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Exhibit R-2, RDT&E Budget Item Justification: PB 2022 Office of the Secretary Of Defense **Date:** May 2021

Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
0400: Research, Development, Test & Evaluation, Defense-Wide I BA 5: System Development & Demonstration (SDD)					PE 0604771D8Z I Joint Tactical Information Distribution System (JTIDS)							
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	171.548	52.059	51.284	9.345	0.000	9.345	-	-	-	-	-	-
771: Link-16 Tactical Data Link (TDL) Transformation	131.410	22.562	18.341	9.345	-	9.345	-	-	-	-	-	-
105: Cyber Capability & Platform Resilience	40.138	16.726	22.671	-	-	-	-	-	-	-	-	-
028: Cybersecurity: Cybersecurity Maturity Model Certification (CMMC) and Pathfinders	0.000	12.771	10.272	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

This program provides in-depth technical, engineering, integration support, and system of system analysis for space, missile defense, cyber, C4ISR, NC3, and nuclear weapons program portfolio management.

- Command, Control, Communications, Computers and Intelligence, Surveillance, and Reconnaissance: Develop and maintain a roadmap to improve data link interoperability, data link waveform standards, and global enterprise capabilities, enabling resilient, survivable federated networks.
- Nuclear Forces (Nuclear Command, Control, and Communications (NC3)): Execute NC3 Enterprise Capability Portfolio Management on behalf of the Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)).

B. Program Change Summary (\$ in Millions)

	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Previous President's Budget	54.102	54.985	41.775	0.000	41.775
Current President's Budget	52.059	51.284	9.345	0.000	9.345
Total Adjustments	-2.043	-3.701	-32.430	0.000	-32.430
• Congressional General Reductions	-	-16.811			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	13.110			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	-2.043	-	-32.430	-	-32.430

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Appropriation/Budget Activity 0400: <i>Research, Development, Test & Evaluation, Defense-Wide I BA 5: System Development & Demonstration (SDD)</i>	R-1 Program Element (Number/Name) PE 0604771D8Z <i>I Joint Tactical Information Distribution System (JTIDS)</i>	
<u>Change Summary Explanation</u> FY 2022 funding realigned to a 0606771D8Z for Chief Information Security Office.		

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Office of the Secretary Of Defense **Date:** May 2021

Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0604771D8Z / <i>Joint Tactical Information Distribution System (JTIDS)</i>				Project (Number/Name) 771 / <i>Link-16 Tactical Data Link (TDL) Transformation</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
<i>771: Link-16 Tactical Data Link (TDL) Transformation</i>	131.410	22.562	18.341	9.345	-	9.345	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Provide in-depth technical, engineering, integration support, and system of system analysis for space, missile defense, cyber, C4ISR, NC3, and nuclear weapons program portfolio management.

- Command, Control, Communications, Computers and Intelligence, Surveillance, and Reconnaissance: Develop and maintain a roadmap to improve data link interoperability, data link waveform standards, and global enterprise capabilities, enabling resilient, survivable federated networks.
- Nuclear Forces (Nuclear Command, Control, and Communications (NC3)): Execute NC3 Enterprise Capability Portfolio Management on behalf of the Under Secretary of Defense for Acquisition & Sustainment (USD(A&S)).

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

	FY 2020	FY 2021	FY 2022
Title: Common Joint Tactical Information Initiatives	22.562	18.341	9.345
Description: FY 2020 Accomplishments:			
<ul style="list-style-type: none"> - Updated CDL technology development roadmap to reflect current trends in technology that can add enhanced capabilities to CDL systems and meet outcomes articulated in Joint Staff 2018 CDL Joint Vision and Roadmap. - Conducted analysis of Airborne ISR communications transport infrastructure in coordination with Joint Staff, Services and Combatant Commands in order to identify a way ahead for establishing an effective/efficient global enterprise capability. - Provided technical and acquisition support for the Spectrum Efficient National Air Surveillance Radar (SENSR) system to ensure development and delivery of DoD requirements and acquisition artifacts to a Cross-Department activity led by the Federal Aviation Administration (FAA). - Contributed to development of congressionally mandated (NDAA FY2020, Section 254) DoD Fifth Generation (5G) Strategy and DoD 5G Implementation Plan. - Provided OSD oversight and cross-Service coordination of Tactical Data Link (TDL) modernization issues currently under review as part of a larger DoD interoperability emphasis led by the Chief Information Office and the Joint Staff and in conjunction with USD(A&S) under the C3 Leadership Board (C3LB) governance council. - Tracked and assessed testing of Link 16 capability improvements in Multi-function Information Distribution System (MIDS-J) terminals (4th Gen aircraft), Communications, Navigation & Identification (CNI) terminal in F-35, emerging 6th Gen aircraft concepts, and Weapons Data Link (WDL) radios. 			

