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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force										Date: February 2018		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0208087F I AF Offensive Cyberspace Operations							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	24.109	39.693	40.526	0.000	40.526	35.178	33.620	33.678	34.292	Continuing	Continuing
670375: Network Warfare Systems and Support	-	24.109	39.693	40.526	0.000	40.526	35.178	33.620	33.678	34.292	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

A.1. Mission Description:

AF Offensive Cyberspace Operations (OCO): Includes manpower authorizations, peculiar support equipment, necessary facilities, research, development and testing and the associated costs specifically identified and measureable to the following: development, testing, fielding, operation, maintenance and logistical support of AF Offensive Cyberspace Operations capabilities and systems. Offensive Cyberspace Operations includes but is not limited to activities that through the use of cyberspace, actively gather information from computers, information systems, networks, or manipulate, disrupt, deny, degrade, or destroy targeted computers, information systems, or networks. Offensive Cyberspace Operations include Cyber Operational Preparation of the environment, Offensive Counter-Cyber, cyber attack, and related electronic attack and space control negation.

A.2. Other:

May include expedited development of innovative solutions for existing and emerging technologies.

A.3. Budget Item Justification:

The AF Offensive Cyberspace Operations program develops operations-ready cyberspace superiority capabilities from laboratory, industry, and academia via studies, accelerated prototyping, technology demonstrations, and other Research, Development, Testing and Evaluation (RDT&E) efforts. This program consists of a portfolio of programs and projects called the Offensive Cyber Product Line (OCPL) that contribute to an overall Distributed Cyber Weapons Operations (DCWO) architecture. The OCPL establishes a flexible and balanced approach to the rapid acquisition of operational cyber capabilities. OCPL effectiveness comes from balancing funding among three capability areas required for effective operations: Air Force Platforms, Access and Capabilities.

OCPL provides cyber warfare capabilities to the 24th Air Force in direct support of US Cyber Command (USCYBERCOM), AF Major Commands (MAJCOMs), unified commands, and national agencies. In accordance with AF Policy, the program office develops capabilities in the cyberspace superiority core areas. OCPL efforts also directly support the Joint Network Attack Initial Capabilities Document (ICD), the National Military Strategy for Cyberspace Operations (NMS-CO), the USCYBERCOM operational directives, the latest AF Space Command (AFSPC) Offensive Cyberspace Operations System Flight Plan, and other formal requirements documents. Planned areas of development, prototyping, and technology demonstration will be used to provide warfighters access, platforms, and tools. This includes mission planning, intelligence, cybersecurity products and services and Command and Control/Situational Awareness (C2SA) tools needed to attack enemy networks, telephony, Integrated Air Defense Systems (IADS), command and control systems, and create cyber effects through the Electromagnetic Spectrum (EMS). These advancements

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will be used to develop and deliver AF unique access and cutting-edge technologies to the warfighter. This capability area leverages cyber technology investments by DoD Agencies. Many program activities are protected under AF Network Warfare Special Access Programs.						
This program element may include necessary civilian pay expenses required to manage, execute, and deliver AF Offensive Cyberspace Operations weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605826F, 0605827F, 0605828F, 0605829F, 0605830F, 0605831F, 0605832F, and 0605898F.						
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 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget		25.025	39.693	40.333	0.000	40.333
Current President's Budget		24.109	39.693	40.526	0.000	40.526
Total Adjustments		-0.916	0.000	0.193	0.000	0.193
• 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		-0.916	0.000			
• Other Adjustments		0.000	0.000	0.193	0.000	0.193
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2017	FY 2018	FY 2019
Title: Platforms - (Cyber Special Access)				17.455	19.369	12.450
Description: The Cyber Mission Platform (CMP) program is an ACAT III program of record that provides a modular, configurable framework for Cyber Operations. The CMP framework is currently being applied to offensive cyber operations and may also be applied to defensive cyber operations in the future as prioritized by CMP stakeholders. CMP uses an Agile acquisition strategy that allows the USAF to dynamically prioritize the delivery of operational capabilities. Baseline capability deliveries occur every 6 months with the option to field minor releases more rapidly based on user need.						
- Cyber Special Access contains the engineering and technical assistance support services for all of the Offensive Cyber Product Line in FY17 and FY18						

