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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0304369F / <i>Cyber Capabilities Support Office (CCSO)</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	16.949	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
646008: <i>US Cyber Command Technology Development</i>	-	16.949	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Mission Description.

The Cyber Capabilities Support Office (CCSO) within the Air Force Concepts, Development, and Management (SAF/CDM) Office is partnered with the New Mexico Institute of Mining and Technology (NMT) to develop the Playas Training and Research Environment (PTRE) at the NMT. This team will: develop a vision and strategy for Multi Domain Operations at the PTRE, facilitate build-out of a research and experimentation environment supporting evaluation and development of Full-Spectrum Multi-Domain Operations from Cyber, Cognitive, Supervisory control and data acquisition (SCADA), to include Terrestrial and airspace through space domains. The development team will also design and develop an "Operator in the Loop" research methodology enabling researchers to evaluate research hypotheses via access to operational platforms to simultaneously conduct integrated training and exercise events. Additionally, the team will establish and re-engineer business processes and usher programs/projects from conceptualization through transition to operational and Service components. Detachment (Det) 1, HQ 55th Wing (WG) provides Information Warfare integration and organizational oversight for operations, training, and infrastructure build-up of PTRE.

Budget Item Justification

The NMT in conjunction with the Cyber Capabilities Support Office, and Det 1 HQ 55th Wing is developing an environment at the Playas Training and Research Environment (PTRE) to advance DoD Information Dominance capabilities and effectiveness in support of the National Defense Strategy by replicating a multi-domain, information warfare combat environment for simultaneous operations, cyber enabled kinetic operations, or physically enabled cyber operations, while reducing the research-to-operational fielding timeline.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program 0304369F. In PY \$0.317 M was expended for civilian pay expenses in this program element, and in CY \$0.000 M is forecasted for civilian pay expenses in this program element

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

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B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	16.949	0.000	0.000	0.000	0.000
Total Adjustments	16.949	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	17.500	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-0.551	0.000			
• Other Adjustments	0.000	0.000	0.000	0.000	0.000

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 646008: *US Cyber Command Technology Development*
 Congressional Add: *U Cyber Command Technology Development*

	FY 2022	FY 2023
	16.949	0.000
Congressional Add Subtotals for Project: 646008	16.949	0.000
Congressional Add Totals for all Projects	16.949	0.000

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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
646008: <i>US Cyber Command Technology Development</i>	-	16.949	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2022	FY 2023
Congressional Add: U Cyber Command Technology Development	16.949	0.000
FY 2022 Accomplishments: - Refined the vision and strategy for Multi Domain Operations at the Playas Training and Research Environment (PTRE) and validated the business case value to the Air Force; engaged with organizations across OSD and academia to support PTRE long-term investment		

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023
<p>- Continued build-out of the research and experimentation environment supporting evaluation and development of Full-Spectrum Multi-Domain Operations, and Cyber, Cognitive, Supervisory control and data acquisition (SCADA), Terrestrial, Airspace through Space domains. Enhanced infrastructure components expanding research and operational nodes across the complex; Created secure storage for sensitive equipment and enhanced OPSEC through installation of additional security infrastructure and establishment of additional security protocols; acquired additional low cost threat emitters and sensors to expand the threat environment; expanded remote functions; and continued to add additional SCADA testing environments.</p> <p>- Continued the Development of an "Operator in the Loop" research methodology that enables researchers to evaluate research hypotheses utilizing access to operational platforms to simultaneously develop and conduct integrated training and exercise events. Key elements included enhancement of DET 1 abilities to integrate, manage and prioritize development of PTRE, incorporation of real-world operational imperatives into testing and evaluation objectives, and use of Training, Integration, Experimentation, and Research (TIER) events to evaluate, experiment, and research with new tactics, techniques, processes, and technologies.</p> <p>- Continued establishing, re-engineering, and evaluating business processes, ushering programs/projects from conceptualization through transition to operational and Service components.</p> <p>FY 2023 Plans: N/A</p>		
Congressional Adds Subtotals	16.949	0.000

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

N/A

Remarks

D. Acquisition Strategy

The Cyber Capabilities Support Office utilizes a tailorable acquisition strategy that facilitates rapid delivery of material and non-material solutions to solve operational Offensive Cyber Operations requirements. This approach allows flexibility for solutions to enter the acquisitions process at any phase of the acquisition life cycle. All plans contain sufficient information for the Milestone Decision Authority to determine readiness to enter into the applicable phase of the acquisition process. CCSO, in conjunction with the Air Force Research Lab (AFRL) and the New Mexico Institute of Mining and Technology (NMT), provides the direction, equipment, research and development, developmental testing, operational test and evaluation, necessary facilities, legal and associated costs supporting cyber innovation leveraging cyber kinetic combat environment funding. In FY21 funds primarily utilize the Playas Electronic Attack & Cyber Environment (PEACE) contract held by AFRL. The PEACE contract provides acquisition of the infrastructure, material and services necessary to implement the strategic vision and assist in the transition of operations to ACC in FY23. In addition, GSA contracts will provide MAJCOM Liaison, SME Program Management Support and SME SETA support.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force **Date:** March 2023

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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Develop vision and strategy; build-out of a research and experimentation environment; Develop "Operator in the Loop" research methodology; Establish and re-engineer business processes	SS/ Various	New Mexico Tech : NM	-	13.406	Sep 2022	-		-		-		-	0.000	13.406	13.406
Subtotal			-	13.406		-		-		-		-	0.000	13.406	N/A

Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Air Combat Command Liaison ,Subject Matter Expert Program Support - Smartronix 47QFCA19F0003	C/CPAF	Smartronix : California, MD	-	1.400	Dec 2022	-		-		-		-	0.000	1.400	1.400
Systems Engineering and Technical Assistance (SETA) Support - GSA Noblis 47QFNA19F0075	SS/CPAF	Noblis : Reston, VA	-	0.125	Jul 2023	-		-		-		-	0.000	0.125	0.123
Senior Advisor, Information Environment Systems and Programs advises the Director, CDM on strategic direction, messaging, and organization design for Department and Joint OIE efforts.	C/CPAF	TBD : TBD	-	0.467	May 2023	-		-		-		-	0.000	0.467	0.467
Information Warfare integration and organizational oversight for	MIPR	USAF 55 Wing : Offutt, NE	-	0.732	Jun 2023	-		-		-		-	0.000	0.732	0.732

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force		Date: March 2023
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Cyber Training Range</i>				
Refine the vision and strategy for Multi Domain Operations at the Playas Training and Research Environment (PTRE))	4	2022	4	2023
Continue build-out of the research and experimentation environment	4	2022	4	2023
Continue the Development of an "Operator in the Loop research methodology	4	2022	4	2023
Continue establishing, re-engineering, and evaluating business processes	4	2022	4	2023