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
<p>- Developed Joint C2 Acquisition Capability Portfolio Management strategy; developed program identification process, drafted proposed metrics plan and identified updates needed to the current C2 governance framework.</p> <p>- Implemented agile development practices into JC2 software driven acquisitions. Prototyped program health check and program future performance forecasting methodologies and tools to provide insights and recommendations to stakeholders before, during, and after senior steering committee meetings</p> <p>. Supported the NC3 Capability Portfolio Manager in drafting and coordinating strategic investment documents including the POM 23 Capability Planning Guidance; NC3 Capability Portfolio Management Working Group charter; NC3 Enterprise Acquisition Strategy; and an update to the NC3 Portfolio Definition List.</p> <p>- Reviewed DoD policy to ensure NC3 CPM synchronization. Documented concerns and assisted in staffing packages across the Office of Secretary of Defense, Combatant Command, and Services. Supported the review and staffing of four major reports to Congress.</p> <p>- Fielded initial analytic tool capability to track NC3 portfolio modernization objects including obligation and expenditures, reprogramming, and congressional marks.</p> <p>- Drafted comprehensive portfolio assessments on NC3 Very Low Frequency/Low Frequency receivers and Presidential Voice Conferencing Assessments.</p> <p>5. Created NC3 Mission Threads, effects chains, and components and conditions to provide context for risk management.</p> <p>FY 2021 Plans:</p> <p>- Common Data Link (CDL) Capability Portfolio Management (CPM): Continue to execute USD(A&S) roles as Principal Staff Assistant (PSA) for CDL. Work with DoD Components to maintain currency of the CDL technology roadmap and terminal database to prioritize commonality, open architecture, and non-proprietary systems for current and emerging platform, sensor, and weapons ISR data transport requirements. Revise and reissue CDL enterprise modernization memo. Conduct annual CDL enterprise modernization analysis and review Service PPBE submissions to assess enterprise migration off To Be Sunset (CDL-TBD) waveforms by 2023.</p> <p>- Intelligence, Surveillance, and Reconnaissance Data Transport and Task, Process, Exploit and Disseminate Intelligence Information: Technical Support as the co-lead with USD(I) to modernize and migrate the DoD Distributed Common Ground family of systems to an enterprise capability through four lines of effort 1) migrating long-term to a cross-component DCGS enterprise cloud solution; 2) utilizing the Defense Intelligence information Enterprise (DI2E) framework to establish a common DCGS data fabric; 3) advancing cyber security/accreditation reciprocity; and 4) developing a shared concept for how we will jointly operate to meet the objectives of the National Defense Strategy (NDS).</p> <p>- Command, Control, and Communications Leadership Board (C3LB): As a Tri-Chair, provide strategic planning, prioritization, policy execution, resource review, and effective capability management and oversight of DoD C3 and Electromagnetic Spectrum</p>			

