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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
Total Program Element	-	67.725	68.154	72.487	0.000	72.487	-	-	-	-	-	-
674540: <i>Cyber Tech Products - Payloads</i>	-	41.901	44.226	0.000	0.000	0.000	-	-	-	-	-	-
674541: <i>Cyber Tech Projects - Platforms</i>	-	14.189	8.378	0.000	0.000	0.000	-	-	-	-	-	-
674542: <i>Cyber Tech Projects - Access/Infrastructure</i>	-	11.635	15.550	0.000	0.000	0.000	-	-	-	-	-	-
674543: <i>AF Offensive Cyber Operations</i>	-	0.000	0.000	72.487	0.000	72.487	-	-	-	-	-	-

Note
 In FY2020, PE 0305251F, Cyberspace Operations Forces and Force Support, Project 646008, US Cyber Command Technology Development efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674540, Cyber Tech Products - Payloads, to consolidate prototyping and development of cyber payload capabilities.

A. Mission Description and Budget Item Justification

Distributed Cyber Warfare Operations (DCWO) provides advanced offensive cyber warfare capabilities to the 16th Air Force in direct support of US Cyber Command (USCYBERCOM), AF Major Commands (MAJCOMs), unified commands, and national agency cyber warfighting requirements. DCWO efforts directly support the Joint Network Attack Initial Capabilities Document (ICD), the National Military Strategy for Cyberspace Operations (NMS-CO), Department of Defense Cyber Strategy, USCYBERCOM operational directives, MAJCOM directive and guidance documentation, and other formal requirements documents in the delivery of offensive cyber effects.

Activities within the DCWO deliver operations-ready cyberspace superiority capabilities through the research, development, testing, evaluation, accelerated prototyping, demonstration, and fielding of advanced offensive cyber technologies and capabilities. The ongoing development of peculiar support equipment, facilities, operations, fielding, maintenance, and logistical support of fielded systems permits the rapid adaptation of current cyber capabilities to capitalize on emerging opportunities and mitigate adversary actions. This portfolio of capabilities permits Combatant Commanders the ability to operate in and through cyberspace to manipulate, disrupt, deny, degrade, or destroy targeted computers, information systems, or networks, and actively gather information from computers, information systems, and networks.

DCWO effectiveness comes from balancing three modular and interoperable elements necessary for the successful presentation of offensive cyber capabilities: Platforms, Access/Infrastructure, and Payloads. When unified, these three elements combine to form a cyber mission thread capable of delivering cyber effects to Combatant Commanders, to include cyber operational preparation of the environment, offensive counter-cyber, cyber-attack, electronic warfare operations, mission

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Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>
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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).

Efforts within DCWO may include the expedited development of innovative solutions for existing and emerging technologies required for the continued superiority within the cyber domain.

This program element may include necessary emergent or unanticipated civilian pay expenses required to manage, execute, and deliver Air Force Distributed Cyber Warfare Operations for emergent or unanticipated weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605829F.

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 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	35.178	68.279	105.450	0.000	105.450
Current President's Budget	67.725	68.154	72.487	0.000	72.487
Total Adjustments	32.547	-0.125	-32.963	0.000	-32.963
• Congressional General Reductions	0.000	-0.125			
• 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	35.000	0.000			
• SBIR/STTR Transfer	-2.453	0.000			
• Other Adjustments	0.000	0.000	-32.963	0.000	-32.963

Change Summary Explanation

Reprogramming occurred in FY2020, PE 0305251F, Cyberspace Operations Forces and Force Support, Project 646008, US Cyber Command Technology Development efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674540, Cyber Tech Products - Payloads, to consolidate prototyping and development of cyber payload capabilities.

In FY2022, -32.963M from PE 0208087F, Distributed Cyber Warfare Operations - Robust Infrastructure development was realigned to the US Army as the designated program office for the Joint Cyber Access Platform (JCAP).

