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

<b>Appropriation/Budget Activity</b> 2040: Research, Development, Test & Evaluation, Army / BA 3: Advanced Technology Development (ATD)	<b>R-1 Program Element (Number/Name)</b> PE 0603457A / C3I Cyber Advanced Development
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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	-	25.492	43.357	31.426	-	31.426	-	-	-	-	-	-
6CY: Autonomous Cyber Advanced Technology	-	6.000	5.995	9.304	-	9.304	-	-	-	-	-	-
7CY: Decoy and Deterrence Advanced Technology	-	0.186	-	-	-	-	-	-	-	-	-	-
8CY: Information Trust Advanced Technology	-	3.052	10.900	15.876	-	15.876	-	-	-	-	-	-
9CY: Network Access and Effects Advanced Technology	-	1.431	4.464	4.347	-	4.347	-	-	-	-	-	-
CB4: Offensive Cyber Operations (OCO) Mirror Adv Tech	-	4.823	1.998	1.899	-	1.899	-	-	-	-	-	-
CB6: C3I Cyber Advanced Development (CA)	-	10.000	20.000	-	-	-	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

This PE matures and demonstrates technologies for offensive and defensive cyber operations in tactical environments. Efforts optimize devices, techniques, services, software and algorithms to enable cyber situational understanding and Cyber Electromagnetic Activities (CEMA). For offensive cyber, efforts demonstrate integrated electronic attack (EA) and CEMA hardware and software to execute force protection (FP), EA, electronic surveillance (ES), signals intelligence (SIGINT), electronic warfare (EW) and cyber missions in a dynamic, distributed and coordinated fashion. For defensive cyber, efforts demonstrate hardware and software to protect tactical wired and wireless networks against modern cyber attacks and focuses on configuration, operation, monitoring, data integrity, and defense in bandwidth constrained tactical environments while reducing the operator workload required to conduct these functions.

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

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<b>Appropriation/Budget Activity</b> 2040: <i>Research, Development, Test &amp; Evaluation, Army / BA 3: Advanced Technology Development (ATD)</i>	<b>R-1 Program Element (Number/Name)</b> PE 0603457A / <i>C3I Cyber Advanced Development</i>
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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>
Previous President's Budget	23.769	23.357	28.773	-	28.773
Current President's Budget	25.492	43.357	31.426	-	31.426
Total Adjustments	1.723	20.000	2.653	-	2.653
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	10.000	20.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-8.277	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	2.653	-	2.653

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

**Project:** CB6: *C3I Cyber Advanced Development (CA)*

Congressional Add: *Program Increase*

Congressional Add: *Program increase - high bandwidth cryptomodule enhancements and certification*

Congressional Add: *Program increase - low SWAP software-defined MFEW*

Congressional Add Subtotals for Project: CB6

Congressional Add Totals for all Projects

	<b>FY 2020</b>	<b>FY 2021</b>
	10.000	-
	-	10.000
	-	10.000
Congressional Add Subtotals for Project: CB6	10.000	20.000
Congressional Add Totals for all Projects	10.000	20.000

**Change Summary Explanation**

0603457A- Increases in Program Element funding in Fiscal Year (FY) 2022 is due to an increase of funds that were transitioned from applied research efforts in Program Element 0602213A (C3I Applied Cyber); specifically projects CY6 and CY8.

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

<b>Appropriation/Budget Activity</b> 2040 / 3					<b>R-1 Program Element (Number/Name)</b> PE 0603457A / C3I Cyber Advanced Development				<b>Project (Number/Name)</b> 6CY / Autonomous Cyber Advanced Technology			
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
6CY: Autonomous Cyber Advanced Technology	-	6.000	5.995	9.304	-	9.304	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

In Fiscal Year (FY) 2022 funding is realigned from:  
 PE 0603463A (Network C3I Advanced Technology) Project AP8 (Comms/Horiz Int for Army Mod Priorities Adv Tech)  
 PE 0602213A (C3I Applied Cyber) Project CY8 (Cyber Security App Research and Exper Partner Tech)

**A. Mission Description and Budget Item Justification**

This Project will demonstrate defensive effects to adversarial use of artificial intelligence (AI) and machine learning (ML) to avoid detection and deceive our automated technologies driving the network decisions. This Project provides cyber autonomy through science & technology advancements. Work in this project complements PE 0602213A (C3I Applied Cyber) Project CY6 (Autonomous Cyber Technology)

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Work in this Project is performed by the United States Army Futures Command.

