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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				PE 0204575N: <i>Elect Warfare Readiness Supt</i>							
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	47.973	18.142	19.843	-	19.843	14.397	11.935	11.461	11.636	Continuing	Continuing
2263: <i>Information Warfare System</i>	47.973	18.142	19.843	-	19.843	14.397	11.935	11.461	11.636	Continuing	Continuing

A. Mission Description and Budget Item Justification

Research, assess, and develop information warfare capabilities.

B. Program Change Summary (\$ in Millions)	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013 Base</u>	<u>FY 2013 OCO</u>	<u>FY 2013 Total</u>
Previous President's Budget	39.398	18.142	19.985	-	19.985
Current President's Budget	47.973	18.142	19.843	-	19.843
Total Adjustments	8.575	-	-0.142	-	-0.142
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	9.252	-			
• SBIR/STTR Transfer	-0.456	-			
• Program Adjustments	-	-	-	-	-
• Rate/Misc Adjustments	-	-	-0.142	-	-0.142
• Congressional General Reductions	-0.221	-	-	-	-
Adjustments					

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0204575N: <i>Elect Warfare Readiness Supt</i>	PROJECT 2263: <i>Information Warfare System</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2263: <i>Information Warfare System</i>	47.973	18.142	19.843	-	19.843	14.397	11.935	11.461	11.636	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Information Operations (IO) Mission Management: Develops command and control mechanism for remote use of Electronic Attack (EA) and cyber assets. This includes frequency, antenna alignment and network protocols. Develops a modeling and simulation laboratory for the program office to use in the development, intended effect, and risk reduction of new EA capabilities. This effort will be terminated in FY12.

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 EA from afloat.

Maritime Cryptologic Systems for the 21st Century Systems Development and Support: Develops and fields spiral EA 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 IO platforms (Classic Troll, Banshee and Ships Signal Exploitation Equipment Increment E and Increment F). Also included is the Navy's investment in Integrated Communications and Data System proof of concept system and Office of the Chief of Naval Operations N2/N6 sponsored PACSAIL research project.

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.)

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

	FY 2011	FY 2012	FY 2013
Title: Information Warfare System/IO Mission Management <div style="text-align: right;">Articles:</div>	3.134 0	-	-
Description: IO Mission Management: Develops command and control mechanism for remote use of Electronic Attack and cyber assets. This includes frequency, antenna alignment and network protocols. Develops a modeling and simulation laboratory for the program office to use in the development, intended effect, and risk reduction of new EA capabilities.			
FY 2011 Accomplishments:			

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APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0204575N: Elect Warfare Readiness Supt	PROJECT 2263: Information Warfare System		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
Continued the following programs task requirements: Radio Frequency Propagation Modeling Maritime Cryptologic Systems for the 21st Century Systems Planning, Optimization and Tasking Services Contractor Engineering Support				
Title: Electronic Warfare/Information Operation Counter Measure Capability Research & Development 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 2011 Accomplishments: Continued: Modeling and Simulation Lab (Applied/projected level of effort) Information Warfare (IW)/IO Electronic Attack (EA) capability development (Details held at higher classification level) Waveform Weapon Development FY 2012 Plans: Continued: Modeling and Simulation Lab (Applied/projected level of effort) IW/IO EA and cyber capability development (Details held at higher classification level) Waveform Weapon Development FY 2013 Plans: Continued: Modeling and Simulation Lab (Applied/projected level of effort) IW/IO EA capability development (Details held at higher classification level) Waveform Weapon Development		Articles: 17.188 0	4.631 0	4.523 0
Title: Electronic Warfare Readiness/MCS-21 Systems Development 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 IO platforms (Classic Troll, Banshee and Ships Signal Exploitation Equipment Increment E and Increment F).		Articles: 13.857 0	3.956 0	4.992 0

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APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0204575N: Elect Warfare Readiness Supt	PROJECT 2263: Information Warfare System		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
FY 2011 Accomplishments: Continued: Electronic Attack (EA) Systems Development (Details held at higher classification level) EA antenna development - Spiral capability upgrade of Photonics antenna Information Warfare (IW)/Information Operations (IO) EA capability development & integration (Details held at higher classification level) Contractor Systems Engineering & OPS Development Testing FY 2012 Plans: Continue: IW/IO EA capability development & integration (Details held at higher classification level) FY 2013 Plans: Continue: IW/IO EA capability development & integration (Details held at higher classification level)				
Title: Electronic Warfare/ Research, Analysis & R&D Technical Support <div>Articles:</div> 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 2011 Accomplishments: Continued: Technical and intelligence related studies and contractor engineering, technical and management capabilities. Research and Analysis (Details held at higher classification level) FY 2012 Plans: Continue: Technical and intelligence related studies and contractor engineering, technical and management capabilities. Research and Analysis (Details held at higher classification level) FY 2013 Plans: Continue: Technical and intelligence related studies and contractor engineering, technical and management capabilities.		6.828 0	6.388 0	6.588 0

