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Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force									DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development				R-1 ITEM NOMENCLATURE PE 0307141F: NASS, IO TECH INTEGRATION & TOOL DEV							
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	18.042	29.788	21.912	0.000	21.912	24.011	22.230	21.872	20.141	Continuing	Continuing
674871: Information Operations Technology	18.042	29.788	21.912	0.000	21.912	24.011	22.230	21.872	20.141	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Joint Functional Component Command Network Warfare (JFCC-NW) responsibilities include planning, integrating, and coordinating computer network warfare capabilities; operational and tactical level planning and day-to-day employment of assigned and attached Computer Network Attack (CNA) forces; integration of CNA forces with Computer Network Defense (CND) forces and planning and coordination of network attack capabilities that have trans-regional effects or that directly support national objectives; providing CNA support for assigned missions and CNA planning and integration in support of other combatant commanders as directed.

This project funds research, development, testing and systems modifications of the technologies and capabilities that allow US Strategic Command (USSTRATCOM) to plan, facilitate coordination and integration, deconflict, and synchronize DoD Computer Network Operations (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 Combatant Commanders (COCOMs) to conduct CNO planning. The JFCC-NW accomplishes part of its mission via systems engineering, testing and development across two primary functions: Net Warfare (NW) Assurance, Risk Assessment, and Safeguards (NWARS); and, requirements, capabilities, and gap analysis. Specifically, the NWARS function provides world-class "assurance-in-depth" products and services enabling COCOMs to confidently, legally, safely, and securely apply CNA capabilities as one of the elements of national power. The NWARS function is further subdivided into NW Risk Assessment and Mitigation (NRAM), Computer Network Operations Test and Evaluation (CNOTE), and computer network technical assurance program. Further detail is classified and can be provided upon request.

JFCC-NW provides support for headquarters USSTRATCOM and other geographic and functional COCOMs' exercise, wargames, and experimentation requirements. JFCC-NW integrates and synchronizes its effort with USSTRATCOM's development of network warfare military utility assessments, research, and development efforts, and advocacy of capability needs for the Joint Capabilities Integration Development System (JCIDS) process.

JFCC-NW supports the Information Operations (IO) community by providing a cadre of experts on CNA technology and its use and renders technical assistance in the development, review and coordination of CNA plans and operations.

JFCC-NW coordinates cyber warfare capability research and development in order to achieve global military objectives. JFCC-NW specifically is responsible for advocating on behalf of the COCOMs for cyber warfare capability development; partnering with the cyber warfare development community to seek resource advocacy

UNCLASSIFIED

R-1 Line Item #218

Page 1 of 11

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force	DATE: February 2010
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from STRATCOM and fund cyber warfare capability development with Service sponsorship and coordination; focusing capability developer's efforts on addressing COCOM requirements; increasing the collaboration between Computer Network Attack (CNA) developers, intelligence providers, and operational planners to shorten the development cycle; transferring end-result capabilities to a Service Component or other organization so that capability can be operationalized; supporting research and development of CNA and Computer Network Defense-Response Action (CND-RA) capabilities and tools required by JFCC-NW to conduct operational planning activities, to include intelligence analysis and situational awareness aids, and exercise command and control of assigned cyber forces for mission execution.

JFCC-NW supports research and development of CNA/CND-RA capabilities based upon COCOM and JFCC-NW operational requirements to include supporting and conducting Quick Reaction Capability (QRC) development of CNA/CND-RA capabilities not currently under development in the Services or NSA. A small in-house development team will perform research in public domain, and harvest available Internet tools that can be quickly documented, evaluated, modified (if necessary), and operationally tested in support of ongoing JFCC-NW operations. Additionally, this team will "re-tool" existing CNA/CND-RA capabilities to satisfy immediate JFCC-NW operational needs. This effort will provide a QRC development team that can support "gap" development for CNA/CND-RA operations as required.

Special Projects, Vulnerability Assessment provides for electric transmission analytical support to exploitable vulnerabilities.

This program is Budget Activity 7, Operational System Development, because it studies, develops and fields IO technologies.