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

	FY 2020	FY 2021	FY 2022
<b>Title:</b> Autonomous Cyber	6.000	5.995	9.304
<b>Description:</b> This effort will develop proof-of-concept sensors that can adapt to and autonomously react to adversary cyber-attack and develop a cyber response course of action decision aid for cyber defenders to validate correctness of actions and to speed response decisions.			
<b>FY 2021 Plans:</b> Mature and demonstrate proof-of-concept cyber response course of action decision aid software that will ingest and correlate event feeds from existing sensors, cybersecurity applications, and services to provide intuitive recommendations to the S6 Cyber Electromagnetic Activities (CEMA) personnel for use in countering adversarial cybersecurity events. This technology will ease the burden of knowledge, validate correctness of actions, and speed response decisions.			
<b>FY 2022 Plans:</b> Will validate the interoperable AI/ML based cyber defense decision aid architecture supporting warfighter planning in a high-fidelity cyber emulation environment; will demonstrate significant performance improvements in cyber response course of action decision			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Army		<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 2040 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603457A / C3I Cyber Advanced Development	<b>Project (Number/Name)</b> 6CY I Autonomous Cyber Advanced Technology		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
aid software while optimizing the ingestion and correlation of event feeds from existing sensors, cybersecurity applications, and services to provide intuitive recommendations to the S6 Cyber Electromagnetic Activities (CEMA) personnel for use in countering adversarial cybersecurity events in a high-fidelity cyber emulation environment. This technology will ease the burden of knowledge, validate correctness of actions, and speed response decisions.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Funding in this effort was realigned from PE 0603463A Project AP8 (Comms/Horiz Int for Army Mod Priorities Adv Tech) and PE 0602213A (C3I Applied Cyber) Project CY8 (Cyber Security App Research and Exper Partner Tech) to increase efforts to improve and demonstrate cyber response course of action decision aid software.				
<b>Accomplishments/Planned Programs Subtotals</b>		6.000	5.995	9.304
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A				
<b>Remarks</b>				
<b>D. Acquisition Strategy</b> N/A				

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

<b>Appropriation/Budget Activity</b> 2040 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603457A / C3I Cyber Advanced Development	<b>Project (Number/Name)</b> 7CY / Decoy and Deterrence Advanced Technology
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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
<i>7CY: Decoy and Deterrence Advanced Technology</i>	-	0.186	-	-	-	-	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

**A. Mission Description and Budget Item Justification**

This Project demonstrates disruption of enemy cyber attacked through the use of cyber decoy applications with realistic user behavior algorithms, such as software that creates fake users, applications, systems, documents, networks, and communication traffic.

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Work in this Project is performed by the United States Army Futures Command (AFC).

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

	FY 2020	FY 2021	FY 2022
<b>Title:</b> Decoy and Deterrence Advanced Technology	0.186	-	-
<b>Description:</b> This Project demonstrates disruption of enemy cyber attacked through the use of cyber decoy applications with realistic user behavior algorithms, such as software that creates fake users, applications, systems, documents, networks, and communication traffic.			
<b>Accomplishments/Planned Programs Subtotals</b>	0.186	-	-

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

N/A

**Remarks**

**D. Acquisition Strategy**

N/A

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Army										<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 2040 / 3					<b>R-1 Program Element (Number/Name)</b> PE 0603457A / C3I Cyber Advanced Development				<b>Project (Number/Name)</b> 8CY I Information Trust Advanced Technology			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
8CY: Information Trust Advanced Technology	-	3.052	10.900	15.876	-	15.876	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**

In Fiscal Year (FY) 2022, funding in this Project was realigned from:  
 Program Element (PE) 0602146A (Network C3I Technology) Project AP7 (Comms/Horiz Int for Army Mod Priorities Tech)  
 PE 0603463A Project AP8 (Comms/Horiz Int for Army Mod Priorities Adv Tech)

**A. Mission Description and Budget Item Justification**

This Project demonstrates enhanced awareness of the information's "provenance" from originator to consumer (e.g. sensor to shooter) in the presence of cyber-attacks, such as an attempt to manipulate data traversing the network. Work in this Project complements PE 06022213A C3I Applied Cyber, Project 2CY Information Trust Technology.

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Work in this Project is performed by the United States Army Futures Command (AFC).

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

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> Information Trust Advanced Technology	3.052	3.500	4.507
<b>Description:</b> This Project demonstrates enhanced awareness of the information's "provenance" from originator to consumer (e.g. sensor to shooter) in the presence of cyber-attacks, such as an attempt to manipulate data traversing the network.			
<b>FY 2021 Plans:</b> Mature and demonstrate the authentication service that helps determine and track user trust values within a block chain architecture.			
<b>FY 2022 Plans:</b> Will mature and demonstrate the specification based fixed format message checking and machine learning based integrity services that ensure the integrity of a messages data, origin, and chain of custody as it traverses the network; will mature and demonstrate the authentication service proof-of-concept that helps determine and track user trust values within a block chain architecture; will implement and mature technology to create a suitable de-centralized lightweight block chain algorithm that can be leveraged to ensure a secure distributed ledger of messages and associated risk with automated analysis of attempted			