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>				Project (Number/Name) 674540 / <i>Cyber Tech Products - Payloads</i>			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
674540: <i>Cyber Tech Products - Payloads</i>	-	41.901	44.226	0.000	0.000	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY2020, PE 0305251F, Cyberspace Operations Forces and Force Support, Project 646008, US Cyber Command Technology Development efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674540, Cyber Tech Products - Payloads, to consolidate prototyping and development of cyber payload capabilities.

In FY2022, PE 0208087F, Distributed Cyber Warfare Operations, Project 674540, Cyber Tech Products - Payloads efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674543, AF Offensive Cyber Operations, to consolidate prototyping and development of offensive cyber operations capabilities.

A. Mission Description and Budget Item Justification

Distributed Cyber Warfare Operations (DCWO) conducts Research, Development, Testing and Evaluation (RDT&E) leading to operations-ready cyberspace superiority capabilities including the transition of efforts from laboratory, industry, and academia via studies, accelerated prototyping, and technology demonstrations. DCWO consists of a portfolio of programs and projects providing the rapid acquisition of operational cyber capabilities. DCWO effectiveness comes from balancing funding among three capability thrust areas required for cyber warfare operations: Air Force Platforms, Access and Payloads. The DCWO portfolio provides capabilities by combining these three areas to provide cyber effects to Combatant Commanders. Cyber payload capabilities and foundational tools are required to deliver cyber effects through the DCWO platform and access.

The payloads capability develops and fields cyber tools and payloads leveraging industry and other Government/non-Government mission partnered applications and programs.

Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO, 210-925-6614.

This program element may include necessary emergent or unanticipated civilian pay expenses required to manage, execute, and deliver Air Force Distributed Cyber Warfare Operations for emergent or unanticipated weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605829F. In FY20 \$0.0M and in FY21 \$0.0M was expended for civilian pay expenses in this program element.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Payloads	41.901	44.226	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674540 / <i>Cyber Tech Products - Payloads</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<p>Description: The payloads capability develops and fields cyber tools and payloads leveraging industry and other Government/non-Government mission partnered applications and programs.</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, 210-925-6614.</p> <p>FY 2021 Plans:</p> <ul style="list-style-type: none"> - Continue the development of cyber tools and payloads by leveraging industry and other government/non-Government mission partnered developed applications and programs. - Continue the development and transition of cyber tool and payload quick reaction capabilities for current and next-generation DCWO weapon systems supporting requirements from DCWO Mission Threads. - Continue to expand USCYBERCOM-funded efforts to produce prioritized family of foundational tools. - Continue to develop additional tool development software teams. - Continue to transition and integrate available prototype tool kits to DCWO portfolio. - Continue to deliver prototype tools into USCYBERCOM architecture to ensure interoperability. - Continue to develop automated testing and information assurance support tools. <p>FY 2022 Base Plans: Refer to Project Number 674543. - FY21 was last year to use Project# 674540. Project# 674540 was consolidated to New Project# 674543 starting in FY22.</p> <p>FY 2022 OCO Plans: N/A</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement: N/A</p>					
Accomplishments/Planned Programs Subtotals	41.901	44.226	0.000	0.000	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674540 / <i>Cyber Tech Products - Payloads</i>

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

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>			<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• OPAF 03 Line Item 831010: <i>COMSEC Equipment</i>	2.790	0.000	0.000	0.000	0.000	-	-	-	-	-	-
• OPAF 03 Line Item 834320: <i>C3 Countermeasures</i>	25.036	18.782	0.000	0.000	0.000	-	-	-	-	-	-

Remarks

In FY21, all OPAF funds for the DCWO portfolio have been consolidated to Line Item 834320.

In FY22, all OPAF funds for the DCWO portfolio support Project# 674543.

