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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Air Force										Date: February 2019		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0208064F I OPERATIONAL HQ - CYBER							
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	7.602	0.000	7.602	5.537	2.266	2.307	14.810	Continuing	Continuing
676002: Cyber Systems Modernization	-	0.000	0.000	7.602	0.000	7.602	5.537	2.266	2.307	14.810	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This program, BA 7, PE 0208064F, project 676002, Cyber Command and Control Mission System (C3MS) Modernization, is a new start.

A. Mission Description and Budget Item Justification

Cyber Command and Control Mission System (C3MS) Mission Description: Provides the AFCYBER Commander with the tools necessary to effectively and efficiently plan, monitor, and execute missions in the cyber domain. This includes development and dissemination of Cyberspace Tasking Orders to ensure commander's intent is supported through the application of cyber forces using the latest intelligence. C3MS provides a common operational picture to maintain cyberspace threat activities and integrates cyberspace indications and warnings, analysis, and other actionable intelligence products into overall situational awareness, planning, and execution.

Budget Item Description: C3MS will start modernization efforts based on a backlog of validated requirements to automate battle management capabilities and provide comprehensive cyber situational awareness. Developmental activities include: machine-to-machine interfaces to dynamically interoperate with Air Operations Center (AOC) systems in order to quickly facilitate collaboration and mutual situational awareness; capabilities to present weapon system operators with force location, mission, effect, and linked information including a standardized, dynamic, map-based, situational awareness interface to display, manipulate, and manage units, missions, network elements, and effects; and multi-level security capabilities to support full-spectrum operations.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver C3MS 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, 0605898F, and 0605833F.

As directed in the FY 2018 NDAA, Sec 825, amendment to PL 114-92 FY 2016 NDAA, Sec 828 Penalty for Cost Overruns, the FY 2018 Air Force penalty total is \$14.373M. The calculated percentage reduction to each research, development, test and evaluation and procurement account will be allocated proportionally from all programs, projects, or activities under such account.

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.

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B. Program Change Summary (\$ in Millions)		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget		0.000	0.000	7.602	0.000	7.602
Current President's Budget		0.000	0.000	7.602	0.000	7.602
Total Adjustments		0.000	0.000	0.000	0.000	0.000
• 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	0.000	0.000	0.000
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2018	FY 2019	FY 2020
Title: Cyber Command and Control Mission System (C3MS) Modernization				0.000	0.000	7.602
Description: Perform development activities to automate processes and ingest & visualize data in support of Air Force specific cyber command and control requirements. Funding includes agile/continuous software development, test, and evaluation as well as support for architecture and modeling.						
FY 2019 Plans: N/A						
FY 2020 Plans: - Will automate battle management processes to define and provide cyber situational awareness to improve Air Force cyber command and control. - Will develop multi-level security capabilities. - Will develop man-to-machine to dynamically interoperate with Air Operations Center (AOC) systems. - Will develop visualization tools for force location, mission, effect, and linked information.						
FY 2019 to FY 2020 Increase/Decrease Statement: Funding increasing due to initiation of C3MS modernization						
Accomplishments/Planned Programs Subtotals				0.000	0.000	7.602

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D. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2020</u>	<u>FY 2020</u>	<u>FY 2020</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>Complete</u>	<u>Total Cost</u>
• OPAF 03 831010: <i>Comsec Equipment</i>	6.408	11.705	5.113	-	5.113	4.801	4.940	5.028	17.579	0.000	55.574
Remarks											
E. Acquisition Strategy											
<p>The Cyber Command and Control Mission System (C3MS) weapon system program office will lead development of new capabilities to provide automated battle management capabilities to plan, monitor, and execute missions in the cyber domain. The program office will develop solution based on a backlog of validated requirements. To meet these requirements, the C3MS program office will utilize various contractual vehicles when necessary, such as Government-Wide Acquisition Contract, Alliant, Encore II, Solutions for Enterprise-Wide Procurement IV, and General Services Administration Federal Supply Schedules, Network-Centric Solutions and competitive contract (if required). The use of multiple-award contractual vehicles will provide a wide range of commercially-available products and services that will be able to meet emerging requirements related to Air Force Cyber Command and Control.</p>											
F. Performance Metrics											
<p>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.</p>											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2020 Air Force													Date: February 2019		
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0208064F / OPERATIONAL HQ - CYBER						Project (Number/Name) 676002 / Cyber Systems Modernization			
Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
C3MS Software Development	Various	Multiple : Various	-	-		-		6.202	Jan 2020	-		6.202	Continuing	Continuing	-
Subtotal			-	-		-		6.202		-		6.202	Continuing	Continuing	N/A
Support (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
C3MS Architecture and Modeling Support	Various	FFRDC : JBSA	-	-		-		1.000	Jan 2020	-		1.000	Continuing	Continuing	-
Subtotal			-	-		-		1.000		-		1.000	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
C3MS Software Test and Evaluation	Various	Multiple : Various	-	-		-		0.400	Apr 2020	-		0.400	Continuing	Continuing	-
Subtotal			-	-		-		0.400		-		0.400	Continuing	Continuing	N/A
			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		0.000		7.602		-		7.602	Continuing	Continuing	N/A
Remarks															

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Air Force												Date: February 2019					
Appropriation/Budget Activity 3600 / 7								R-1 Program Element (Number/Name) PE 0208064F / OPERATIONAL HQ - CYBER						Project (Number/Name) 676002 / Cyber Systems Modernization			

	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024			
	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
Automated Battle Management and Cyber SA																												
Architecture and Modeling Support																												
Software Development																												
Test and Evaluation																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Air Force		Date: February 2019
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208064F / OPERATIONAL HQ - CYBER	Project (Number/Name) 676002 / Cyber Systems Modernization

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Automated Battle Management and Cyber SA				
Architecture and Modeling Support	2	2020	4	2024
Software Development	2	2020	4	2024
Test and Evaluation	3	2020	4	2024