B. Program Change Summary (\$ in Millions)

	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011 Base</u>	<u>FY 2011 OCO</u>	<u>FY 2011 Total</u>
Previous President's Budget	15.683	15.730	0.000	0.000	0.000
Current President's Budget	18.042	29.788	21.912	0.000	21.912
Total Adjustments	2.359	14.058	21.912	0.000	21.912
• Congressional General Reductions		-0.516			
• Congressional Directed Reductions		0.000			
• Congressional Rescissions	0.000	-0.288			
• Congressional Adds		0.000			
• Congressional Directed Transfers		0.000			
• Reprogrammings	2.800	14.862			
• SBIR/STTR Transfer	-0.441	0.000			
• Other Adjustments	0.000	0.000	21.912	0.000	21.912

UNCLASSIFIED

R-1 Line Item #218

Page 2 of 11

UNCLASSIFIED

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<p><u>Change Summary Explanation</u> FY10 \$14.862M increase and smaller FY11-15 increases are SECDEF-directed to support classified cyber initiative.</p>		

UNCLASSIFIED

UNCLASSIFIED

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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</i> <i>INTEGRATION & TOOL DEV</i>				PROJECT 674871: <i>Information Operations Technology</i>			
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
674871: <i>Information Operations Technology</i>	18.042	29.788	21.912	0.000	21.912	24.011	22.230	21.872	20.141	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 US Strategic Command (USSTRATCOM) to plan, facilitate coordination and integration, deconflict, and synchronize DoD Computer Network Operations (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 Combatant Commanders (COCOMs) to conduct CNO planning. The JFCC-NW accomplishes part of its mission via systems engineering, testing and development across two primary functions: Net Warfare (NW) Assurance, Risk Assessment, and Safeguards (NWARs); and, requirements, capabilities, and gap analysis. Specifically, the NWARS function provides world-class "assurance-in-depth" products and services enabling COCOMs to confidently, legally, safely, and securely apply CNA capabilities as one of the elements of national power. The NWARS function is further subdivided into NW Risk Assessment and Mitigation (NRAM), Computer Network Operations Test and Evaluation (CNOTE), and computer network technical assurance program. Further detail is classified and can be provided upon request.

JFCC-NW provides support for headquarters USSTRATCOM and other geographic and functional COCOMs' exercise, wargames, and experimentation requirements. JFCC-NW integrates and synchronizes its effort with USSTRATCOM's development of network warfare 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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UNCLASSIFIED

R-1 Line Item #218

Page 4 of 11

UNCLASSIFIED

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from STRATCOM and fund cyber warfare capability development with Service sponsorship and coordination; focusing capability developer's efforts on addressing COCOM requirements; increasing the collaboration between Computer Network Attack (CNA) developers, intelligence providers, and operational planners to shorten the development cycle; transferring end-result capabilities to a Service Component or other organization so that capability can be operationalized; supporting research and development of CNA and Computer Network Defense-Response Action (CND-RA) capabilities and tools required by JFCC-NW to conduct operational planning activities, to include intelligence analysis and situational awareness aids, and exercise command and control of assigned cyber forces for mission execution.						
JFCC-NW supports research and development of CNA/CND-RA capabilities based upon COCOM and JFCC-NW operational requirements to include supporting and conducting Quick Reaction Capability (QRC) development of CNA/CND-RA capabilities not currently under development in the Services or NSA. A small in-house development team will perform research in public domain, and harvest available Internet tools that can be quickly documented, evaluated, modified (if necessary), and operationally tested in support of ongoing JFCC-NW operations. Additionally, this team will "re-tool" existing CNA/CND-RA capabilities to satisfy immediate JFCC-NW operational needs. This effort will provide a QRC development team that can support "gap" development for CNA/CND-RA operations as required.						
Special Projects, Vulnerability Assessment provides for electric transmission analytical support to exploitable vulnerabilities.						
This program is Budget Activity 7, Operational System Development, because it studies, develops and fields IO technologies.						
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: NRAM, CNOTE and Technical Assurance programs.		8.137	10.076	9.053	0.000	9.053
FY 2009 Accomplishments: In FY 2009: Provided assurance-in-depth products enabling COCOMs to confidently, legally, safely, and securely apply CNA capabilities. These software tools are utilized by both the NW NRAM and CNOTE programs.						
FY 2010 Plans: In FY 2010: Continues to provide assurance-in-depth products enabling COCOMs to confidently, legally, safely, and securely apply CNA capabilities. These software tools are utilized by both the NW NRAM and CNOTE programs.						