UNCLASSIFIED

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
<p>- Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCP, 210-925-1228</p> <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Complete Contractor Test and Developmental Test of CMP Increment 2 Build 1 - Initiate development of CMP Increment 2 Build 2 with imbedded Agile developmental testing - Accredite and field CMP Increment 2 Build 2 for CRASH HEADER operations - Initiate and complete development of CMP Increment 2 Build 3 to meet prioritized USAF platform requirements - Support Joint Task Force ARES requirements <p>FY 2019 Plans:</p> <ul style="list-style-type: none"> - Will conduct delta accreditation and Fielding of CMP Increment 2 Build 3 - Will develop, conduct delta accreditation and fielding of CMP Increment 2 Build 4 to meet prioritized USAF platform requirements - Will initiate and complete development of CMP Increment 2 Build 5 to meet prioritized USAF platform requirements <p>FY 2018 to FY 2019 Increase/Decrease Statement:</p> <ul style="list-style-type: none"> - Funding decreased due to conclusion of FY18 Joint Task Force ARES and their requirements. - Funding decreased due to reallocation of engineering and technical assistance support services for Access - (Cyber Tech Projects) and Capabilities - (Cyber Tech Projects). 				
<p>Title: Access - (Cyber Tech Projects)</p> <p>Description: Access provides operators with the means to enable offensive cyberspace operations.</p> <p>- Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO, 210-925-6653</p> <p>FY 2018 Plans:</p> <ul style="list-style-type: none"> - Develop Air Force unique access and infrastructure programs via necessary upgrades, modifications, equipment modernization, and integration leveraging industry and AFRL-developed applications 		1.716	7.241	7.567

UNCLASSIFIED

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Development and delivery of access releases addressing highest priority user requirements to include Electronic Magnetic Spectrum (EMS) requirements - Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO, 210-925-6653 FY 2019 Plans: <ul style="list-style-type: none"> - Will continue to develop Air Force unique access and infrastructure programs via necessary upgrades, modifications, equipment modernization, and integration leveraging industry and AFRL-developed applications - Will continue development and delivery of access releases addressing highest priority user requirements to include Electronic Magnetic Spectrum (EMS) requirements - Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO,210-925-6653 FY 2018 to FY 2019 Increase/Decrease Statement: <ul style="list-style-type: none"> - Funding increased due to additional funds required for the AF unique access tools development efforts in FY19 				
Title: Capabilities - (Cyber Tech Projects) Description: The cyber capability area delivers desired effects to the target. <ul style="list-style-type: none"> - Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO, 210-925-6653 FY 2018 Plans: <ul style="list-style-type: none"> - Develop capability and payload programs via necessary upgrades, modifications, equipment modernization, and integration leveraging industry and AFRL-developed applications - Agile development and delivery of capability releases addressing the highest priority user requirements to include Electronic Magnetic Spectrum (EMS) requirements 		4.135	10.732	18.710

UNCLASSIFIED

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019
<ul style="list-style-type: none"> - Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO, 210-925-6653 FY 2019 Plans: <ul style="list-style-type: none"> - Will continue to develop capability and payload programs via necessary upgrades, modifications, equipment modernization, and integration leveraging industry and AFRL-developed applications - Will continue to conduct agile development and delivery of capability of tools addressing the highest priority user requirements leveraging industry and DoD-developed applications. - Will acquire required developmental testing capability products prior to fielding - Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO, 210-925-6653 FY 2018 to FY 2019 Increase/Decrease Statement: <ul style="list-style-type: none"> - Funding increased due to reallocation of engineering and technical assistance support services from Cyber Special Access Platforms and increased tools and Saber Chime development efforts planned in FY19 				
Title: Test & Evaluation (T&E) Description: Test and Evaluation provides both developmental testing of new tool development and a secure network environment for such testing <ul style="list-style-type: none"> - Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO, 210-925-6653 FY 2018 Plans: <ul style="list-style-type: none"> - Provide the required developmental testing for new platform, access, and capability products prior to fielding - Provide the secure network environment for all tests - Support testing for Joint Task Force ARES requirements 		0.803	2.351	1.799

