

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification:** PB 2021 Air Force **Date:** February 2020

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

COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	-	38.857	35.178	68.279	0.000	68.279	105.450	91.132	110.688	94.795	Continuing	Continuing
670375: <i>Network Warfare Systems and Support</i>	-	38.857	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	38.857
674540: <i>Cyber Tech Products - Payloads</i>	-	0.000	6.615	44.351	0.000	44.351	42.987	44.496	43.718	42.671	Continuing	Continuing
674541: <i>Cyber Tech Projects - Platforms</i>	-	0.000	10.054	8.378	0.000	8.378	31.598	22.706	32.480	25.007	Continuing	Continuing
674542: <i>Cyber Tech Projects - Access/Infrastructure</i>	-	0.000	18.509	15.550	0.000	15.550	30.865	23.930	34.490	27.117	Continuing	Continuing

**Note**  
In FY2021, 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

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2021 Air Force	<b>Date:</b> February 2020
--	----------------------------

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

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 civilian pay expenses required to manage, execute, and deliver Air Force Distributed Cyber Warfare Operations weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program elements 0605831F.

The FY 2021 funding request was reduced by \$3.215 million to account for the availability of prior year execution balances.

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>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Previous President's Budget	40.168	35.178	33.620	0.000	33.620
Current President's Budget	38.857	35.178	68.279	0.000	68.279
Total Adjustments	-1.311	0.000	34.659	0.000	34.659
• 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	-1.311	0.000			
• Other Adjustments	0.000	0.000	34.659	0.000	34.659

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Air Force										<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 3600 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>					<b>Project (Number/Name)</b> 670375 / <i>Network Warfare Systems and Support</i>		
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
670375: <i>Network Warfare Systems and Support</i>	-	38.857	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	38.857
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

In FY20, PE 0208087F, Distributed Cyber Warfare Operations, Project 670375, Network Warfare Systems and Support efforts were distributed to PE 0208087F, Distributed Cyber Warfare Operations, Project 674540, Cyber Tech Projects - Payloads, Project 674541, Platforms, and Project 674542, Cyber Tech Projects - Access/Infrastructure, to provide additional clarity and structure to the Distributed Cyber Warfare Operations portfolio.

**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.

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.

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

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<b>Title:</b> Platforms	22.920	0.000	0.000	0.000	0.000
<b>Description:</b> 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 them to operations based on operational need and acceptance timelines. The platform major thrust also includes platform integration development activities necessary to integrate CMP into DCWO mission threads.					
- 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.					
<b>FY 2020 Plans:</b>					

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Air Force			<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 670375 / <i>Network Warfare Systems and Support</i>			
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>					
Refer to Project Number 674541. -FY19 last year to use Project# 670375. Project# 670375 transition to New Project# 674541 starting FY20.					
<b>FY 2021 Base Plans:</b> N/A					
<b>FY 2021 OCO Plans:</b> N/A					
<b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> N/A					
<b>Title:</b> Access					
<b>Description:</b> 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.					
<b>FY 2020 Plans:</b> Refer to Project Number 674542. -FY19 last year to use Project# 670375. Project# 670375 transition to New Project# 674542 starting FY20.					
<b>FY 2021 Base Plans:</b> N/A					
<b>FY 2021 OCO Plans:</b> N/A					
<b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> N/A					
<b>Title:</b> Payloads					
<b>Description:</b> The payloads capability develops and fields cyber tools and payloads leveraging industry and other Government/non-Government mission partnered applications and programs.					
	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
	7.869	0.000	0.000	0.000	0.000
	8.068	0.000	0.000	0.000	0.000

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 670375 / <i>Network Warfare Systems and Support</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
- 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.					
<b><i>FY 2020 Plans:</i></b> Refer to Project Number 674540. -FY19 last year to use Project# 670375. Project# 670375 transition to New Project# 674540 starting FY20.					
<b><i>FY 2021 Base Plans:</i></b> N/A					
<b><i>FY 2021 OCO Plans:</i></b> N/A					
<b><i>FY 2020 to FY 2021 Increase/Decrease Statement:</i></b> N/A					
<b>Accomplishments/Planned Programs Subtotals</b>	38.857	0.000	0.000	0.000	0.000

