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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				PE 0305149N: <i>Cobra Judy</i>							
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	61.802	36.527	40.605	-	40.605	17.092	-	-	-	0.000	156.026
4021: <i>CJR System Engineering</i>	61.802	36.527	40.605	-	40.605	17.092	-	-	-	0.000	156.026

A. Mission Description and Budget Item Justification

Cobra Judy Replacement funds will replace the current U.S. Naval Ship (USNS) Observation Island which has become unsustainable and due to leave service in 2014. This program funds the development of a single ship-based radar suite for ballistic missile treaty verification. Cobra Judy provides monitoring and verification of specific aspects of United States treaties with other countries. It is necessary to replace the current Cobra Judy to prevent any potential gap in coverage. Prior studies have indicated that a ship-based radar replacement is the most timely and cost effective solution. This program is joint-funded.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	61.804	36.527	39.520	-	39.520
Current President's Budget	61.802	36.527	40.605	-	40.605
Total Adjustments	-0.002	-	1.085	-	1.085
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	-	-	1.191	-	1.191
• Rate/Misc Adjustments	-	-	-0.106	-	-0.106
• Congressional General Reductions Adjustments	-0.002	-	-	-	-

Change Summary Explanation

Technical: Added funds in FY 12 to properly price program.

Schedule: Not applicable.

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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
4021: <i>CJR System Engineering</i>	61.802	36.527	40.605	-	40.605	17.092	-	-	-	0.000	156.026
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

A. (U) Mission Description

Cobra Judy Replacement funds will replace the current U.S. Naval Ship (USNS) Observation Island which has become unsustainable and due to leave service in 2014. This program will fund the development of a single ship-based radar suite for ballistic missile treaty verification. Cobra Judy provides monitoring and verification of specific aspects of United States treaties with other countries. It is necessary to replace the current Cobra Judy to prevent any potential gap in coverage. Prior studies have indicated that a ship-based radar replacement is the most timely and cost effective solution. This program is joint-funded.

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

	FY 2010	FY 2011	FY 2012
<p>Title: DESIGN AND RISK REDUCTION</p> <p style="text-align: right;">Articles:</p> <p>FY 2010 Accomplishments:</p> <ul style="list-style-type: none"> - Continue Common Back End software development and array build and test - S-Band Front End Array testing began 2QTR FY10 - S-Band Front End (SFE) manufacturing in process <p>FY 2011 Plans:</p> <ul style="list-style-type: none"> - Complete Common Back End software development - Complete S-Band array development testing - Begin Mission Equipment installation on Ship <p>FY 2012 Plans:</p> <ul style="list-style-type: none"> - Continue installation of Mission Equipment on Ship - Integration of Mission Equipment on Ship 	57.112 0	24.463 0	30.172 0
<p>Title: SYSTEMS ENGINEERING</p> <p style="text-align: right;">Articles:</p> <p>FY 2010 Accomplishments:</p> <ul style="list-style-type: none"> - Ship installation of non-prime mission equipment began 3QTR FY10 <p>FY 2011 Plans:</p>	4.610 0	3.807 0	3.954 0

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2010	FY 2011	FY 2012
- Continue Ship installation of non-prime mission equipment FY 2012 Plans: - Integration of non-prime mission equipment			
Title: PROGRAM MANAGEMENT FY 2010 Accomplishments: - Program travel - Cost and schedule development and execution	0.080 0	-	-
Title: TEST AND EVALUATION FY 2011 Plans: Radar & ship integration and test Ship crew contracts after ship delivery FY 2012 Plans: Radar & ship integration and test Ship crew contracts after ship delivery	-	8.257 0	6.479 0
Accomplishments/Planned Programs Subtotals	61.802	36.527	40.605

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• 0303901N/4003: <i>Cobra Judy</i> <i>Replacement</i>	53.294	34.457	39.963	0.000	39.963	16.000	0.000	0.000	0.000	0.000	143.714

D. Acquisition Strategy

The acquisition strategy calls for leveraging ongoing Navy Ballistic Missile Defense (BMD) radar development, updating existing user interface/communications/data handling equipment designs from a similar operational unit and purchasing and integrating the mission equipment aboard an appropriate merchant-class hull. System design will be accomplished using in-hand technologies and commercial standards to lower schedule risk and produce a product with the lowest possible life-cycle cost.

E. Performance Metrics

-Successfully complete Design Reviews & MDA-Level Reviews

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<ul style="list-style-type: none">-Successfully complete Initial Operational Capability (IOC)-Successfully complete X-Band Development-Successfully complete S-Band Radar Development-Successfully complete Mission Equipment String Integration-Successfully complete ME Ship Integration-Successfully complete Mission Communications Suite Lightoff-Ship Delivery-Successfully complete TECHEVAL/Post Delivery Test & Trails-Successfully complete Operational Test & Readiness Review (OTRR)-Successfully complete IOT&E Initial Operational Test OPEVAL		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Navy **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305149N: <i>Cobra Judy</i>	PROJECT 4021: <i>CJR System Engineering</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Design and Risk Reduction	Allot	NAVSEA 05C:Washington DC	-	0.150	Oct 2010	0.150	Oct 2011	-		0.150	0.150	0.450	
Design and Risk Reduction	C/CPIF	Raytheon:Sudbury, MA	566.228	21.763	Jan 2011	27.772	Oct 2011	-		27.772	11.349	627.112	
Shipbuilding	C/FFP	PEO Ships:Washington, DC	100.815	-		-		-		-	0.000	100.815	
Design and Risk Reduction	WR	SPAWAR:San Diego, CA	5.855	2.550	Dec 2010	2.250	Dec 2011	-		2.250	1.000	11.655	
Design and Risk Reduction	C/CPAF	MIT/TWS:Hanscom AFB, MA	0.500	-		-		-		-	0.000	0.500	
Subtotal			673.398	24.463		30.172		-		30.172	12.499	740.532	

