING: Maritime Cryptological System (MCS-21) Integration: 3 - MCS-21 Integration - Classified	4	2016	1	2017	
TESTING: Maritime Cryptological System (MCS-21) Integration: 4 - MCS-21 Integration - Classified	4	2017	1	2018	
TESTING: Maritime Cryptological System (MCS-21) Integration: 5 - MCS-21 Integration - Classified	4	2018	1	2019	
DELIVERIES: Information Operations Capabilities (IOC): Information Operations Capabilities (IOC) Modeling & Simulation Lab	4	2014	4	2014	
DELIVERIES: Information Operations Capabilities (IOC): 1 - MCS-21 IOC - Spiral Enhancements	4	2014	4	2015	
DELIVERIES: Information Operations Capabilities (IOC): 2 - MCS-21 IOC - Classified	4	2015	4	2016	
DELIVERIES: Information Operations Capabilities (IOC): 3 - MCS-21 IOC - Classified	4	2016	4	2017	
DELIVERIES: Information Operations Capabilities (IOC): 4 - MCS-21 IOC - Classified	4	2017	4	2018	
DELIVERIES: Information Operations Capabilities (IOC): 5 - MCS-21 IOC - Classified	4	2018	4	2019	
DELIVERIES: Cyber Network Operations (CNO) Capabilities: 1-CNO Capabilities - Spiral Enhancements	4	2014	4	2014	
DELIVERIES: Cyber Network Operations (CNO) Capabilities: 2-CNO Capabilities - Spiral Enhancements / Full Operational Capability (FOC)	1	2014	4	2014	
DELIVERIES: Cyber Network Operations (CNO) Capabilities: 3 -CNO Capabilities - Classified	1	2015	4	2015	
DELIVERIES: Cyber Network Operations (CNO) Capabilities: 4 - CNO Capabilities - Classified	1	2017	4	2017	
DELIVERIES: Maritime Cryptological System (MSC-21): MCS-21 Product Line - Full Operational Capability (FOC)	1	2015	4	2018	