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Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604771D8Z / <i>Joint Tactical Information Distribution System (JTIDS)</i>	Project (Number/Name) 771 / <i>Link-16 Tactical Data Link (TDL) Transformation</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2020	FY 2021	FY 2022
<p>(EMS) initiatives. Accelerate and synchronize fielding of modernized networking solutions across the joint force with the objective of establishing priorities and strategies that enable implementation across the DoD C3 and EMS enterprises. As part of C3LB governance structure, engage subordinate Senior Steering Groups on relevant matters: SATCOM Systems Engineering Group (SSEG), Tactical Communications Senior Steering Group (TCSSG), Electromagnetic Spectrum Senior Steering Group (EMS SSG), and Public Safety Communications Senior Steering Group (PSC SSG).</p> <p>- Joint Tactical Networking Center (JTNC): Provide technical and programmatic analysis to support DoD's rapid identification, characterization, procurement, fielding, and sustainment of modular, innovative tactical communications products that ensure secure, interoperable, and resilient C4ISR capabilities. Develop, with D/CIO and J6, robust waveform repository providing programmatic technical guidance to the JTNC. Continue to enhance Link-16 and other waveforms by active engagement and leadership at the Joint Datalink Acquisition Working Group". Provide product support in CDL and Link-16 Crypto Modernization working with Service EAs and NSA. JTNC priorities include: support for JADC2; chair of Communication Technology and Waveform Working Group (CTWWG) under the C3LB/TCSSG governance structure; Lead Service support with respect to key waveforms to comply with Deputy Secretary of Defense tasking; facilitate government and industry stakeholder interaction with Joint Communications Marketplace; Waveform Capability Characterization; HF Modernization support; Modular Radio Architecture efforts; and upgrading the DoD Information Repository operating environment.</p> <p>- Integrated Electromagnetic Spectrum Operations (EMSO): Implement integrated transport, radio communications, and Electronic Warfare (EW)/EMSO capability development to ensure NDS objectives for integrated Spectrum operations and capabilities are met. Provide acquisition support to the Department's 5G strategy</p> <p>- Spectrum: Provide executive guidance, technical expertise, and acquisition support for the Spectrum Efficient National Air Surveillance Radar (SENSR) system. Develop and deliver mission capability requirements and acquisition artifacts to the Joint Program Office (JPO)-led by the Federal Aviation Administration (FAA). In FY21 SENSR enters a critical stage with a Milestone FY 2021 Plans. Provide funding for the Institute for Defense Analyses (IDA) to execute a requested study on the supply chain for radar production. Continue work with NDIA to engage industry on the development of spectrum sharing capability, regulations, and policies. Track and monitor spectrum conflict status between DoD, industry, and spectrum controlling bodies while promoting optimal use of spectrum for 5G through the NDIA working group as well as through the DoD 5G test beds. Facilitate the transition for 5G solutions, that are part of DoD 5G Strategy, to the Services, to be developed and tested through the DoD 5G test beds. Facilitate interaction with industry and countries to support mutual interests in 5G innovation and enhancing security measures to ensure availability, security, and reliability of the 5G supply chain. OUSD(A&S) seeks opportunities to inject 5G technologies into acquisition programs and takes advantage of smart warehousing and other 5G-enabled capabilities in DoD's sustainment systems.</p>				

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2020	FY 2021	FY 2022
<ul style="list-style-type: none"> - Tactical Datalink: Complete assessment of TDL LPI/LPD waveforms and work with the Services to create a TDL Roadmap modernization in accordance with DEPSECDEF Memorandum "Enhancing DoD's Joint Tactical Networks and Datalink Modernization." Track and assess capability improvements in Multi-function Information Distribution System (MIDS), F-35 Communications, Navigation & Identification (CNI) terminals, IR&D TDL progress, emerging 6th Gen aircraft and Weapons Data Link (WDL) concepts. Standardize TDL terminology and security classification of TDL waveforms. - Execute the Joint C2 Acquisition Capability Portfolio Management strategy in support of reprogramming decisions within year of execution and future years program budget development. Evolve the Joint C2 Acquisition Portfolio to include and provide acquisition integration and synchronization for materiel solutions sponsored through Joint All Domain Command and Control (JADC2) efforts. - Provide technical expertise for Joint All Domain Command and Control (JADC2) Operations Planning Teams (OPT), provide coordination and AO support for reviews of JADC2 Reference Architecture, Data Integration, Budget and Campaign Plan products as they are developed to support critical cross-functional team timelines and deliverables. - Support AISR DT ITF initiatives to provide material and non-materiel solutions that meet Combatant Commander AISR DT requirements by executing plans to increase dissemination of full-motion-video, download and disseminate sensor data from AISR platforms, and share AISR intelligence information with allies through implementation of cross-domain solutions. - Engage in C4/Cyber and Battlespace Awareness FCBs to ensure C4ISR Directorate equities and interests are adequately addressed and to help inform the management of systems within the C4ISR portfolio. - International: Continue support to the A&S International Cooperation on multiple efforts to support NDS Strengthen Alliances and Attract New Partners. Provide support to the US FR CIWG, the NGCC with the UK, and support for the multiple other minor efforts such as Yockey waivers, review of policy issues, and support for meetings. - Implement agile development practices into DoD and Intelligence Community software driven acquisitions. Develop and institute program health check and program future performance forecasting methodologies and tools to provide insights and recommendations to stakeholders before, during, and after senior steering committee meetings. - Strategic Deterrence: Support the recapitalizing the nation's nuclear deterrent, driving risk reduction in nuclear modernization programs, enhancing sustainment of existing legacy nuclear capabilities, and implementing the Nuclear Posture Review. 				