D. Acquisition Strategy

The Distributed Cyber Warfare 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. Distributed Cyber Warfare 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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force												Date: May 2021				
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)								
3600 / 7				PE 0208087F / Distributed Cyber Warfare Operations				674540 / Cyber Tech Products - Payloads								
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	
Payload Development	Various	Various : Various	-	4.832	Nov 2019	4.613	Oct 2020	-		-		-	-	-	-	
CMF Foundational Tool Development	Various	Various : Various	-	22.000	Jan 2020	27.284	Oct 2020	-		-		-	-	-	-	
CMF Interoperability Development	Various	Various : Various	-	3.100	Feb 2020	3.800	Nov 2020	-		-		-	-	-	-	
CMF Automated Test Development	Various	Various : Various	-	3.000	Jan 2020	3.700	Oct 2020	-		-		-	-	-	-	
Subtotal			-	32.932		39.397		-		-		-	-	-	N/A	
Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	
DCA - Payloads and Effects	TBD	USAF : Hanscom AFB, MA	-	-		1.100	Oct 2020	-		-		-	-	-	-	
Subtotal			-	-		1.100		-		-		-	-	-	N/A	
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	
Payload Test and Evaluation	PO	47 CTS : San Antonio, TX	-	0.200	Dec 2019	0.154	Dec 2020	-		-		-	-	-	-	
CMF Foundational Tool Testing	MIPR	47 CTS : San Antonio, TX	-	2.900	Jan 2020	0.600	Oct 2020	-		-		-	-	-	-	
Subtotal			-	3.100		0.754		-		-		-	-	-	N/A	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674540 / <i>Cyber Tech Products - Payloads</i>
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Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
PSC - Engineering & Technical Assistance Support Services (Various)	C/FFP	Various : San Antonio, TX	-	2.069	Apr 2020	1.118	Oct 2020	-		-		-	-	-	-
CMF Foundational Tool PSC (A&AS, FFRDC)	C/Various	Various : Various	-	3.800	Jan 2020	1.857	Oct 2020	-		-		-	-	-	-
Subtotal			-	5.869		2.975		-		-		-	-	-	N/A

	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		-	41.901	44.226	-	-	-	-	N/A

Remarks

In FY20, PE 0305251F, Cyberspace Operations Force and Force Support, Project 646008, US Cyber Command Technology Development efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674540, Cyber Tech Projects - Payloads, to consolidate prototyping and development of cyber payload capabilities.

In FY22, PE 0208087F, Distributed Cyber Warfare Operations, Project 674540, Cyber Tech Products - Payloads efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674543, AF Offensive Cyber Operations, to consolidate prototyping and development of offensive cyber operations capabilities.

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674540 / <i>Cyber Tech Products - Payloads</i>

	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
	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
Neptune Rumble																												
CMF Foundational Tool Development																												
Interoperability Development																												
Automated Test																												
Saturn Crash																												
Tool Development																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674540 / <i>Cyber Tech Products - Payloads</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Neptune Rumble				
CMF Foundational Tool Development	2	2020	4	2021
Interoperability Development	2	2020	4	2021
Automated Test	2	2020	4	2021
Saturn Crash				
Tool Development	1	2020	4	2021

Note

Neptune Rumble and Saturn Crash each develop payloads against a specific series of targets. These aspects are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO, 210-925-6614.

In FY2022, PE 0208087F, Distributed Cyber Warfare Operations, Project 674540, Cyber Tech Products - Payloads efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674543, AF Offensive Cyber Operations, to consolidate prototyping and development of offensive cyber operations capabilities.

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674541 / <i>Cyber Tech Projects - Platforms</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
674541: <i>Cyber Tech Projects - Platforms</i>	-	14.189	8.378	0.000	0.000	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

Note

In FY2022, PE 0208087F, Distributed Cyber Warfare Operations, Project 674541, Cyber Tech Projects - Platforms efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674543, AF Offensive Cyber Operations, to consolidate prototyping and development of offensive cyber operations capabilities.

A. Mission Description and Budget Item Justification

DCWO conducts Research, Development, Testing and Evaluation (RDT&E) leading to operations-ready cyberspace superiority capabilities including the transition of efforts from laboratory, industry, and academia via studies, accelerated prototyping, and technology demonstrations. DCWO consists of a portfolio of programs and projects providing the rapid acquisition of operational cyber capabilities. DCWO effectiveness comes from balancing funding among three capability thrust areas required for cyber warfare operations: Air Force Platforms, Access and Payloads. The DCWO portfolio provides capabilities by combining these three areas to provide cyber effects to Combatant Commanders. Cyber platforms serve as the primary operator interface in the DCWO portfolio and projects encompass hardware and software development.