UNCLASSIFIED

R-1 Line Item #218

Page 5 of 11

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: February 2010		
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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: In FY 2011: Continues to provide assurance-in-depth products enabling COCOMs to confidently, legally, safely, and securely apply CNA capabilities. These software tools are utilized by both the NW NRAM and CNOTE programs.						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						
MAJOR THRUST: Requirements, Capabilities and Gap Analysis FY 2009 Accomplishments: In FY 2009: Provided focused capabilities for geographic and functional COCOMs exercises, wargames, and experimentation requirements. Integrated and synchronized the development of network warfare military utility assessments and R&D efforts across the COCOMs.		7.346	11.712	8.789	0.000	8.789
FY 2010 Plans: In FY 2010: Continues to provide focused capabilities for geographic and functional COCOMs exercises, wargames, and experimentation requirements. Continues integration and synchronization for the development of network warfare military utility assessments and R&D efforts across the COCOMs.						
FY 2011 Base Plans: In FY 2011: Continues to provide focused capabilities for geographic and functional COCOMs exercises, wargames, and experimentation requirements. Continues integration and synchronization for the development of network warfare military utility assessments and R&D efforts across the COCOMs.						
FY 2011 OCO Plans: In FY 2011 OCO: N/A						

UNCLASSIFIED

R-1 Line Item #218

Page 6 of 11

UNCLASSIFIED

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B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
MAJOR THRUST: CNA/CND-RA Lab Upgrades FY 2009 Accomplishments: In FY 2009: Updated existing software CNA/CND-RA tools used by JFCC-NW. FY 2010 Plans: In FY 2010: N/A FY 2011 Base Plans: In FY 2011: N/A FY 2011 OCO Plans: In FY 2011 OCO: N/A		2.559	0.000	0.000	0.000	0.000
MAJOR THRUST: CNA/CND-RA Research and Development Lab FY 2009 Accomplishments: In FY 2009: N/A FY 2010 Plans: In FY 2010: Computer Network Attack continued development/prototyping of CNA tools based on submissions within the network warfare community. FY 2011 Base Plans: In FY 2011: Continues development of the CNA lab and increased CNA capabilities as required to support the network warfare community. FY 2011 OCO Plans: In FY 2011 OCO: N/A		0.000	8.000	4.070	0.000	4.070
Accomplishments/Planned Programs Subtotals		18.042	29.788	21.912	0.000	21.912

UNCLASSIFIED

R-1 Line Item #218

Page 7 of 11

UNCLASSIFIED

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

<u>Line Item</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u> <u>Base</u>	<u>FY 2011</u> <u>OCO</u>	<u>FY 2011</u> <u>Total</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PE 030714F: <i>Joint HQ</i> <i>Information Operations, (O&M)</i>	17.340	0.951	0.180	0.000	0.180	0.565	0.678	0.695	0.713	0.000	0.000

D. Acquisition Strategy

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.

UNCLASSIFIED

R-1 Line Item #218

Page 8 of 11

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Air Force							DATE: February 2010		
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</i> <i>INTEGRATION & TOOL DEV</i>			PROJECT 674871: <i>Information Operations Technology</i>		
<div style="display: flex; justify-content: space-between;"> <div style="width: 25%;"></div> <div style="width: 20%; text-align: center;"> Total Prior Years Cost </div> <div style="width: 10%; text-align: center;"> FY 2010 </div> <div style="width: 10%; text-align: center;"> FY 2011 Base </div> <div style="width: 10%; text-align: center;"> FY 2011 OCO </div> <div style="width: 10%; text-align: center;"> FY 2011 Total </div> <div style="width: 10%; text-align: center;"> Cost To Complete </div> <div style="width: 10%; text-align: center;"> Total Cost </div> <div style="width: 10%; text-align: center;"> Target Value of Contract </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 25%;">Project Cost Totals</div> <div style="width: 20%; text-align: center;">0.000</div> <div style="width: 10%; text-align: center;">0.000</div> <div style="width: 10%; text-align: center;">0.000</div> <div style="width: 10%; text-align: center;">0.000</div> <div style="width: 10%; text-align: center;">0.000</div> <div style="width: 10%; text-align: center;">0.000</div> <div style="width: 10%; text-align: center;">0.000</div> </div>									
Remarks Total Prior Years Cost may include only FY 2009 data.									

