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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
3600: <i>Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>					PE 0306250F / <i>Cyber Operations Technology Development</i>							
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	-	0.000	81.732	158.002	0.000	158.002	223.636	195.752	198.439	211.977	Continuing	Continuing
646008: <i>US Cyber Command Technology Development</i>	-	0.000	81.732	158.002	0.000	158.002	223.636	195.752	198.439	211.977	Continuing	Continuing

A. Mission Description and Budget Item Justification

US Cyber Command (USCYBERCOM) plans, coordinates, integrates, synchronizes, and conducts activities to: direct the operations and defense of specified Department of Defense information networks, and prepare to, and when directed, conduct full-spectrum military cyberspace operations in order to enable actions in all domains, ensure US/Allied freedom of action in cyberspace and deny the same to our adversaries. Emphasis is on providing component and subsystem maturity prior to integration in major and complex systems and may involve risk reduction initiatives.

USCYBERCOM, in conjunction with the Services and National Agencies, will develop and expand infrastructure architectures to support Cyber Mission Forces.

This program is in Budget Activity 4, Advanced Component Development and Prototypes, because efforts are necessary to evaluate integrated technologies, representative modes, or prototype systems in a high fidelity and realistic operating environment.

B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	0.000	81.732	94.643	0.000	94.643
Current President's Budget	0.000	81.732	158.002	0.000	158.002
Total Adjustments	0.000	0.000	63.359	0.000	63.359
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	63.359	0.000	63.359

Change Summary Explanation

In FY17, funding increased due to growing DOD requirements and priority.

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Air Force										Date: February 2016		
Appropriation/Budget Activity 3600 / 4					R-1 Program Element (Number/Name) PE 0306250F / <i>Cyber Operations Technology Development</i>				Project (Number/Name) 646008 / <i>US Cyber Command Technology Development</i>			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
646008: <i>US Cyber Command Technology Development</i>	-	0.000	81.732	158.002	0.000	158.002	223.636	195.752	198.439	211.977	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

US Cyber Command (USCYBERCOM) plans, coordinates, integrates, synchronizes, and conducts activities to: direct the operations and defense of specified Department of Defense information networks, and prepare to, and when directed, conduct full-spectrum military cyberspace operations in order to enable actions in all domains, ensure US/Allied freedom of action in cyberspace and deny the same to our adversaries. Emphasis is on providing component and subsystem maturity prior to integration in major and complex systems and may involve risk reduction initiatives.

USCYBERCOM in conjunction with the Services and National Agencies will develop and expand infrastructure architectures to support Cyber Mission Forces:

Defend the Nation - Develop the tools and capabilities, as well as tactics, techniques and procedures (TTPs) to Defend the Nation from hostile cyber activity. Developing a diverse cyber portfolio is essential for USCYBERCOM to conduct operations to include reconnaissance, surveillance, and target acquisition (RSTA); block; and counter TTPs against imminent or hostile cyber activity in support of the Defend the Nation mission from adversary cyberspace operations. When directed, support the cybersecurity mission of non-DOD entities.

Combatant Command Support - Develop the tools and capabilities necessary to support Geographic or Functional Combatant Command (CCMD) contingency and crisis action plans. Focus is on developing target accesses and capabilities necessary to achieve CCMD objectives during OPLAN execution and expediting technology transition from the laboratory to operational use. This essential development work is focused exclusively on CCMD priorities and will ensure achievement of CCMD military objectives.

Operate and Defend the DODIN - CYBERCOM conducts global cyberspace operations to deter, disrupt, and defeat adversary cyberspace operations in order to defend U.S. Critical Infrastructure and Key Resources.

CYBER Situational Awareness - To develop a Common Operating Picture for cyber situational awareness for the Services and CCMDs. This capability will enable commanders to understand their network topology, identify cyber terrain, determine mission impact and increase commander information flow while enabling decisions and action within operationally relevant timelines.

Unified Platform - Development of the Unified Platform will enable the Cyber Mission Forces to conduct full spectrum cyberspace operations in support of national requirements.

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Appropriation/Budget Activity 3600 / 4	R-1 Program Element (Number/Name) PE 0306250F / <i>Cyber Operations Technology Development</i>	Project (Number/Name) 646008 / <i>US Cyber Command Technology Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
<p>Title: Defend the Nation Mission</p> <p>Description: Funding supports the prototype development of a diverse cyber capability portfolio to enable efforts in order to defeat a wide variety of cyber attacks. Efforts include research, integration, analysis, access development, training, testing, and assessments for defensive cyber capabilities.</p> <p>FY 2015 Accomplishments: N/A</p> <p>FY 2016 Plans:</p> <ul style="list-style-type: none"> - Support cyber operations prototype tools development, engineering, data strategy, and development of a common operating picture that enables USCYBERCOM to conduct operations in defense of specified Department of Defense information networks - Support prototype tool development for Joint Cyber Centers with an event detection capability and engineering support to ensure smooth integration and development - Support efforts to solve operational limitations, vulnerabilities and requirements - Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact USCYBERCOM, 443-654-4765. <p>FY 2017 Base Plans:</p> <ul style="list-style-type: none"> - Will continue to support studies, analysis, testing and development of cyber operations capabilities and tools in support of Combatant Command military objectives - Will support advanced reverse engineering efforts, development of Electronic Warfare and cyberspace targeting efforts - Will develop Cyber capabilities and prototype tools in support of operational requirements - Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact USCYBERCOM, 443-654-4765. <p>FY 2017 OCO Plans:</p>	0.000	35.218	71.359	0.000	71.359