The platform capability provides user interface and controls by leveraging industry and other Government/non-Government mission partners' applications and programs.

Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO, 210-925-6614.

This program element may include necessary emergent or unanticipated civilian pay expenses required to manage, execute, and deliver Air Force Distributed Cyber Warfare Operations for emergent or unanticipated weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605829F. In FY20 0.0M and in FY21 0.0M was expended for civilian pay expenses in this program element.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Platforms	14.189	8.378	0.000	0.000	0.000
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. CMP develops capability enhancements on a regular cadence and delivers					

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674541 / <i>Cyber Tech Projects - Platforms</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<p>them to operations based on operational need and acceptance timelines. The platform project also includes platform integration development activities necessary to integrate CMP into DCWO mission threads.</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, 210-925-6614.</p> <p>FY 2021 Plans:</p> <ul style="list-style-type: none"> - Continue enhancements to the CMP Platform to satisfy prioritized requirements from USAF Distributed Cyber Warfare Operations Mission Threads. - Continue to conduct delta accreditation and fielding of updated CMP software. - Continue to execute a continuous delivery program structure. <p>FY 2022 Base Plans: Refer to Project Number 674543. - FY21 was last year to use Project# 674541. Project# 674541 was consolidated to New Project# 674543 starting in FY22.</p> <p>FY 2022 OCO Plans: N/A</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement: N/A</p>					
Accomplishments/Planned Programs Subtotals	14.189	8.378	0.000	0.000	0.000

C. Other Program Funding Summary (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• OPAF 03 Line Item 831010: <i>COMSEC Equipment</i>	2.790	0.000	0.000	0.000	0.000	-	-	-	-	-	-
• OPAF 03 Line Item 834320: <i>C3 Countermeasures</i>	25.036	18.782	0.000	0.000	0.000	-	-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674541 / <i>Cyber Tech Projects - Platforms</i>

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

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u> <u>Base</u>	<u>FY 2022</u> <u>OCO</u>	<u>FY 2022</u> <u>Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
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Remarks

In FY21, all OPAF funds for the DCWO portfolio have been consolidated to Line Item 834320.

In FY22, all OPAF funds for the DCWO portfolio support Project# 674543.

D. Acquisition Strategy

The Distributed Cyber Warfare 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. Distributed Cyber Warfare 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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674541 / <i>Cyber Tech Projects - Platforms</i>
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Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
Platform Development	C/Various	Various : Various	-	11.104	Nov 2019	4.303	Nov 2020	-		-		-	-	-	-
Subtotal			-	11.104		4.303		-		-		-	-	-	N/A

Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
Platform Test and Evaluation	PO	47 CTS : San Antonio, TX	-	0.750	Dec 2019	0.150	Dec 2020	-		-		-	-	-	-
Subtotal			-	0.750		0.150		-		-		-	-	-	N/A

Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
PSC - Advisory & Assistance Services (A&AS & FFRDC Support)	C/Various	Various : San Antonio, TX	-	2.335	Oct 2019	3.925	Oct 2020	-		-		-	-	-	-
Subtotal			-	2.335		3.925		-		-		-	-	-	N/A

			Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	14.189	8.378	-	-	-	-	-	N/A

Remarks
 In FY2022, PE 0208087F, Distributed Cyber Warfare Operations, Project 674541, Cyber Tech Projects - Platforms efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674543, AF Offensive Cyber Operations, to consolidate prototyping and development of offensive cyber operations capabilities.