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• OPAF 03 Line Item 831010: <i>COMSEC Equipment</i>	0.070	2.790	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	2.860
• OPAF 03 Line Item 834320: <i>C3 Countermeasures</i>	25.947	25.036	18.782	-	18.782	29.022	23.323	38.538	39.079	Continuing	Continuing

**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

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 670375 / <i>Network Warfare Systems and Support</i>

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**

**Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 670375 / <i>Network Warfare Systems and Support</i>
--	---	---

<b>Product Development (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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	Various	Various : Various	-	20.145	Nov 2018	-		-		-		-	0.000	20.145	-
Access/Infrastructure	Various	Various : Various	-	4.976	Jan 2019	-		-		-		-	0.000	4.976	-
Payloads	Various	Various : Various	-	5.749	Jan 2019	-		-		-		-	0.000	5.749	-
<b>Subtotal</b>			-	30.870		-		-		-		-	0.000	30.870	N/A

<b>Test and Evaluation (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Platforms	MIPR	47 CTS : San Antonio, TX	-	0.694	Dec 2018	-		-		-		-	0.000	0.694	-
Access/Infrastructure	MIPR	47 CTS : San Antonio, TX	-	0.407	Dec 2018	-		-		-		-	0.000	0.407	-
Payloads	MIPR	Various : San Antonio, TX	-	0.000		-		-		-		-	0.000	0.000	-
<b>Subtotal</b>			-	1.101		-		-		-		-	0.000	1.101	N/A

<b>Management Services (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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) - Platforms	C/Various	Various : San Antonio, TX	-	2.081	Oct 2018	-		-		-		-	0.000	2.081	-
PSC - Acquisition Support - Access	C/Various	Various : San Antonio, TX	-	2.486	Oct 2018	-		-		-		-	0.000	2.486	-
PSC - Engineering & Technical Assistance Support Services (ETASS & FFRDC) - Payloads	C/FFP	Various : San Antonio, TX	-	2.319	Apr 2018	-		-		-		-	0.000	2.319	-



**UNCLASSIFIED**

<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 670375 / <i>Network Warfare Systems and Support</i>

	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	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
<b>Platform</b>																												
CMP Development Increment 2																												
Platform Integration																												
<b>Access</b>																												
AF Unique Access																												
Next-Gen OCO WS																												
DCWO Infrastructure Development																												
<b>Payloads</b>																												
Payload Development																												
Corner Series Development																												
Tools Development																												

**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 670375 / <i>Network Warfare Systems and Support</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Platform</b>				
CMP Development Increment 2	1	2019	4	2019
Platform Integration	2	2019	4	2019
<b>Access</b>				
AF Unique Access	1	2019	4	2019
Next-Gen OCO WS	1	2019	4	2019
DCWO Infrastructure Development	1	2019	4	2019
<b>Payloads</b>				
Payload Development	1	2019	4	2019
Corner Series Development	1	2019	4	2019
Tools Development	1	2019	4	2019

**Note**

Starting in FY 2020, future projects are broken out under each respective BPAC:

- 674540: Payloads
- 674541: Platforms
- 674542: Access/Infrastructure

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Air Force										<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 3600 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>				<b>Project (Number/Name)</b> 674540 / <i>Cyber Tech Products - Payloads</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
674540: <i>Cyber Tech Products - Payloads</i>	-	0.000	6.615	44.351	0.000	44.351	42.987	44.496	43.718	42.671	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

In FY2020, PE 0208087F, Distributed Cyber Warfare Operations, Project 670375, Network Warfare Systems and Support payload efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674540, Cyber Tech Projects - Payloads, to provide additional clarity and structure to the Distributed Cyber Warfare Operations portfolio.

In FY2021, 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) 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.

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

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<b>Title:</b> Payloads	0.000	6.615	44.351	0.000	44.351
<b>Description:</b> The payloads capability develops and fields cyber tools and payloads leveraging industry and other Government/non-Government mission partnered applications and programs.					