UNCLASSIFIED

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019
<p>- Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO,210-925-6653</p> <p><i>FY 2019 Plans:</i></p> <p>- Will continue to provide the required developmental testing for new platform, access, and capability products prior to fielding</p> <p>- Will continue to provide the secure network environment for all tests</p> <p><i>FY 2018 to FY 2019 Increase/Decrease Statement:</i></p> <p>- Funding decreased due to conclusion of FY18 Joint Task Force ARES requirements</p>			
Accomplishments/Planned Programs Subtotals	24.109	39.693	40.526

D. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2017</u>	<u>FY 2018</u>	<u>FY 2019</u> <u>Base</u>	<u>FY 2019</u> <u>OCO</u>	<u>FY 2019</u> <u>Total</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPAF 03 Line Item 834320: <i>C3 Countermeasures</i>	6.774	16.990	37.329	-	37.329	23.323	22.207	19.949	20.304	Continuing	Continuing
• OPAF 03 Line Item 834010: <i>General Information Technology</i>	1.554	8.781	1.683	-	1.683	1.713	1.743	1.775	1.806	Continuing	Continuing
• OPAF 03 Line Item 831010: <i>COMSEC Equipment</i>	-	-	8.370	-	8.370	2.790	-	-	-	11.131	22.291

Remarks

E. Acquisition Strategy

The Offensive Cyberspace Operations program office will utilize Concept, Development, Risk Management, Production, or Deployment Plans as part of a streamlined approach to acquisition planning. All plans will contain sufficient information for the Milestone Decision Authority (MDA) to determine readiness to enter into the applicable phase of the acquisition process. Offensive Cyberspace Operations will utilize both new and existing contractual vehicles, such as Government-Wide Acquisition Contract (GWAC) vehicles (Alliant, Encore II, Solutions for Enterprise-Wide Procurement IV (SEWP IV)), and General Services Administration (GSA) Federal Supply Schedules and a Cyber Indefinite Delivery Indefinite Quantity (IDIQ) contract. The use of multiple-award contractual vehicles will provide a wide range of commercially-available products and services that should be able to meet many requirements related to Offensive Cyberspace Operations. These multiple-award contractual vehicles have already met the statutory requirements of the Competition in Contracting Act (CICA), which requires a fair opportunity to all contract holders, in accordance with Federal Acquisition Regulation (FAR) 16.505, unless an exception to fair opportunity applies.

UNCLASSIFIED

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F. 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

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force												Date: February 2018			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0208087F / AF Offensive Cyberspace Operations				Project (Number/Name) 670375 / Network Warfare Systems and Support					
Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Platforms - (Cyber Special Access)	C/Various	Various : Various	-	11.231	Nov 2016	12.947	Dec 2017	9.332	Nov 2018	-		9.332	Continuing	Continuing	-
Access - (Cyber Tech Projects)	Various	Various : Various	-	1.716	Dec 2016	7.241	Jan 2018	7.567	Jan 2019	-		7.567	Continuing	Continuing	-
Capabilities - (Cyber Tech Projects)	C/Various	Various : Various	-	4.135	Dec 2016	10.732	Jan 2018	15.075	Jan 2019	-		15.075	Continuing	Continuing	-
Subtotal			-	17.082		30.920		31.974		-		31.974	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Test & Evaluation	MIPR	47 CTS : San Antonio, TX	-	0.803	Dec 2016	2.351	Dec 2017	1.799	Dec 2018	-		1.799	Continuing	Continuing	-
Subtotal			-	0.803		2.351		1.799		-		1.799	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
PSC - Engineering & Technical Assistance Support Services (ETASS & FFRDC) - (Cyber Special Access)	C/FFP	Various : San Antonio, TX	-	3.285	Oct 2016	4.189	Oct 2017	0.906	Oct 2018	-		0.906	Continuing	Continuing	-
PSC - Acquisition Support - (Cyber Special Access)	C/Various	Various : San Antonio, TX	-	2.939	Oct 2016	2.233	Oct 2017	2.112	Oct 2018	-		2.112	Continuing	Continuing	-
Various - Engineering & Technical Assistance Support Services (ETASS & FFRDC) - (Cyber Tech Projects)	C/FFP	Various : San Antonio, TX	-	-		-		3.735	Apr 2018	-		3.735	Continuing	Continuing	-