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

	FY 2020	FY 2021	FY 2022
<p>- NC3: Support the NC3 Capability Portfolio Manager (CPM) with analysis presented to senior leadership bodies (NC3 Enterprise Review, Deputy's Management Action Group, SECDEF Weekly Priorities Review, etc.) and recommend investment and policy alternatives. Draft NC3 program protection planning policy, NC3 cybersecurity systems engineering standards, modernization assessments, sustainment assessments, and comprehensive NC3 portfolio assessments on High Frequency radio networks and Indications and Warning.</p> <p>FY 2022 Plans:</p> <p>- Common Data Link (CDL) Capability Portfolio Management (CPM): Continue to execute USD(A&S) roles as Principal Staff Assistant (PSA) for CDL. Work with DoD Components to maintain currency of the CDL technology roadmap and terminal database to prioritize commonality, open architecture, and non-proprietary systems for current and emerging platform, sensor, and weapons ISR data transport requirements. Conduct annual CDL enterprise modernization analysis and review Service PPBE submissions to assess enterprise migration off To Be Sunset (CDL-TBD) waveforms by 2023.</p> <p>- Intelligence, Surveillance, and Reconnaissance Data Transport and Task, Process, Exploit and Disseminate Intelligence Information: Technical Support as the co-lead with USD(I) to modernize and migrate the DoD Distributed Common Ground family of systems to an enterprise capability through four lines of effort 1) migrating long-term to a cross-component DCGS enterprise cloud solution; 2) utilizing the DI2E framework to establish a common DCGS data fabric; 3) advancing cyber security/accreditation reciprocity; and 4) developing a shared concept for how we will jointly operate to meet the objectives of the NDS.</p> <p>- Command, Control, and Communications Leadership Board (C3LB): As a Tri-Chair, provide strategic planning, prioritization, policy execution, resource review, and effective capability management and oversight of DoD C3 and Electromagnetic Spectrum (EMS) initiatives. Accelerate and synchronize fielding of modernized networking solutions across the joint force with the objective of establishing priorities and strategies that enable implementation across the DoD C3 and EMS enterprises. As part of C3LB governance structure, engage subordinate Senior Steering Groups on relevant matters: SATCOM Systems Engineering Group (SSEG), Tactical Communications Senior Steering Group (TCSSG), Electromagnetic Spectrum Senior Steering Group (EMS SSG), and Public Safety Communications Senior Steering Group (PSC SSG).</p> <p>- Joint Tactical Networking Center (JTNC): Provide technical and programmatic analysis to support DoD's rapid identification, characterization, procurement, fielding, and sustainment of modular, innovative tactical communications products that ensure secure, interoperable, and resilient C4ISR capabilities. Develop, with D/CIO and J6, robust waveform repository providing programmatic technical guidance to the JTNC. Continue to enhance Link-16 and other waveforms by active engagement and leadership at the Joint Datalink Acquisition Working Group". Provide product support in CDL and Link-16 Crypto Modernization working with Service EAs and NSA. JTNC will continue to execute core priorities including: support for JADC2; chair of Communication Technology and Waveform Working Group (CTWWG) under the C3LB/TCSSG governance structure; Lead Service support with respect to key waveforms to comply with Deputy Secretary of Defense tasking; facilitating government and</p>			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2020	FY 2021	FY 2022
<p>industry stakeholder interaction with Joint Communications Marketplace; Waveform Capability Characterization; HF Modernization support; Modular Radio Architecture efforts; and maintaining the DoD Information Repository operating environment.</p> <p>- Integrated Electromagnetic Spectrum Operations (EMSO): Implement integrated transport, radio communications, and Electronic Warfare(EW)/EMSO capability development to ensure NDS objectives for integrated Spectrum operations and capabilities are met. Provide acquisition support to the Department's 5G strategy</p> <p>- Spectrum: Provide executive guidance, technical expertise, and acquisition support for the Spectrum Efficient National Air Surveillance Radar (SENSR) system. In FY22 SENSR milestones will include work specific to risk reduction efforts and the development and refinement of Implementation and Transition Plans. Integrate results from Institute for Defense Analyses (IDA) radar supply chain study into spectrum relocation efforts, updating plans as necessary. Continue work with the NDIA to engage industry on the development of spectrum sharing capability, regulations, and policies. Track and monitor spectrum conflict status between DoD, industry, and spectrum controlling bodies while promoting optimal use of spectrum for 5G through NDIA working group as well as through the DoD 5G test beds. Facilitate the transition for 5G solutions, that are part of DoD 5G Strategy, to the services, to be developed and tested through the DoD 5G test beds. Conducts interaction with industry and countries to support mutual interests in 5G innovation and enhancing security measures to ensure availability, security, and reliability of the 5G supply chain. OUSD(A&S) seeks opportunities to inject 5G technologies into acquisition programs and takes advantage of smart warehousing and other 5G-enabled capabilities in DoD's sustainment systems.</p> <p>- Tactical Datalink: Implement the TDL Roadmap using the JTWG as a coordination group to transition to TDL LPD/LPI waveforms as required by DEPSECDEF Memorandum "Enhancing DoD's Joint Tactical Networks and Datalink Modernization." Synchronize service acquisition strategies to gain synergistic efficiencies and maintain interoperability between the services, allies, and partner nations. Continue to track and assess capability improvements in Multi-function Information Distribution System (MIDS) and F-35 Communications, Navigation & Identification (CNI) terminals, emerging 6th Gen aircraft and Weapons Data Link (WDL) concepts. Continue support of international efforts including US France CIWG and other efforts to support NDS Strengthen Alliances and Attract New Partners.</p> <p>- Execute the Joint C2 Acquisition Capability Portfolio Management strategy in support of reprogramming decisions within year of execution and future years program budget development. Evolve the Joint C2 Acquisition Portfolio to include and provide acquisition integration and synchronization for materiel solutions sponsored through Joint All Domain Command and Control (JADC2) efforts.</p> <p>- Provide technical expertise for Joint All Domain Command and Control (JADC2) Operations Planning Teams (OPT), provide coordination and AO support for reviews of JADC2 Reference Architecture, Data Integration, Budget and Campaign Plan products as they are developed to support critical cross-functional team timelines and deliverables.</p>				