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674541 / <i>Cyber Tech Projects - Platforms</i>

FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
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

Cyber Mission Platform (CMP)	
CMP-H (Incrementally Delivered Each Quarter)	████████████████████
Build Infrastructure Tracking System (BITS)	████████████████████

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674541 / <i>Cyber Tech Projects - Platforms</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Cyber Mission Platform (CMP)				
CMP-H (Incrementally Delivered Each Quarter)	1	2020	4	2021
Build Infrastructure Tracking System (BITS)	1	2020	4	2021

Note

In FY2022, PE 0208087F, Distributed Cyber Warfare Operations, Project 674541, Cyber Tech Projects - Platforms efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674543, AF Offensive Cyber Operations, to consolidate prototyping and development of offensive cyber operations capabilities.

Each project delivers increments on a quarterly frequency. Increments 12 thru 20 are planned through FY 2022.

- Neptune Shield transitioned to sustainment.
- BITS realigned as platform development

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674542 / <i>Cyber Tech Projects - Access/Infrastructure</i>
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COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
674542: <i>Cyber Tech Projects - Access/Infrastructure</i>	-	11.635	15.550	0.000	0.000	0.000	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

Note

In FY2022, PE 0208087F, Distributed Cyber Warfare Operations, Project 674542, Cyber Tech Projects - Access/Infrastructure efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674543, AF Offensive Cyber Operations, to consolidate prototyping and development of offensive cyber operations capabilities.

A. Mission Description and Budget Item Justification

Distributed Cyber Warfare Operations (DCWO) conducts Research, Development, Testing and Evaluation (RDT&E) leading to operations-ready cyberspace superiority capabilities including the transition of efforts from laboratory, industry, and academia via studies, accelerated prototyping, and technology demonstrations. DCWO consists of a portfolio of programs and projects providing the rapid acquisition of operational cyber capabilities. DCWO effectiveness comes from balancing funding among three capability thrust areas required for cyber warfare operations: Air Force Platforms, Access and Payloads. The DCWO portfolio provides capabilities by combining these three areas to provide cyber effects to Combatant Commanders. Cyber access capabilities enables a variety of DCWO missions and projects encompass hardware and software development.

The Access capability provides connectivity and required infrastructure by leveraging industry and other Government/non-Government mission partners' applications and programs.

Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO, 210-925-6614.

This program element may include necessary emergent or unanticipated civilian pay expenses required to manage, execute, and deliver Air Force Distributed Cyber Warfare Operations for emergent or unanticipated weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605829F. In FY20 0.0M and in FY21 0.0M was expended for civilian pay expenses in this program element.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: Access	11.635	15.550	0.000	0.000	0.000
Description: The Access capability provides connectivity and required infrastructure by leveraging industry and other Government/non-Government mission partners' applications and programs.					

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674542 / <i>Cyber Tech Projects - Access/Infrastructure</i>

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
- Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO, 210-925-6614.					
<i>FY 2021 Plans:</i> - Continue to develop Air Force unique connectivity and required infrastructures across multiple spectrums leveraging industry and other Government/non-Government mission partner's applications and programs. - Continue to develop and transition Offensive Cyber Operations (OCO) quick reaction capabilities for next-generation DCWO weapon system supporting requirements from DCWO Mission Threads.					
<i>FY 2022 Base Plans:</i> Refer to Project Number 674543. - FY21 was last year to use Project# 674542. Project# 674542 was consolidated to New Project# 674543 starting in FY22.					
<i>FY 2022 OCO Plans:</i> N/A					
<i>FY 2021 to FY 2022 Increase/Decrease Statement:</i> N/A					
Accomplishments/Planned Programs Subtotals	11.635	15.550	0.000	0.000	0.000

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

<u>Line Item</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022 Base</u>	<u>FY 2022 OCO</u>	<u>FY 2022 Total</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPAF 03 Line Item 831010: <i>COMSEC Equipment</i>	2.790	0.000	0.000	0.000	0.000	-	-	-	-	-	-
• OPAF 03 Line Item 834320: <i>C3 Countermeasures</i>	25.036	18.782	0.000	0.000	0.000	-	-	-	-	-	-

Remarks

In FY21, all OPAF funds for the DCWO portfolio have been consolidated to Line Item 834320.

In FY22, all OPAF funds for the DCWO portfolio support Project# 674543.