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 674540 / <i>Cyber Tech Products - Payloads</i>

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

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.

***FY 2020 Plans:***

- 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.
- Expand USCYBERCOM-funded efforts to produce prioritized family of foundational tools.
- Develop additional tool development software teams.
- Transition and integrate available prototype tool kits to DCWO portfolio.
- Deliver prototype tools into USCYBERCOM architecture to ensure interoperability.
- Develop automated testing and information assurance support tools.

***FY 2021 Base Plans:***

- Will continue the development of cyber tools and payloads by leveraging industry and other government/non-Government mission partnered developed applications and programs.
- Will 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.
- Will continue to expand USCYBERCOM-funded efforts to produce prioritized family of foundational tools.
- Will continue to develop additional tool development software teams.
- Will continue to transition and integrate available prototype tool kits to DCWO portfolio.

FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 674540 / <i>Cyber Tech Products - Payloads</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
- Will continue to deliver prototype tools into USCYBERCOM architecture to ensure interoperability.					
- Will continue to develop automated testing and information assurance support tools.					
<b><i>FY 2021 OCO Plans:</i></b> N/A					
<b><i>FY 2020 to FY 2021 Increase/Decrease Statement:</i></b> -Funding increase due to consolidation of Cyber Mission forces (CMF) Foundational Tools requirements from PE 0305251F.					
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	6.615	44.351	0.000	44.351

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021 Base</u>	<u>FY 2021 OCO</u>	<u>FY 2021 Total</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPAF 03 Line Item 831010: <i>COMSEC Equipment</i>	0.070	2.790	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	2.860
• OPAF 03 Line Item 834320: <i>C3 Countermeasures</i>	25.947	25.036	18.782	-	18.782	29.022	23.323	38.538	39.079	Continuing	Continuing

**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.

**UNCLASSIFIED**

Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force												Date: February 2020				
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								
<b>Product Development (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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	-	-		4.346	Nov 2019	4.738	Oct 2020	-		4.738	Continuing	Continuing	-	
CMF Foundational Tool Development	Various	Various : Various	-	-		-		27.284	Oct 2020	-		27.284	Continuing	Continuing	-	
CMF Interoperability Development	Various	Various : Various	-	-		-		3.800	Nov 2020	-		3.800	Continuing	Continuing	-	
CMF Automated Test Development	Various	Various : Various	-	-		-		3.700	Oct 2020	-		3.700	Continuing	Continuing	-	
<b>Subtotal</b>			-	-		4.346		39.522		-		39.522	Continuing	Continuing	N/A	
<b>Test and Evaluation (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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	MIPR	47 CTS : San Antonio, TX	-	-		0.200	Dec 2019	0.154	Dec 2020	-		0.154	Continuing	Continuing	-	
CMF Foundational Tool Testing	MIPR	47 CTS : San Antonio, TX	-	-		-		0.600	Oct 2020	-		0.600	Continuing	Continuing	-	
<b>Subtotal</b>			-	-		0.200		0.754		-		0.754	Continuing	Continuing	N/A	
<b>Management Services (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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 (Various)	C/FFP	Various : San Antonio, TX	-	-		2.069	Apr 2020	2.218	Oct 2020	-		2.218	Continuing	Continuing	-	
CMF Foundational Tool PSC (A&AS, FFRDC)	C/Various	Various : Various	-	-		-		1.857	Oct 2020	-		1.857	Continuing	Continuing	-	
<b>Subtotal</b>			-	-		2.069		4.075		-		4.075	Continuing	Continuing	N/A	

**UNCLASSIFIED**

**Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 674540 / <i>Cyber Tech Products - Payloads</i>
--	---	--

<b>Management Services (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			

**Remarks**  
 In FY2021, 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.

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	-	-	6.615	44.351	-	44.351	Continuing	Continuing	N/A

**Remarks**



**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 674540 / <i>Cyber Tech Products - Payloads</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b><i>Payload Development</i></b>				
Payloads Development	1	2020	4	2025
Corner Series Development	1	2020	4	2025
Tools Development	1	2020	4	2025
CMF Foundational Tool Development	1	2021	4	2025
CMF Interoperability Development	1	2021	4	2022
CMF Automated Test Development	1	2021	4	2022

**Note**

Corner Series develops 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.