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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0204575N: <i>Elect Warfare Readiness Supt</i>	PROJECT 2263: <i>Information Warfare System</i>		
B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
Research and Analysis (Details held at higher classification level)				
Title: Electronic Warfare/ Computer Network Operations (CNO) 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 2011 Accomplishments: Continued: CNO Research and Development Integrated Testing Facility Computer Network Attack Capabilities Development (Details held at higher classification level). Demonstration of Advanced Computer Network Operations Concept (Details held at higher classification level). Conduct vulnerability analysis and reverse engineering on improvised explosive devices (Details held at higher classification level). FY 2012 Plans: Continue: CNO Research and Development Integrated Testing Facility Computer Network Attack Capabilities Development (Details held at higher classification level). Demonstration of Advanced Computer Network Operations Concept (Details held at higher classification level). FY 2013 Plans: Continue: CNO Research and Development Integrated Testing Facility Computer Network Attack Capabilities Development (Details held at higher classification level). Demonstration of Advanced Computer Network Operations Concept (Details held at higher classification level).		6.966 0	3.167 0	3.740 0
Accomplishments/Planned Programs Subtotals		47.973	18.142	19.843

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APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0204575N: <i>Elect Warfare Readiness Supt</i>				PROJECT 2263: <i>Information Warfare System</i>		

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u> <u>Base</u>	<u>FY 2013</u> <u>OCO</u>	<u>FY 2013</u> <u>Total</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• RDTEN/0604270N/1742: <i>Electronic Warfare Technical Development</i>	4.719	1.784	1.702	0.000	1.702	1.649	1.552	1.542	1.568	Continuing	Continuing

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.

E. Performance Metrics

The Navy Offensive Cyber and Information Warfare Program discovers adversary vulnerabilities, develops capabilities to exploit these vulnerabilities, and transitions these capabilities for operational use. Investments are made in high risk/high payoff non-kinetic opportunities and result in technologies and capabilities that provide unique, innovative, life-saving, and potentially cost saving applications into Department of Navy and Department of Defense classified acquisition and intelligence programs. 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 2013 Navy										DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0204575N: Elect Warfare Readiness Supt				PROJECT 2263: Information Warfare System					
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	Various	Classified:Classified	20.728	1.000	Oct 2011	1.400	Oct 2012	-		1.400	Continuing	Continuing	Continuing
Ancillary Hardware Development	Various	Classified:Classified	12.375	-		-		-		-	0.000	12.375	
Systems Engineering	SS/CPFF	Applied Research Laboratory:University Park, PA	1.070	0.365	Jan 2012	0.500	Nov 2012	-		0.500	Continuing	Continuing	Continuing
Systems Engineering	SS/CPFF	ARGON:Fairfax, VA	3.865	-		-		-		-	Continuing	Continuing	Continuing
Systems Engineering	WR	NRL:Washington, DC	3.395	0.392	Oct 2011	0.392	Oct 2012	-		0.392	Continuing	Continuing	Continuing
Subtotal			41.433	1.757		2.292		-		2.292			
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	SS/CPFF	ARGON:Fairfax, VA	11.428	1.348	Dec 2011	1.450	Oct 2012	-		1.450	Continuing	Continuing	Continuing
Software Development	SS/CPFF	L3 Communications:New York, NY	64.682	0.550	Dec 2011	0.550	Dec 2012	-		0.550	Continuing	Continuing	Continuing
Development Support	WR	NRL:Washington, DC	1.060	0.550	Nov 2011	0.550	Nov 2012	-		0.550	Continuing	Continuing	Continuing
Development Support	Various	Classified:Classified	9.892	0.607	Nov 2011	0.611	Nov 2012	-		0.611	Continuing	Continuing	Continuing
Software Development	SS/CPFF	ARL:University Park, PA	3.100	0.400	Nov 2011	0.400	Nov 2012	-		0.400	Continuing	Continuing	Continuing
Software Development	SS/CPFF	ARGON:Fairfax, VA	14.958	1.833	Nov 2011	3.051	Nov 2012	-		3.051	Continuing	Continuing	Continuing
Software Development	WR	NRL:Washington, DC	1.945	-	Oct 2011	-		-		-	0.000	1.945	
Software Development	Various	Classified:Classified	21.265	4.607	Oct 2011	3.321	Oct 2012	-		3.321	Continuing	Continuing	Continuing
Research, Studies and Vulnerability	WR	NRL:Washington, DC	13.214	1.654	Oct 2011	1.546	Oct 2012	-		1.546	Continuing	Continuing	Continuing
Development Support	WR	SSC PAC:San Diego, CA	2.441	1.111	Oct 2011	2.147	Oct 2012	-		2.147	0.000	5.699	
Development Support	C/BA	NSWC:Philadelphia, PA	1.829	1.400	Oct 2011	1.400	Oct 2012	-		1.400	0.000	4.629	