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674542 / <i>Cyber Tech Projects - Access/Infrastructure</i>

D. Acquisition Strategy

The Distributed Cyber Warfare 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. Distributed Cyber Warfare 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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force												Date: May 2021				
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)								
3600 / 7				PE 0208087F / Distributed Cyber Warfare Operations				674542 / Cyber Tech Projects - Access/Infrastructure								
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	
Access Development	Various	Various : Various	-	6.512	Nov 2019	11.534	Nov 2020	-		-		-	-	-	-	
Subtotal			-	6.512		11.534		-		-		-	-	-	N/A	
Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	
DCA - Access Development	TBD	USAF : Hanscom AFB, MA	-	-		1.600	Oct 2020	-		-		-	-	-	-	
Subtotal			-	-		1.600		-		-		-	-	-	N/A	
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	
Access Test and Evaluation	PO	47 CTS : San Antonio, TX	-	0.760	Dec 2019	0.255	Dec 2020	-		-		-	-	-	-	
Subtotal			-	0.760		0.255		-		-		-	-	-	N/A	
Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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 - Acquisition Support (Various)	Various	Various : San Antonio, TX	-	4.363	Oct 2019	2.161	Oct 2020	-		-		-	-	-	-	
Subtotal			-	4.363		2.161		-		-		-	-	-	N/A	
Project Cost Totals			-	11.635		15.550		-		-		-	-	-	N/A	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force							Date: May 2021			
Appropriation/Budget Activity 3600 / 7			R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>			Project (Number/Name) 674542 / <i>Cyber Tech Projects - Access/Infrastructure</i>				
	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	Cost To Complete	Total Cost	Target Value of Contract	

Remarks
 In FY2022, PE 0208087F, Distributed Cyber Warfare Operations, Project 674542, Cyber Tech Projects - Access/Infrastructure efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674543, AF Offensive Cyber Operations, to consolidate prototyping and development of offensive cyber operations capabilities.

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674542 / <i>Cyber Tech Projects - Access/Infrastructure</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Hydra - AF Unique Access				
Development	1	2020	4	2021
Next-Gen Network Attack				
Development	1	2020	4	2021
Coral Series - AF Infrastructure				
Development	1	2020	4	2021

Note

Ongoing development to provide continuously updated access for D5 operations.

- Cloud Network Transport System (CNeTS) transitioned to sustainment.
- Neptune Zephyr no longer under developed in DCWO portfolio.
- Build Infrastructure Tracking Systems(BITS) development transferred to Platforms thrust under Project #674543.

- Robust Infrastructure expansion transferred to US Army as MDA for Joint Cyber Access Platform (JCAP).

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force										Date: May 2021		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>				Project (Number/Name) 674543 / <i>AF Offensive Cyber Operations</i>			
COST (\$ in Millions)	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
674543: <i>AF Offensive Cyber Operations</i>	-	0.000	0.000	72.487	0.000	72.487	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY2022, PE 0208087F, Distributed Cyber Warfare Operations, Project 674540, Cyber Tech Products - Payloads; Project 674541, Cyber Tech Projects - Platforms; and Project 674542, Cyber Tech Projects - Access/Infrastructure efforts were all transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674543, AF Offensive Cyber Operations, to consolidate prototyping and development of offensive cyber operations capabilities.

A. Mission Description and Budget Item Justification

Distributed Cyber Warfare Operations (DCWO) conducts Research, Development, Testing and Evaluation (RDT&E) leading to operations-ready cyberspace superiority capabilities including the transition of efforts from laboratory, industry, and academia via studies, accelerated prototyping, and technology demonstrations. DCWO consists of a portfolio of programs and projects providing the rapid acquisition of operational cyber capabilities. DCWO effectiveness comes from balancing funding among three capability thrust areas required for cyber warfare operations: Air Force Platforms, Access and Payloads. The DCWO portfolio provides capabilities by combining these three areas to provide cyber effects to Combatant Commanders.