UNCLASSIFIED

R-1 Line Item #218

Page 9 of 11

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Air Force

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

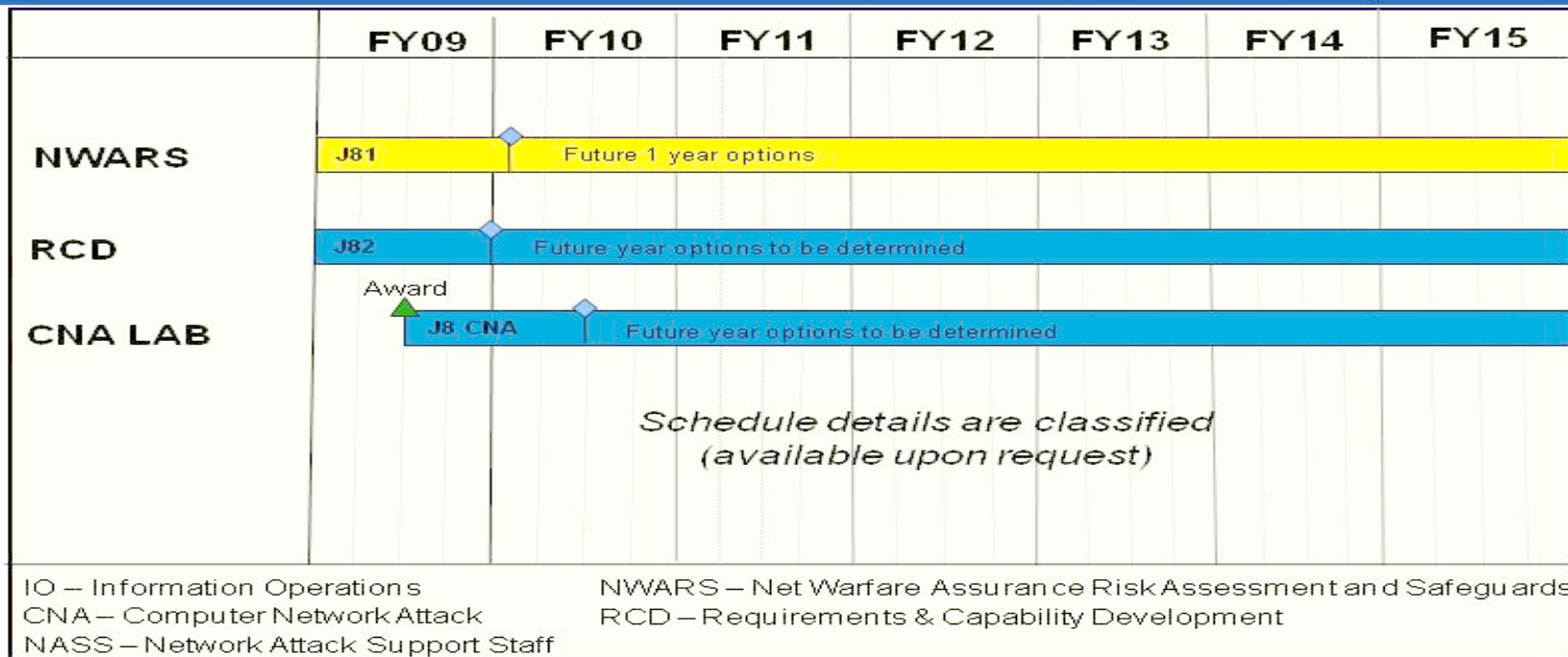
PE 0307141F: NASS, IO TECH
INTEGRATION & TOOL DEV

PROJECT

674871: Information Operations Technology



JFCC-NW NASS IO TECH INTEGRATION & TOOL DEVELOPMENT



IO – Information Operations
CNA – Computer Network Attack
NASS – Network Attack Support Staff

NWARS – Net Warfare Assurance Risk Assessment and Safeguards
RCD – Requirements & Capability Development

Concept activities

Integrate / test

Key events

PB11 R-Docs

1

UNCLASSIFIED

R-1 Line Item #218

Page 10 of 11

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Air Force			DATE: February 2010
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</i> <i>INTEGRATION & TOOL DEV</i>	PROJECT 674871: <i>Information Operations Technology</i>	

Schedule Details

Event	Start		End	
	Quarter	Year	Quarter	Year
J81 -Net Warfare Assurance, Risk Assessment and Safeguards	1	2009	4	2011
J82 -Requirements and Capability Development	1	2009	4	2011
J8 - Computer Network Attack Lab	3	2009	4	2011

UNCLASSIFIED

R-1 Line Item #218

Page 11 of 11