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

<b>APPROPRIATION/BUDGET ACTIVITY</b>				<b>R-1 ITEM NOMENCLATURE</b>							
1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				PE 0204574N: <i>Cryptologic Direct Support</i>							
<b>COST (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	1.602	1.519	1.447	-	1.447	1.757	1.798	1.835	1.869	Continuing	Continuing
3091: <i>Advanced Cryptological Sys Eng (CCOP)</i>	1.602	1.519	1.447	-	1.447	1.757	1.798	1.835	1.869	Continuing	Continuing

**A. Mission Description and Budget Item Justification**

The Advanced Cryptologic Systems Engineering - Cryptologic Carry On Program develops state-of-the-art signal acquisition software in response to Combatant Command requirements for a quick-reaction surface, subsurface, and airborne cryptologic carry-on capability. There are approximately 100 cryptologic capable surface ships in the current Navy inventory. Each of these ships is a potential user of this carry-on equipment, depending on deployment schedules and the tempo of operations. In addition, numerous subsurface and air platforms are potential users. This funding line will provide the resources to enable rapid transition of available Commercial Off-The-Shelf (COTS) and Government Off-The-Shelf (GOTS) technologies that apply to Fleet requirements for carry-on system functionalities. These technologies typically require various levels of integration to leverage on-board systems that provide system and mission management, product reporting, and data analysis. COTS/GOTS system documentation and training materials usually require adaptation or modification to meet fleet operator requirements, or entirely new training materials may need to be developed. Before deployment for operational use, systems must be systematically tested to ensure suitable and reliable operation, tested for network vulnerabilities if connected to shipboard Local Area Networks, and tested relative to interoperability requirements. Certification testing is conducted to meet Office of Naval Intelligence security requirements and network testing is conducted in accordance with Information Technology (IT)-21 requirements to allow connection to Navy networks. This Research, Development, Test & Evaluation will also provide resources to address rapid deployment of enhancements or improvements to the common hardware and/or software baseline of all other carry-on subsystems to meet emergent requirements.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>
Previous President's Budget	1.602	1.519	1.567	-	1.567
Current President's Budget	1.602	1.519	1.447	-	1.447
Total Adjustments	-	-	-0.120	-	-0.120
• Congressional General Reductions	-	-	-	-	-
• Congressional Directed Reductions	-	-	-	-	-
• Congressional Rescissions	-	-	-	-	-
• Congressional Adds	-	-	-	-	-
• Congressional Directed Transfers	-	-	-	-	-
• Reprogrammings	-	-	-	-	-
• SBIR/STTR Transfer	-	-	-	-	-
• Program Adjustments	-	-	-0.109	-	-0.109
• Rate/Misc Adjustments	-	-	-0.011	-	-0.011

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**APPROPRIATION/BUDGET ACTIVITY**

1319: *Research, Development, Test & Evaluation, Navy*  
BA 7: *Operational Systems Development*

**R-1 ITEM NOMENCLATURE**

PE 0204574N: *Cryptologic Direct Support*

**Change Summary Explanation**

Technical: Not applicable.

Schedule: Not applicable.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Navy								<b>DATE:</b> February 2011			
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>				<b>R-1 ITEM NOMENCLATURE</b> PE 0204574N: <i>Cryptologic Direct Support</i>				<b>PROJECT</b> 3091: <i>Advanced Cryptological Sys Eng (CCOP)</i>			
<b>COST (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3091: <i>Advanced Cryptological Sys Eng (CCOP)</i>	1.602	1.519	1.447	-	1.447	1.757	1.798	1.835	1.869	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

**A. Mission Description and Budget Item Justification**

The Advanced Cryptologic Systems Engineering - Cryptologic Carry On Program program develops state-of-the-art signal acquisition software in response to Combatant Command requirements for a quick-reaction surface, subsurface and airborne cryptologic carry-on capability. There are approximately 100 cryptologic capable surface ships in the current Navy inventory. Each of these ships is a potential user of this carry-on equipment, depending on deployment schedules and the tempo of operations. In addition, there are numerous subsurface and air platforms that are also potential users. This funding line will provide the resources to enable rapid transition of available Commercial Off-The-Shelf (COTS) and Government Off -The-Shelf (GOTS) technologies that apply to Fleet requirements for carry-on system functionalities. These technologies typically require various levels of integration to leverage on-board systems that provide system and mission management, product reporting, and data analysis. COTS/GOTS system documentation and training materials usually require adaptation or modification to meet fleet operator requirements, or entirely new training materials may need to be developed. Before deployment for operational use, systems must be systematically tested to ensure suitable and reliable operation, tested for network vulnerabilities if connected to shipboard Local Area Networks, and tested relative to interoperability requirements. Certification testing is conducted to meet Office of Naval Intelligence security requirements and network testing is conducted in accordance with Information Technology (IT)-21 requirements to allow connection to Navy networks. This Research, Development, Test & Evaluation will also provide resources to address rapid deployment of enhancements or improvements to the common hardware and/or software baseline of all other carry-on subsystems to meet emergent requirements.

FY12 funds will continue to integrate, test, and document identified COTS and GOTS technologies and subsystems that meet emergent and on-going Fleet requirements as specified in the Signals of Interest (SOI) and target threat list. Funds will continue to develop upgrades to existing systems and subsystems according to Fleet requirements. Additional funds will aid in the development of new SOI algorithms in support of cryptologic systems.