The platform capability provides user interface and controls, the access/infrastructure capability provides connectivity and the payloads capability develops and fields cyber tools and payloads all leveraging industry and other Government/non-Government mission partnered applications and programs.

Some aspects of the effort are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO, 210-925-6614.

This program element may include necessary emergent or unanticipated civilian pay expenses required to manage, execute, and deliver Air Force Distributed Cyber Warfare Operations for emergent or unanticipated weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605829F. In FY20 0.0M and in FY21 0.0M was expended for civilian pay expenses in this program element.

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

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Title: AF Cyber Mission Platform (CMP)	0.000	0.000	16.767	0.000	16.767
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					

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674543 / <i>AF Offensive Cyber Operations</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<p>delivery of operational capabilities. CMP develops capability enhancements on a regular cadence and delivers them to operations based on operational need and acceptance timelines. The platform project also includes platform integration development activities necessary to integrate CMP into DCWO mission threads.</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, 210-925-6614.</p> <p>FY 2021 Plans: N/A</p> <p>FY 2022 Base Plans:</p> <ul style="list-style-type: none"> - Will continue enhancements to the CMP Platform to satisfy prioritized requirements from USAF Distributed Cyber Warfare Operations Mission Threads. - Will continue to conduct delta accreditation and fielding of updated CMP software. - Will continue to execute a continuous delivery program structure. <p>FY 2022 OCO Plans: N/A</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement: Increased funding will deliver capabilities to remote cyber operations squadrons and upgrade weapons system infrastructure to cloud and cross domain solution (CDS) services framework. This modernization addresses data flow issues with aging CDS and supports integration in DoD elements such as Unified Platform and big data platforms.</p>					
<p>Title: Access/Infrastructure</p> <p>Description: The Access capability provides connectivity and required infrastructure by leveraging industry and other Government/non-Government mission partners' applications and programs.</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, 210-925-6614.</p> <p>FY 2021 Plans:</p>	-	0.000	14.574	0.000	14.574

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674543 / <i>AF Offensive Cyber Operations</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
<p>N/A</p> <p>FY 2022 Base Plans:</p> <ul style="list-style-type: none"> - Will continue to develop Air Force unique connectivity and required infrastructures across multiple spectrums leveraging industry and other Government/non-Government mission partner's applications and programs. - Will continue to develop and transition Offensive Cyber Operations (OCO) quick reaction capabilities for next-generation DCWO weapon system supporting requirements from DCWO Mission Threads. - Will begin to develop and transition data analytic tools supporting access capabilities. <p>FY 2022 OCO Plans: N/A</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement: N/A</p>					
<p>Title: Payloads</p> <p>Description: The payloads capability develops and fields cyber tools and payloads leveraging industry and other Government/non-Government mission partnered applications and programs.</p> <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, 210-925-6614. <p>FY 2021 Plans: N/A</p> <p>FY 2022 Base Plans:</p> <ul style="list-style-type: none"> - Will continue the development of cyber tools and exploits by leveraging industry and other government/non-Government mission partnered developed applications and programs. - Will continue to expand USCYBERCOM-funded efforts to produce prioritized family of foundational tools. <p>FY 2022 OCO Plans: N/A</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement:</p>	0.000	0.000	41.146	0.000	41.146

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674543 / <i>AF Offensive Cyber Operations</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
N/A					
Accomplishments/Planned Programs Subtotals	0.000	0.000	72.487	0.000	72.487

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	Cost To Complete	Total Cost
• OPAF 03 Line Item 834320: <i>C3 Countermeasures</i>	0.000	0.000	16.848	0.000	16.848	-	-	-	-	-	-

Remarks
In FY21, all OPAF funds for the DCWO portfolio have been consolidated to Line Item 834320.