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Air Force										<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 3600 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>				<b>Project (Number/Name)</b> 674541 / <i>Cyber Tech Projects - Platforms</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
674541: <i>Cyber Tech Projects - Platforms</i>	-	0.000	10.054	8.378	0.000	8.378	31.598	22.706	32.480	25.007	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

In FY2020, PE 0208087F, Distributed Cyber Warfare Operations, Project 670375, Network Warfare Systems and Support platform efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674541, Platforms, to provides additional clarity and structure to the Distributed Cyber Warfare Operations portfolio.

**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.

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

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<b>Title:</b> Platforms	0.000	10.054	8.378	0.000	8.378
<b>Description:</b> 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 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.					

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 674541 / <i>Cyber Tech Projects - Platforms</i>

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

	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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.					
<b>FY 2020 Plans:</b> - Continue enhancements to the CMP Platform to satisfy prioritized requirements from USAF Offensive Cyber Operations Mission Threads.  - Execute an approved FY18 NDAA Pilot Program for Agile Software Development.					
<b>FY 2021 Base Plans:</b> - 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.					
<b>FY 2021 OCO Plans:</b> N/A					
<b>FY 2020 to FY 2021 Increase/Decrease Statement:</b> - Funding decreased to address other USAF priorities.					
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	10.054	8.378	0.000	8.378

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

Line Item	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
• OPAF 03 Line Item 831010: <i>COMSEC Equipment</i>	0.070	2.790	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	2.860
• OPAF 03 Line Item 834320: <i>C3 Countermeasures</i>	25.947	25.036	18.782	-	18.782	29.022	23.323	38.538	39.079	Continuing	Continuing

**Remarks**

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

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 674541 / <i>Cyber Tech Projects - Platforms</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.

**UNCLASSIFIED**

**Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 674541 / <i>Cyber Tech Projects - Platforms</i>
--	---	---

<b>Product Development (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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	-	-		6.969	Nov 2019	4.303	Nov 2020	-		4.303	Continuing	Continuing	-
<b>Subtotal</b>			-	-		6.969		4.303		-		4.303	Continuing	Continuing	N/A

<b>Test and Evaluation (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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	MIPR	47 CTS : San Antonio, TX	-	-		0.750	Dec 2019	0.150	Dec 2020	-		0.150	Continuing	Continuing	-
<b>Subtotal</b>			-	-		0.750		0.150		-		0.150	Continuing	Continuing	N/A

<b>Management Services (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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	-		3.925	Continuing	Continuing	-
<b>Subtotal</b>			-	-		2.335		3.925		-		3.925	Continuing	Continuing	N/A

			Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>			-	-	10.054	8.378	-	8.378	Continuing	Continuing	N/A

**Remarks**

**UNCLASSIFIED**

<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 674541 / <i>Cyber Tech Projects - Platforms</i>

	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	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

<b>Platform Development: CMP</b>	
CMP Program (Incrementally Delivered Each Quarter)	
<b>Platform Integration: NEPTUNE SHIELD</b>	
NEPTUNE SHIELD (Incrementally Delivered Each Quarter)	

**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 674541 / <i>Cyber Tech Projects - Platforms</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Platform Development: CMP</b>				
CMP Program (Incrementally Delivered Each Quarter)	1	2020	4	2025
<b>Platform Integration: NEPTUNE SHIELD</b>				
NEPTUNE SHIELD (Incrementally Delivered Each Quarter)	1	2020	4	2025

**Note**

Each project delivers increments on a quarterly frequency. Increments 4 thru 11 are planned through FY 2021.