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

	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>
<b>Title:</b> Advanced Cryptological Sys Eng (CCOP)	1.602	1.519	1.447
<b>Articles:</b>	0	0	0
<b>FY 2010 Accomplishments:</b> Integrated, tested, and documented identified COTS and GOTS technologies and subsystems that met emergent and on-going Fleet requirements as specified in the FY10 SOI and target threat list. Continued to develop upgrades to existing systems and subsystems according to Fleet requirements. Developed new SOI algorithms in support of cryptologic systems.			
<b>FY 2011 Plans:</b>			

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

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0204574N: <i>Cryptologic Direct Support</i>	<b>PROJECT</b> 3091: <i>Advanced Cryptological Sys Eng (CCOP)</i>
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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	FY 2010	FY 2011	FY 2012
Continue to integrate, test, and document identified COTS and GOTS technologies and subsystems that meet emergent and on-going Fleet requirements as specified in the FY11 SOI and target threat list. Continue to develop upgrades to existing systems and subsystems according to Fleet requirements.			
<b><i>FY 2012 Plans:</i></b> Continue to integrate, test, and document identified COTS and GOTS technologies and subsystems that meet emergent and on-going Fleet requirements as specified in the FY12 SOI and target threat list. Continue to develop upgrades to existing systems and subsystems according to Fleet requirements.			
<b>Accomplishments/Planned Programs Subtotals</b>	1.602	1.519	1.447

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

Line Item	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
• OPN / 3501: <i>Cryptologic Communications Equipment</i>	11.581	12.834	10.173	0.000	10.173	10.625	10.813	11.052	11.249	Continuing	Continuing

**D. Acquisition Strategy**  
Acquisition, management, and contracting strategies are to support engineering and manufacturing development by providing funds to Space and Naval Warfare (SPAWAR) Systems Centers Atlantic and Pacific, and miscellaneous contractors with management oversight by SPAWAR.

**E. Performance Metrics**  
Cryptologic Carry On Program (CCOP) program will deliver state-of-the-art signal acquisition software for CCOP systems in response to Combatant Command requirements for a quick-reaction surface, subsurface and airborne cryptologic carry-on capability. There are approximately 250 CCOP systems in inventory.

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

<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0204574N: <i>Cryptologic Direct Support</i>	<b>PROJECT</b> 3091: <i>Advanced Cryptological Sys Eng (CCOP)</i>
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<b>Product Development (\$ in Millions)</b>				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	Various	Various:Various	1.915	-		-		-		-	Continuing	Continuing	Continuing
Systems Engineering	C/CPFF	Classified Contract:Classified Contract	-	0.197	Dec 2010	0.210	Dec 2011	-		0.210	Continuing	Continuing	Continuing
<b>Subtotal</b>			1.915	0.197		0.210		-		0.210			

<b>Support (\$ in Millions)</b>				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
Software Development	Various	Various:Various	6.109	-		-		-		-	Continuing	Continuing	Continuing
Software Development	C/CPFF	Classified Contract:Classified Contract	-	0.552	Dec 2010	0.560	Dec 2011	-		0.560	Continuing	Continuing	Continuing
Software Development	WR	SSC PAC:San Diego, CA	-	0.310	Dec 2010	0.310	Dec 2011	-		0.310	Continuing	Continuing	Continuing
Software Development	WR	SSC LANT:Charleston, SC	-	0.165	Dec 2010	0.170	Dec 2011	-		0.170	Continuing	Continuing	Continuing
<b>Subtotal</b>			6.109	1.027		1.040		-		1.040			

<b>Test and Evaluation (\$ in Millions)</b>				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
Developmental Test & Evaluation	Various	Various:Various	0.333	-		-		-		-	Continuing	Continuing	Continuing
Developmental Test & Evaluation	WR	NPGS:Monterey, CA	-	0.054	Dec 2010	0.050	Dec 2011	-		0.050	Continuing	Continuing	Continuing
Developmental Test & Evaluation	WR	OPTEVFOR:Norfolk, VA	-	0.012	Dec 2010	0.012	Dec 2011	-		0.012	Continuing	Continuing	Continuing
<b>Subtotal</b>			0.333	0.066		0.062		-		0.062			

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<b>Exhibit R-4, RDT&amp;E Schedule Profile: PB 2012 Navy</b>		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0204574N: <i>Cryptologic Direct Support</i>	<b>PROJECT</b> 3091: <i>Advanced Cryptological Sys Eng (CCOP)</i>

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Navy		<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy</i> BA 7: <i>Operational Systems Development</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0204574N: <i>Cryptologic Direct Support</i>	<b>PROJECT</b> 3091: <i>Advanced Cryptological Sys Eng (CCOP)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Proj 3091</b>				
Prototype Phase	1	2010	4	2016
System Design Review (SDR) - 2010	2	2010	2	2010
System Design Review (SDR) - 2011	2	2011	2	2011
System Design Review (SDR) - 2012	2	2012	2	2012
System Design Review (SDR) - 2013	2	2013	2	2013
System Design Review (SDR) - 2014	2	2014	2	2014
System Design Review (SDR) - 2015	2	2015	2	2015
System Design Review (SDR) - 2016	2	2016	2	2016
Software Delivery - 2010	3	2010	4	2010
Software Delivery - 2011	3	2011	4	2011
Software Delivery - 2012	3	2012	4	2012
Software Delivery - 2013	3	2013	4	2013
Software Delivery - 2014	3	2014	4	2014
Software Delivery - 2015	3	2015	4	2015
Software Delivery - 2016	3	2016	4	2016
Operational Assessment (OA) - 2010	3	2010	3	2010
Operational Assessment (OA) - 2011	3	2011	3	2011
Operational Assessment (OA) - 2012	3	2012	3	2012
Operational Assessment (OA) - 2013	3	2013	3	2013
Operational Assessment (OA) - 2014	3	2014	3	2014
Operational Assessment (OA) - 2015	3	2015	3	2015

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Navy		<b>DATE:</b> February 2011
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Operational Assessment (OA) - 2016	3	2016	3	2016