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

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0307141F: <i>NASS, IO TECH INTEGRATION & TOOL DEV</i>
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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
Total Program Element	34.025	21.912	23.931	-	23.931	22.132	21.771	20.042	20.396	Continuing	Continuing
674871: <i>Information Operations Technology</i>	34.025	21.912	23.931	-	23.931	22.132	21.771	20.042	20.396	Continuing	Continuing

Note
NASS, IO TECH- Network Attack Support Staff, Information Operations Technology

A. Mission Description and Budget Item Justification

The US Cyber Command (USCYBERCOM) responsibilities include planning, integrating, and coordinating computer Computer Network Operations (CNO) capabilities; operational and tactical level planning and day-to-day employment of assigned and attached Offensive Cyber Operations (OCO) forces; integration of OCO forces with Defensive Cyber Operations (DCO) forces and planning and coordination of cyber capabilities that have trans-regional effects or that directly support national objectives; providing OCO/DCO support for assigned missions and OCO/DCO planning and integration in support of other Combatant Commanders (COCOMs) as directed.

This project funds research, development, testing, and systems modifications of the technologies and capabilities that allow USCYBERCOM to plan, facilitate coordination and integration, deconflict, and synchronize DoD CNO. Activities also include studies and analysis to support both current program planning and execution, and future program planning. This program also provides the ability for other COCOMs to conduct CNO planning. The USCYBERCOM accomplishes part of its mission via systems engineering, testing and development across the primary functions of technical assurance, risk assessments, requirements management, capability development, and gap analysis. The technical assurance function provides world-class "assurance-in-depth" products and services enabling COCOMs to confidently, legally, safely, and securely apply CNO capabilities as one of the elements of national power. Further detail is classified and can be provided upon request. USCYBERCOM provides support for US Strategic Command (USSTRATCOM) and other geographic and functional COCOM exercises, war games, and experimentation requirements. USCYBERCOM integrates and synchronizes its effort with the USSTRATCOM development of CNO military utility assessments, research, and development efforts, and advocacy of capability needs for the Joint Capabilities Integration Development System (JCIDS) process.

USCYBERCOM supports the Information Operations (IO) community by providing a cadre of experts on CNO technology use, and renders technical assistance in the development, review and coordination of CNO plans and operations. USCYBERCOM coordinates CNO capability research and development in order to achieve global military objectives. USCYBERCOM specifically is responsible for advocating on behalf of the COCOMs for CNO capability development. It is also responsible for partnering with the CNO development community to seek resource advocacy from USSTRATCOM, and fund CNO capability development with service sponsorship and coordination. Additionally, USCYBERCOM focuses capability developer's efforts on addressing COCOM requirements, fosters collaboration between OCO/DCO developers, intelligence providers, and operational planners to shorten the development cycle, transfers end-result capabilities to service components, and supports research and development of OCO/DCO capabilities for the conduct operational planning activities.

USCYBERCOM supports research and development of OCO/DCO capabilities based upon COCOM and USCYBERCOM operational requirements to include supporting and conducting quick reaction development of OCO/DCO capabilities in support of OCO/DCO operations as required. A small in-house development team will perform research as required to support this mission. The Special Projects, Vulnerability Assessment Team provides analytical support to exploitable vulnerabilities. Additionally, this team will "re-tool" existing OCO/DCO capabilities to satisfy immediate USCYBERCOM operational needs.

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This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	29.788	21.912	24.011	-	24.011
Current President's Budget	34.025	21.912	23.931	-	23.931
Total Adjustments	4.237	-	-0.080	-	-0.080
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.125	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	5.000	-			
• SBIR/STTR Transfer	-0.926	-			
• Other Adjustments	0.288	-	-0.080	-	-0.080

Change Summary Explanation

FY10 SECDEF-directed increase to support classified cyber initiative.

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

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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
674871: <i>Information Operations Technology</i>	34.025	21.912	23.931	-	23.931	22.132	21.771	20.042	20.396	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

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This project funds research, development, testing, and systems modifications of the technologies and capabilities that allow USCYBERCOM to plan, facilitate coordination and integration, deconflict, and synchronize DoD CNO. Activities also include studies and analysis to support both current program planning and execution, and future program planning. This program also provides the ability for other COCOMs to conduct CNO planning. The USCYBERCOM accomplishes part of its mission via systems engineering, testing and development across the primary functions of technical assurance, risk assessments, requirements management, capability development, and gap analysis. The technical assurance function provides world-class "assurance-in-depth" products and services enabling COCOMs to confidently, legally, safely, and securely apply CNO capabilities as one of the elements of national power. Further detail is classified and can be provided upon request. USCYBERCOM provides support for US Strategic Command (USSTRATCOM) and other geographic and functional COCOM exercises, war games, and experimentation requirements. USCYBERCOM integrates and synchronizes its effort with the USSTRATCOM development of CNO military utility assessments, research, and development efforts, and advocacy of capability needs for the Joint Capabilities Integration Development System (JCIDS) process.