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Air Force										<b>Date:</b> February 2020		
<b>Appropriation/Budget Activity</b> 3600 / 7					<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>				<b>Project (Number/Name)</b> 674542 / <i>Cyber Tech Projects - Access/Infrastructure</i>			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
674542: <i>Cyber Tech Projects - Access/Infrastructure</i>	-	0.000	18.509	15.550	0.000	15.550	30.865	23.930	34.490	27.117	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

In FY20, PE 0208087F, Distributed Cyber Warfare Operations, Project 670375, Network Warfare Systems and Support access and infrastructure efforts were transferred to PE 0208087F, Distributed Cyber Warfare Operations, Project 674542, Cyber Tech Projects - Access/Infrastructure, to provide additional clarity and structure to the Distributed Cyber Warfare Operations portfolio.

**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.

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

	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<b>Title:</b> Access	0.000	18.509	15.550	0.000	15.550
<b>Description:</b> 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.					
<b>FY 2020 Plans:</b>					

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 674542 / <i>Cyber Tech Projects - Access/Infrastructure</i>

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
- 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.					
<b><i>FY 2021 Base Plans:</i></b>					
- 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.					
<b><i>FY 2021 OCO Plans:</i></b>					
N/A					
<b><i>FY 2020 to FY 2021 Increase/Decrease Statement:</i></b>					
-Funding decreased from FY2020 to FY2021 due to transition to sustainment.					
<b>Accomplishments/Planned Programs Subtotals</b>	0.000	18.509	15.550	0.000	15.550

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• OPAF 03 Line Item 831010: <i>COMSEC Equipment</i>	0.070	2.790	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	2.860
• OPAF 03 Line Item 834320: <i>C3 Countermeasures</i>	25.947	25.036	18.782	-	18.782	29.022	23.323	38.538	39.079	Continuing	Continuing

**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-

**UNCLASSIFIED**

<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 674542 / <i>Cyber Tech Projects - Access/Infrastructure</i>
<p>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.</p>		

**UNCLASSIFIED**

**Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force** **Date:** February 2020

<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 674542 / <i>Cyber Tech Projects - Access/Infrastructure</i>
--	---	---

<b>Product Development (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Access Development	Various	Various : Various	-	-		13.386	Nov 2019	11.534	Nov 2020	-		11.534	Continuing	Continuing	-
<b>Subtotal</b>			-	-		13.386		11.534		-		11.534	Continuing	Continuing	N/A

<b>Test and Evaluation (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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			
Access Test and Evaluation	MIPR	47 CTS : San Antonio, TX	-	-		0.760	Dec 2019	0.255	Dec 2020	-		0.255	Continuing	Continuing	-
<b>Subtotal</b>			-	-		0.760		0.255		-		0.255	Continuing	Continuing	N/A

<b>Management Services (\$ in Millions)</b>				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 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)	C/Various	Various : San Antonio, TX	-	-		4.363	Oct 2019	3.761	Oct 2020	-		3.761	Continuing	Continuing	-
<b>Subtotal</b>			-	-		4.363		3.761		-		3.761	Continuing	Continuing	N/A

			Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>			-	-	18.509	15.550	-	15.550	Continuing	Continuing	N/A

**Remarks**



**UNCLASSIFIED**

<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2021 Air Force		<b>Date:</b> February 2020
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0208087F / <i>Distributed Cyber Warfare Operations</i>	<b>Project (Number/Name)</b> 674542 / <i>Cyber Tech Projects - Access/Infrastructure</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>Access Development</b>				
AF Unique Access	1	2020	4	2025
Next-Gen Offensive Cyber Operations Weapon System	1	2020	4	2025
DCWO Infrastructure Development	1	2020	4	2025
<b>Cloud Network Transport System (CNeTS)</b>				
CNeTS Development (Incrementally Delivered Each Year)	1	2021	4	2024
<b>Build Infrastructure Tracking Systems (BITS)</b>				
BITS Development	1	2021	3	2022
<b>NEPTUNE ZEPHYR (NZ)</b>				
NZ Development (Incrementally Delivered Every 6 Months)	1	2021	2	2022

**Note**

Ongoing development to provide continuously updated access for D5 operations.