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Army		<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 2040 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603457A / C3I Cyber Advanced Development	<b>Project (Number/Name)</b> 8CY I Information Trust Advanced Technology		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
malicious modification; will optimize user and role-based authentication services and demonstrate within high fidelity cyber emulation environment.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Funding in this effort was realigned from PE 0603463A Project AP8 (Comms/Horiz Int for Army Mod Priorities Adv Tech) for demonstration of the authentication service.				
<b>Title:</b> Agile Virtual Enclave  <b>Description:</b> To develop a Multi-Level Security (MLS) Access Guard to reduce hardware infrastructure required for US Government owned systems and develop a Mission Partner Environment (MPE) transfer cross domain solution (CDS) to enable data sharing with coalition partners.  <b>FY 2021 Plans:</b> Mature, optimize and demonstrate a MLS access guard implementation that leverages virtual container techniques to allow users to access different levels of classified data from a common hardware platform; mature and demonstrate a Transfer Guard implementation that supports MPEs and allows access to common services and mission command as part of a network package that is reliable, protected and configurable to mission requirements for multiple security classification information requirements that enable seamless preparation and conduct of unified land operations.  <b>FY 2022 Plans:</b> Will integrate a demonstrable baseline Cross Domain Solution (CDS) which will incorporate Multi Single Level Security (MSL) Access Guard with the Mission Partner Environment (MPE) Transfer Guard solution. Will conduct a validation and verification evaluations and field tests, on the final Integrated CDS deliverable in order to prove out the technology. Will mature all supporting documentation generated throughout the length of the Agile Virtual Enclave (AVE) program to include Preliminary Design Reviews (PDRs) and Capabilities Design Document (CDDs) for all the deliverables. Will mature a generalized solution for use on MSL Access Guard platform with potential for adaptation across Armed Forces systems and will incorporate it into the final deliverable.  <b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Funding in this effort was realigned from PE 0602146A Project AP7 (Comms/Horiz Int for Army Mod Priorities Tech) to mature and demonstrate technology to develop a MLS Access Guard for data sharing in a mission partner environment with a reduced hardware footprint.		-	7.400	11.369
<b>Accomplishments/Planned Programs Subtotals</b>		3.052	10.900	15.876
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A				

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Army		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 2040 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603457A / C3I Cyber Advanced Development	<b>Project (Number/Name)</b> 8CY / Information Trust Advanced Technology

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

**Remarks**

**D. Acquisition Strategy**

N/A

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Army										<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 2040 / 3					<b>R-1 Program Element (Number/Name)</b> PE 0603457A / C3I Cyber Advanced Development				<b>Project (Number/Name)</b> 9CY / Network Access and Effects Advanced Technology			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
9CY: Network Access and Effects Advanced Technology	-	1.431	4.464	4.347	-	4.347	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This Project matures and demonstrates advanced mission management tools and workflows, to promote efficient selection and sequencing of effects to support the agile deployment and execution of Offensive Cyber Operations / Radio Frequency (RF) Enabled capabilities. Work in this project complements PE 0602213A (C3I Applied Cyber) Project 3CY (Network Access and Effects Technology).

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Work in this Project is performed by the United States Army Futures Command (AFC).

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

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> Offensive Cyber Enabling Mission Support	1.431	4.464	4.347
<b>Description:</b> This effort matures and demonstrates advanced mission management tools and workflows, to promote efficient selection and sequencing of effects to support the agile deployment and execution of Offensive Cyber Operations/Radio Frequency (RF) Enabled capabilities.			
<b>FY 2021 Plans:</b> Mature and optimize protocol-based access offensive cyber operations techniques and demonstrate D4M effects launched from tactical RF platforms against specific targets of interest in a suitable environment			
<b>FY 2022 Plans:</b> Will mature and demonstrate OCO/RF enabled access and effects vectors against validated targets of interest; optimize assisted technique development for expedited vulnerability discovery against validated Adversary Command, Control, Communication, Computers, and Intelligence (AC4I) targets of interest; and mature decision aids for optimization of RF enabled techniques in support of the Commander's desired intent.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b> Funding change reflects planned lifecycle of this effort.			
<b>Accomplishments/Planned Programs Subtotals</b>	1.431	4.464	4.347

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Army		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 2040 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603457A / <i>C3I Cyber Advanced Development</i>	<b>Project (Number/Name)</b> 9CY / <i>Network Access and Effects Advanced Technology</i>
<b>C. Other Program Funding Summary (\$ in Millions)</b> N/A		
<b>Remarks</b>		
<b>D. Acquisition Strategy</b> N/A		