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USCYBERCOM supports research and development of OCO/DCO capabilities based upon COCOM and USCYBERCOM operational requirements to include supporting and conducting quick reaction development of OCO/DCO capabilities in support of OCO/DCO operations as required. A small in-house development team will perform research as required to support this mission. The Special Projects, Vulnerability Assessment Team provides analytical support to exploitable vulnerabilities. Additionally, this team will "re-tool" existing OCO/DCO capabilities to satisfy immediate USCYBERCOM operational needs.

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UNCLASSIFIED

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: NRAM, CNOTE and TA Programs</p> <p>Description: NRAM - Network Warfare Risk Assessment and Mitigation, CNOTE - Computer Network Ops Testing and Evaluation, TA - Technical Assurance</p> <p>FY 2010 Accomplishments: Funding provided assurance-in-depth products enabling COCOMs to confidently, legally, safely, and securely apply CNA capabilities. These software tools were utilized by both the NW NRAM and CNOTE programs.</p> <p>FY 2011 Plans: Continues to provide assurance-in-depth products enabling COCOMs to confidently, legally, safely, and securely apply CNA capabilities.</p> <p>FY 2012 Base Plans: Funding will continue to provide assurance-in-depth products enabling COCOMs to confidently, legally, safely, and securely apply CNA capabilities.</p> <p>FY 2012 OCO Plans:</p>	10.076	5.070	8.740	-	8.740
<p>Title: Requirements & Gap Analysis</p> <p>Description: Requirements, Capabilities and Gap Analysis</p> <p>FY 2010 Accomplishments: Funding provided focused capabilities for geographic and functional COCOMs exercises, wargames, and experimentation requirements. Continued integration and synchronization for the development of network warfare military utility assessments and R&D efforts across the COCOMs.</p> <p>FY 2011 Plans: Funding develops requirements, capabilities and provides gap analysis. Provides focused capabilities for geographic and functional COCOM exercises, war games, and experimentation requirements. Integrates and synchronizes the development of CNO military utility assessments, research, and development efforts across COCOMs.</p> <p>FY 2012 Base Plans:</p>	11.712	11.000	10.270	-	10.270

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Funding will develop requirements, capabilities and provide gap analysis. Will provide focused capabilities for geographic and functional COCOM exercises, war games, and experimentation requirements. Funding will also integrate and synchronize the development of CNO military utility assessments, research, and development efforts across COCOMs.					
<i>FY 2012 OCO Plans:</i>					
<i>Title:</i> CNA/CND-RA	12.237	5.842	4.921	-	4.921
<i>Description:</i> (CNA) Computer Network Attack/ (CND) Computer Network Defense- (RA) Response Action Research and Development Lab					
<i>FY 2010 Accomplishments:</i> Continued development/prototyping of CNA tools based on submissions from the network warfare community.					
<i>FY 2011 Plans:</i> Continues development of the CNA lab and increases CNA capabilities as required to support the network warfare community. Provides funds for Offensive Cyber Operations Lab to continue development/prototyping of OCO tools based on submissions from CNO community.					
<i>FY 2012 Base Plans:</i> Funding will continue development of the CNA lab and increase CNA capabilities as required to support the network warfare community. Will provide funds for Offensive Cyber Operations Lab to continue development/prototyping of OCO tools based on submissions from CNO community.					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	34.025	21.912	23.931	-	23.931

C. Other Program Funding Summary (\$ in Millions)						Cost To						
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Complete	Total Cost	
• PE 030714F: <i>Joint HQ</i>	0.000	0.278	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
<i>Information Operations, O&M</i>	0.000	1.117	0.704	0.000	0.704	0.518	0.517	0.408	0.413	Continuing	Continuing	

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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>
• PE 0208059: <i>Cyber Command Activities, RDT&E</i>											

D. Acquisition Strategy

Bi-annual Industry and Academia Call for Proposal. Contracts will be awarded under full and open competition whenever possible. Variations of both Fixed Price (FP) and Cost Plus (CP) contracting vehicles will be used.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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

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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
J581 - Technical Assurance	Various	NSA:Ft Meade, MD	10.076	5.070	Dec 2010	8.740	Dec 2011	-		8.740	Continuing	Continuing	TBD
J582 - Requirements, Capabilities and Gap Analy	Various	NSA:Ft Meade, MD	11.712	11.000	Jan 2011	10.270	Jan 2012	-		10.270	0.000	32.982	0.000
Subtotal			21.788	16.070		19.010		-		19.010			

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
J582-Offensive Cyber Operations Lab	Various	NSA/Other Mission Partners:Ft Meade, MD	12.237	5.842	Dec 2010	4.921	Jan 2012	-		4.921	Continuing	Continuing	TBD
Subtotal			12.237	5.842		4.921		-		4.921			

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			-	-		-		-		-	0.000	0.000	0.000

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
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			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			34.025	21.912		23.931		-		23.931			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
J581 -Net Warfare Assurance, Risk Assessment and Safeguards	1	2010	4	2016
J581 - NWARS - One Year Future Options	1	2011	1	2016
J582 -Requirements and Capability Development	1	2010	4	2016
J582 - RCD - One Year Future Options	1	2011	1	2016
J584 - Computer Network Attack Lab	1	2011	4	2016
J584 - CNA LAB - One Year Future Options	1	2011	1	2016