D. Acquisition Strategy
The Distributed Cyber Warfare 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. Distributed Cyber Warfare 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.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force												Date: May 2021				
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)								
3600 / 7				PE 0208087F / Distributed Cyber Warfare Operations				674543 / AF Offensive Cyber Operations								
Product Development (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	
Platform Development	Various	Various : Various	-	-		-		12.500	Nov 2021	-		12.500	-	-	-	
Access Development	Various	Various : Various	-	-		-		10.419	Nov 2021	-		10.419	-	-	-	
Payload Development	Various	Various : Various	-	-		-		34.446	Nov 2021	-		34.446	-	-	-	
Subtotal			-	-		-		57.365		-		57.365	-	-	N/A	
Support (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	
DCA - AF Offensive Cyber Operations Development	TBD	USAF : Hanscom AFB, MA	-	-		-		2.360	Oct 2021	-		2.360	-	-	-	
Subtotal			-	-		-		2.360		-		2.360	-	-	N/A	
Test and Evaluation (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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	
Platform Test and Evaluation	PO	47 CTS : San Antonio, TX	-	-		-		0.300	Dec 2021	-		0.300	-	-	-	
Access Test and Evaluation	PO	47 CTS : San Antonio, TX	-	-		-		0.308	Dec 2021	-		0.308	-	-	-	
Payload Test and Evaluation	PO	47 CTS : San Antonio, TX	-	-		-		2.492	Dec 2021	-		2.492	-	-	-	
Subtotal			-	-		-		3.100		-		3.100	-	-	N/A	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Air Force **Date:** May 2021

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674543 / <i>AF Offensive Cyber Operations</i>
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Management Services (\$ in Millions)				FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 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			
PSC - Acquisition Support (Various)	Various	Various : San Antonio, TX	-	-		-		9.662	Nov 2021	-		9.662	-	-	-
Subtotal			-	-		-		9.662		-		9.662	-	-	N/A
Project Cost Totals			-	-		0.000		72.487		-		72.487	-	-	N/A

Remarks
 In FY2022, PE 0208087F, Distributed Cyber Warfare Operations, Project 674540, Cyber Tech Products - Payloads, Project 674541, Cyber Tech Projects - Platforms, and Project 674542, Cyber Tech Projects - Access/Infrastructure efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674543, AF Offensive Cyber Operations, to consolidate prototyping and development of offensive cyber operations capabilities.

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674543 / <i>AF Offensive Cyber Operations</i>

FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026			
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

Cyber Mission Platform (CMP)	
CMP-H (Incrementally Delivered Each Quarter)	██████████
Build Infrastructure Tracking System (BITS)	██████████
Access/Infrastructure	
Hydra - AF Unique Access	██████████
Next-Gen Network Attack	██████████
Data Analytics	██████████
Payloads	
Payloads - Neptune Rumble	██████████
Payloads - Saturn Crash	██████████

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Air Force		Date: May 2021
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	Project (Number/Name) 674543 / <i>AF Offensive Cyber Operations</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Cyber Mission Platform (CMP)				
CMP-H (Incrementally Delivered Each Quarter)	1	2022	4	2022
Build Infrastructure Tracking System (BITS)	1	2022	3	2022
Access/Infrastructure				
Hydra - AF Unique Access	1	2022	4	2022
Next-Gen Network Attack	1	2022	4	2022
Data Analytics	1	2022	4	2022
Payloads				
Payloads - Neptune Rumble	1	2022	4	2022
Payloads - Saturn Crash	1	2022	4	2022

Note

Cyber Mission Platform (Delivers increments on a quarterly frequency)

- Increments 12 thru 15 are planned through FY 2022
- Cloud Network Transport System (CNeTS) transitioned to sustainment.
- Neptune Zephyr is no longer under development in the AF DCWO portfolio, efforts transition to US Army as the Joint Cyber Access Platform (JCAP) program office.
- BITS realigned as a platform project and will transition to sustainment in FY22.

Access/Infrastructures:

- DCWO Infrastructure is no longer under development in the AF DCWO portfolio, efforts transition to US Army as the JCAP program office.
- Access projects are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO, 210-925-6614.

Payloads

- Neptune Rumble and Saturn Crash each develop payloads against a specific series of targets.
- Payload projects are classified and will be provided on a need to know basis. For further information please contact AFLCMC/HNCO, 210-925-6614.