UNCLASSIFIED

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Management Services (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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			-	6.224		6.422		6.753		-		6.753	Continuing	Continuing	N/A

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	24.109	39.693	40.526	-	40.526	Continuing	Continuing	N/A

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UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force			Date: February 2018		
Appropriation/Budget Activity 3600 / 7		R-1 Program Element (Number/Name) PE 0208087F / AF Offensive Cyberspace Operations			Project (Number/Name) 670375 / Network Warfare Systems and Support

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Air Force Cyber Mission Platform (CMP)																												
CMP Development Increment 1 Build 1																												
CMP DT and OT Events Increment 1 Build 1																												
CMP Follow-on Contract Award (APR 2017)																												
CMP OA/Fielding (CRASH HEADER) Increment 1 Build 1																												
CMP Development Increment 2 Build 1																												
CMP Development Increment 2 Build 2																												
CMP Development Increment 2 Build 3																												
CMP Development Increment 2 Build 4																												
CMP Development Increment 2 Build 5																												
CMP Development Increment 2 Build 6																												
CMP Development Increment 2 Build 7																												
CMP Development Increment 2 Build 8																												
CMP Development Increment 2 Build 9																												
CMP Development Increment 2 Build 10																												
CMP Development Increment 2 Build 11																												
CMP Development Increment 2 Build 12																												
Tech Project - Access																												
Access																												
AF Unique Access																												
Cyber Effects via Electromagnetic Spectrum (EMS)																												
Tech Project - Capabilities																												
Capabilities																												

UNCLASSIFIED

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										FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
										1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Saber Chime Development																																					
Tools Development																																					

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force			Date: February 2018
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Air Force Cyber Mission Platform (CMP)</i>				
CMP Development Increment 1 Build 1	1	2017	3	2017
CMP DT and OT Events Increment 1 Build 1	2	2017	4	2017
CMP Follow-on Contract Award (APR 2017)	3	2017	3	2017
CMP OA/Fielding (CRASH HEADER) Increment 1 Build 1	4	2017	1	2018
CMP Development Increment 2 Build 1	3	2017	1	2018
CMP Development Increment 2 Build 2	1	2018	3	2018
CMP Development Increment 2 Build 3	3	2018	1	2019
CMP Development Increment 2 Build 4	1	2019	3	2019
CMP Development Increment 2 Build 5	3	2019	1	2020
CMP Development Increment 2 Build 6	1	2020	3	2020
CMP Development Increment 2 Build 7	3	2020	1	2021
CMP Development Increment 2 Build 8	1	2021	3	2021
CMP Development Increment 2 Build 9	3	2021	1	2022
CMP Development Increment 2 Build 10	1	2022	3	2022
CMP Development Increment 2 Build 11	3	2022	1	2023
CMP Development Increment 2 Build 12	1	2023	3	2023
<i>Tech Project - Access</i>				
Access	1	2017	4	2023
AF Unique Access	2	2018	4	2023
Cyber Effects via Electromagnetic Spectrum (EMS)	3	2018	4	2023
<i>Tech Project - Capabilities</i>				

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force			Date: February 2018
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Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Capabilities	1	2017	4	2023
Saber Chime Development	3	2018	4	2023
Tools Development	1	2018	4	2023

Note
The Cyber Mission Platform Planning, Generation, Execution, Assessment, Reporting, and Visualization (PGEARV) Services efforts are included within Platforms CMP Versions development