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Army										<b>Date:</b> May 2021		
<b>Appropriation/Budget Activity</b> 2040 / 3					<b>R-1 Program Element (Number/Name)</b> PE 0603457A / C3I Cyber Advanced Development				<b>Project (Number/Name)</b> CB4 / Offensive Cyber Operations (OCO) Mirror Adv Tech			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022 Base</b>	<b>FY 2022 OCO</b>	<b>FY 2022 Total</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>FY 2026</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
CB4: <i>Offensive Cyber Operations (OCO) Mirror Adv Tech</i>	-	4.823	1.998	1.899	-	1.899	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

This Project matures and demonstrates methods, tools and techniques to enable rapid instantiation of an operationally relevant cyberspace environment supporting critical Offensive Cyber Operations (OCO) mission functions to include but not limited to development, exercise, mission rehearsal and provide technical reach back to units during operations. Work in this project complements PE 0602213A (C3I Applied Cyber) Project 5CY (Offensive Cyber Operations (OCO) Mirror Technology).

The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

Work in this Project is performed by the United States Army Futures Command.

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

	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
<b>Title:</b> Offensive Cyber Operations Mirror	2.000	1.998	1.899
<b>Description:</b> This effort matures and demonstrates methods, tools and techniques to enable rapid instantiation of an operationally relevant cyberspace environment supporting critical OCO mission functions to include but not limited to development, exercise, mission rehearsal and provide technical reach back to units during operations.			
<b>FY 2021 Plans:</b> Mature and demonstrate initial increment of an interactive modeling and simulation capability within rapid response environment; and mature and demonstrate validated mirror capabilities within an interactive, behavior based modeling and simulation environment.			
<b>FY 2022 Plans:</b> Will mature and demonstrate incremental modeling and simulation (M&S) software and optimize fidelity driven Development Security Operations (DevSecOps) with exemplar OCO/Radio Frequency (RF) firing platforms; demonstrate information operations social influence mission functions within relevant environment; and optimizes the ?body of evidence? necessary to achieve an accredited rapid response enclave in support of DevSecOps utilization of tactical OCO/RF Enabled platforms at mission speed.			
<b>FY 2021 to FY 2022 Increase/Decrease Statement:</b>			

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<b>Appropriation/Budget Activity</b> 2040 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603457A / C3I Cyber Advanced Development	<b>Project (Number/Name)</b> CB4 / Offensive Cyber Operations (OCO) Mirror Adv Tech		
<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>
Funding change reflects planned lifecycle of this effort.				
<b>Title:</b> Non-Kinetic Kill Chain Architecture		2.823	-	-
<b>Description:</b> This effort matures architectures and virtual testbeds to demonstrate offensive cyber capabilities in a multi-domain, contested environment.				
<b>Accomplishments/Planned Programs Subtotals</b>		4.823	1.998	1.899
<b>C. Other Program Funding Summary (\$ in Millions)</b>				
N/A				
<b>Remarks</b>				
<b>D. Acquisition Strategy</b>				
N/A				

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

<b>Appropriation/Budget Activity</b> 2040 / 3					<b>R-1 Program Element (Number/Name)</b> PE 0603457A / C3I Cyber Advanced Development				<b>Project (Number/Name)</b> CB6 / C3I Cyber Advanced Development (CA)			
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
CB6: C3I Cyber Advanced Development (CA)	-	10.000	20.000	-	-	-	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**Note**  
Congressional Interest Item funding provided for C3I Cyber Advanced Development.

**A. Mission Description and Budget Item Justification**  
Congressional Interest Item funding provided for C3I Cyber Advanced Development.  
  
The cited work is consistent with the Under Secretary of Defense for Research and Engineering priority focus areas and the Army Modernization Strategy.

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	FY 2020	FY 2021
<b>Congressional Add:</b> Program Increase	10.000	-
<b>FY 2020 Accomplishments:</b> Congressional Interest Item in support of cyber advanced technology development.		
<b>Congressional Add:</b> Program increase - high bandwidth cryptomodule enhancements and certification	-	10.000
<b>FY 2021 Plans:</b> Conduct advanced research in High Bandwidth Cryptomodule Enhancements and Certification.  Work executed by Army Futures Command.		
<b>Congressional Add:</b> Program increase - low SWAP software-defined MFEW	-	10.000
<b>FY 2021 Plans:</b> Conduct advanced research in Low SWAP Software-Defined MFEW.  Work executed by Army Futures Command.		
<b>Congressional Adds Subtotals</b>	10.000	20.000

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

**Remarks**

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2022 Army		<b>Date:</b> May 2021
<b>Appropriation/Budget Activity</b> 2040 / 3	<b>R-1 Program Element (Number/Name)</b> PE 0603457A / C3I Cyber Advanced Development	<b>Project (Number/Name)</b> CB6 / C3I Cyber Advanced Development (CA)

**D. Acquisition Strategy**  
N/A