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
N/A					
<p>Title: Combatant Command Support</p> <p>Description: Supports development and testing of various tools critical to achieving Combatant Command military objectives. Including research, studies, integration, analysis, access development and operational assessment of cyberspace capabilities, methodologies and tactics in support of Combatant Command objectives. Further details are held at higher classification levels.</p> <p>FY 2015 Accomplishments: N/A</p> <p>FY 2016 Plans:</p> <ul style="list-style-type: none"> - Support studies, analysis, testing and prototype development of cyber operations capabilities and tools in support of Combatant Command military objectives - Support advanced reverse engineering efforts, development of Electronic Warfare and cyberspace targeting efforts, a framework to underpin analytic and targeting efforts and seed funding for cyber capabilities and tools in support of cyber operations requirements - Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact USCYBERCOM, 443-654-4765. <p>FY 2017 Base Plans:</p> <ul style="list-style-type: none"> - Will continue to support studies, analysis, testing and development of cyber operations capabilities and tools in support of Combatant Command military objectives - Will support advanced reverse engineering efforts, development of Electronic Warfare and cyberspace targeting efforts - Will support analytic and targeting efforts for cyber capabilities and prototype tools in support of cyber operations requirements 	0.000	19.051	32.000	0.000	32.000

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
- Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact USCYBERCOM, 443-654-4765. FY 2017 OCO Plans: N/A					
Title: Operate and Defend the DODIN and Cyber Situational Awareness and Unified Platform Description: Supports engineering and development of tools, data strategy, and management of a common operating picture support operations focused on cyber key terrain at the global and national level and for cyber situational awareness for the services and CCMDs to support operations focused on cyber key terrain at the global and national level. Further details are held at higher classification levels. FY 2015 Accomplishments: N/A FY 2016 Plans: - Support cyber operations prototype tools development, engineering, data strategy, and development of a common operating picture that enables USCYBERCOM to conduct operations in defense of specified Department of Defense information networks - Support prototype tool development for Joint Cyber Centers with an event detection capability and engineering support to ensure smooth integration and development - Support efforts to solve operational limitations, vulnerabilities, and requirements - Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact USCYBERCOM, 443-654-4765. FY 2017 Base Plans: - Will continue cyber operations tools development, engineering, data strategy, and development of a common operating picture that enables USCYBERCOM to conduct operations in defense of specified Department of Defense information network - Will support prototype tool development for Joint Cyber Centers at all Combatant Commands with an event detection capability and engineering support to ensure smooth integration and development	0.000	27.463	54.643	0.000	54.643

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
- Will support efforts to solve operational limitations, vulnerabilities and requirements					
- Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact USCYBERCOM, 443-654-4765.					
<i>FY 2017 OCO Plans:</i> N/A					
Accomplishments/Planned Programs Subtotals	0.000	81.732	158.002	0.000	158.002

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

N/A

Remarks

D. Acquisition Strategy

Develop and expand infrastructure architectures to support Cyber Mission Forces through modernization/modification efforts with focus on minimizing life cycle costs. Contracts are awarded under full and open competition whenever possible. Variations of both Fixed Price (FP) and Cost Plus (CP) contracting vehicles will be used and managed by various Service Components' contracting offices, COCOM contracting offices, and the National Security Administration contracting offices.

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 2017 Air Force												Date: February 2016			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
3600 / 4				PE 0306250F / Cyber Operations Technology Development				646008 / US Cyber Command Technology Development							
Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Combatant Command Support	Various	Various : Various	-	0.000		19.051	Nov 2015	32.000	Nov 2016	0.000		32.000	Continuing	Continuing	TBD
Defend the Nation	Various	Multiple Agencies : Various	-	0.000		35.218	Nov 2015	71.359	Nov 2016	0.000		71.359	Continuing	Continuing	TBD
Operate and Defend the DoDIN / Cyber Situational Awareness / Unified Platform	Various	Service Partners, Agencies : Various	-	0.000		27.463	Nov 2015	54.643	Nov 2016	0.000		54.643	Continuing	Continuing	TBD
Subtotal			-	0.000		81.732		158.002		0.000		158.002	-	-	-
Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-		-	-	-	-
Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-		-	-	-	-
Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-		-	-	-	-

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	Prior Years	FY 2015	FY 2016		FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	-	0.000	81.732		158.002	0.000	158.002	-	-	-	

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Air Force		Date: February 2016
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Combatant Command Support	1	2017	4	2021
FY17 Annual Call for Proposals	1	2017	1	2017
FY18 Annual Call for Proposals	1	2018	1	2018
FY19 Annual Call for Proposals	1	2019	1	2019
FY20 Annual Call for Proposals	1	2020	1	2020
FY21 Annual Call for Proposals	1	2021	1	2021
Defend the Nation	1	2017	4	2021
GIG Ops and Defense / Cyber Situational Awareness / Unified Platform	1	2017	4	2021