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APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0204575N: Elect Warfare Readiness Supt				PROJECT 2263: Information Warfare System					
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			145.814	14.060		15.026		-		15.026			
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NAWC:China Lake, CA	5.402	0.100	Dec 2011	0.100	Dec 2012	-		0.100	Continuing	Continuing	Continuing
Subtotal			5.402	0.100		0.100		-		0.100			
Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering and Program Management	Various	Classified:Classified	5.121	1.000	Nov 2011	1.000	Nov 2012	-		1.000	Continuing	Continuing	Continuing
Acquisition Workforce Fund 2009	Various	Various:Various	0.117	-		-		-		-	0.000	0.117	
Project Engineering	Various	Classified:Classified	1.675	1.225	Oct 2011	1.425	Oct 2012	-		1.425	Continuing	Continuing	Continuing
Subtotal			6.913	2.225		2.425		-		2.425			
			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			199.562	18.142		19.843		-		19.843			
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0204575N: <i>Elect Warfare Readiness Supt</i>	PROJECT 2263: <i>Information Warfare System</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0204575N: <i>Elect Warfare Readiness Supt</i>	PROJECT 2263: <i>Information Warfare System</i>

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0204575N: <i>Elect Warfare Readiness Supt</i>	PROJECT 2263: <i>Information Warfare System</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 2263				
IO Mission Management: MCS21 Planning, Optimization, and Tasking Services (MPOTS): MCS21 Planning, Optimization, and Tasking Services (MPOTS)	1	2011	4	2011
IO CM Capability Research & Development: Modeling and Simulation Lab: Modeling and Simulation Lab	1	2011	4	2013
Page/Group/Row				
Waveform and Cyber Development: FIOC Delivery #2	3	2012	3	2012
Waveform and Cyber Development: FIOC Delivery #3	2	2013	2	2013
Waveform and Cyber Development: FIOC Delivery #4	3	2014	3	2014
Waveform and Cyber Development: FIOC Delivery #5	2	2015	2	2015
Waveform and Cyber Development: FIOC Delivery #6	3	2016	3	2016
Waveform and Cyber Development: FIOC Delivery #7	1	2017	1	2017
Computer Network Operations: CNO Capabilities Development: CNO Spiral Enhancements #2	2	2011	2	2011
Computer Network Operations: CNO Capabilities Development: CNO Spiral Enhancements #3	4	2012	4	2012
Computer Network Operations: CNO Capabilities Development: CNO Spiral Enhancements #4	4	2013	4	2013
Computer Network Operations: CNO Capabilities Development: CNO Spiral Enhancements #5	2	2015	2	2015
Computer Network Operations: CNO Capabilities Development: CNO Spiral Enhancements #6	2	2016	2	2016
Computer Network Operations: CNO Capabilities Development: CNO Spiral Enhancements #7	2	2017	2	2017

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy			DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development		R-1 ITEM NOMENCLATURE PE 0204575N: Elect Warfare Readiness Supt		PROJECT 2263: Information Warfare System
		Start		End
Events by Sub Project		Quarter	Year	Quarter Year
Test and Evaluation Milestones: DT Airborne IO Capabilities/MCS21 IO Capabilities: MCS21 IO Capabilities (Test) #2		4	2011	4 2011
Test and Evaluation Milestones: DT Airborne IO Capabilities/MCS21 IO Capabilities: MCS21 IO Capabilities (Test) #3		1	2012	1 2012
Test and Evaluation Milestones: DT Airborne IO Capabilities/MCS21 IO Capabilities: MCS21 IO Capabilities (Test) #4		3	2013	3 2013
Test and Evaluation Milestones: DT Airborne IO Capabilities/MCS21 IO Capabilities: MCS21 IO Capabilities (Test) #5		4	2014	4 2014
Test and Evaluation Milestones: DT Airborne IO Capabilities/MCS21 IO Capabilities: MCS21 IO Capabilities (Test) #6		1	2015	1 2015
Test and Evaluation Milestones: DT Airborne IO Capabilities/MCS21 IO Capabilities: CNO Spiral Enhancements #6		3	2016	3 2016