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering	Various	Various:Various	8.764	-		-		-		-	0.000	8.764	
System Engineering	C/CPAF	BAE:Rockville, MD	0.840	-		-		-		-	0.000	0.840	
System Engineering	C/CPAF	GTRI:Atlanta, GA	2.118	0.750	Dec 2010	0.500	Dec 2011	-		0.500	0.350	3.718	
System Engineering	C/CPFF	JHU/APL:Laurel, MD	5.790	-		-		-		-	0.000	5.790	
System Engineering	C/CPAF	MIT/LL:Hanscom AFB, MA	5.294	1.620	Dec 2010	2.179	Dec 2011	-		2.179	2.090	11.183	
System Engineering	WR	NRL:Washington, DC	1.880	0.525	Dec 2010	0.425	Dec 2011	-		0.425	0.450	3.280	
System Engineering	WR	NSWC CSS:Panama City, FL	2.942	-		-		-		-	0.000	2.942	
System Engineering	WR	NSWC DD:Dahlgren, VA	11.592	0.809	Dec 2010	0.850	Dec 2011	-		0.850	0.000	13.251	
System Engineering	WR	NSWC PHD:Port Hueneme, CA	1.535	-		-		-		-	0.000	1.535	
System Engineering	Allot	PEO Ships:Washington, DC	3.000	-		-		-		-	0.000	3.000	
System Engineering	WR	SEG:Columbia, MD	1.195	-		-		-		-	0.000	1.195	

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Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	SPAWAR:San Diego,CA	5.659	-		-		-		-	0.000	5.659	
Systems Engineering	WR	NSWC/CRANE:Crane, IN	0.204	0.103	Dec 2010	-		-		-	0.000	0.307	
Subtotal			50.813	3.807		3.954		-		3.954	2.890	61.464	

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	Various	Various:Various	0.295	-		-		-		-	0.000	0.295	
Test and Evaluation	C/CPAF	Raytheon:Sudbury, MA	1.200	-		-		-		-	0.000	1.200	
Test and Evaluation	MIPR	AFOTEC:Peterson AFB, CO	0.330	-		-		-		-	0.000	0.330	
Test and Evaluation	MIPR	COMOPTEVFOR:Norfolk, VA	0.315	-		-		-		-	0.000	0.315	
Test and Evaluation	MIPR	JITC:Fort Huachuca, AZ	0.225	-		-		-		-	0.000	0.225	
Test and Evaluation	WR	NSWC DD:Dahlgren, VA	2.019	-		-		-		-	0.000	2.019	
Test and Evaluation	Allot	PEO SHIPS:Washington, DC	0.452	-		-		-		-	0.000	0.452	
Test and Evaluation	C/CPAF	TSC:Silver Spring, MD	0.422	-		-		-		-	0.000	0.422	
Test and Evaluation	C/CPAF	Riverside Research:New York, NY	-	2.071	Oct 2010	1.979	Oct 2011	-		1.979	0.750	4.800	
Test and Evaluation	MIPR	Military Sealift Command:Washington, DC	-	4.872	Nov 2010	4.500	Oct 2011	-		4.500	0.511	9.883	
Test and Evaluation	MIPR	Patrick AFB:PAFB, Florida	-	1.314	Nov 2010	-		-		-	0.442	1.756	

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Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			5.258	8.257		6.479		-		6.479	1.703	21.697	

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	C/CPAF	BAE Systems:Rockville, MD	12.233	-		-		-		-	0.000	12.233	
Program Management	C/CPFF	DTI:Arlington, VA	0.435	-		-		-		-	0.000	0.435	
Contractor Engineering	C/CPAF	BAE Systems:Rockville, MD	10.611	-		-		-		-	0.000	10.611	
Contractor Engineering	C/CPAF	Computer Science Corp:Falls Church, VA	3.255	-		-		-		-	0.000	3.255	
Contractor Engineering	C/CPAF	Systems Planning and Analysis:Alexandria, VA	1.900	-		-		-		-	0.000	1.900	
Contractor Engineering	Various	Various:Various	1.687	-		-		-		-	0.000	1.687	
Travel	Allot	PEO IWS2:Washington, DC	0.896	-		-		-		-	0.000	0.896	
Subtotal			31.017	-		-		-		-	0.000	31.017	

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		760.486	36.527		40.605		-	40.605	17.092	854.710	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy		DATE: February 2011
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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Navy		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 1319: <i>Research, Development, Test & Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305149N: <i>Cobra Judy</i>	PROJECT 4021: <i>CJR System Engineering</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Proj 4021</i>				
Decision Reviews & MDA-Level Reviews	1	2010	4	2012
Initial Operational Capability (IOC)	3	2013	3	2013
X- Band Development	1	2010	1	2011
S-Band Radar Development	1	2010	2	2011
Mission Equipment String Integration	1	2010	1	2011
ME Ship Integration	4	2011	1	2013
Ship Delivery	3	2011	3	2011
TECHEVAL/ Post Delivery Test & Trials	1	2013	2	2013
OTRR	3	2013	3	2013
IOT&E/OPEVAL	3	2013	3	2013