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Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604771D8Z / <i>Joint Tactical Information Distribution System (JTIDS)</i>	Project (Number/Name) 771 / <i>Link-16 Tactical Data Link (TDL) Transformation</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2020	FY 2021	FY 2022
<p>- Support AISR DT ITF initiatives to provide material and non-materiel solutions that meet Combatant Commander AISR DT requirements by developing/improving the capabilities of AISR platforms to enable/expand the download and/or relay of sensor information through DoD gateways to U.S. warfighters and U.S. allies in each of the geographic Combatant Commanders' theaters in support of humanitarian relief and contingency operations.</p> <p>- Engage in C4/Cyber and Battlespace Awareness FCBs to ensure C4ISR Directorate equities and interests are adequately addressed and to help inform the management of systems within the C4ISR portfolio.</p> <p>- International: Continue support to the A&S International Cooperation on multiple efforts to support NDS Strengthen Alliances and Attract New Partners. Provide support to the US FR CIWG, the NGCC with the UK, and support for the multiple other minor efforts such as Yockey waivers, review of policy issues, and support for meetings.</p> <p>- Execute agile development practices within DoD and Intelligence Community software driven acquisitions, including program health check and program future performance forecasting methodologies and tools and lessons learned/best practices capabilities to provide insights and recommendations to project managers and stakeholders towards improving program execution performance and inform senior steering committee meetings.</p> <p>- Strategic Deterrence: Support the recapitalizing the nation's nuclear deterrent, driving risk reduction in nuclear modernization programs, enhancing sustainment of existing legacy nuclear capabilities, and implementing the Nuclear Posture Review.</p> <p>- NC3: Support the NC3 Capability Portfolio Manager (CPM) with analysis presented to senior leadership bodies (NC3 Enterprise Review, Deputy's Management Action Group, SECDEF Weekly Priorities Review, etc.) and recommend investment and policy alternatives. Update NC3 program protection planning policy, NC3 cybersecurity systems engineering standards, modernization assessments, and comprehensive NC3 portfolio assessments.</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement: Decrease from FY 2021 to FY 2022 due to FY 2021 congressional add as well as, program re-alignments.</p>				
Accomplishments/Planned Programs Subtotals		22.562	18.341	9.345
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				

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D. Acquisition Strategy

Utilize existing fixed-price and cost-plus contracts (where appropriate) to continue providing in-depth technical, engineering, integration support, and system of system analysis for space, missile defense, and C4ISR.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Office of the Secretary Of Defense **Date:** May 2021

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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			
Link-16 Tactical Data Link (TDL) Transformation	C/TBD	OUSD A&S DASD I&IPM : Pentagon	131.410	22.562	Jan 2020	18.341	Jan 2021	9.345	Jan 2021	-		9.345	-	-	-
Subtotal			131.410	22.562		18.341		9.345		-		9.345	-	-	N/A

Remarks
NA

	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	131.410	22.562	18.341	9.345	-	9.345	-	-	N/A

Remarks
Resources will be used to provide technical, systems engineering and acquisition management oversight of programs, projects and activities to maximize the Department's return on investment in information technology resources and to affect a comprehensive approach for assessing and procuring critical information systems from initial design, through development to capability delivery in support of improved weapons systems performance and military operations.

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Office of the Secretary Of Defense **Date:** May 2021

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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

Link-16 Comm Tactical Data Link (TDL) Transformation	
Contract Awards	[REDACTED]

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Office of the Secretary Of Defense		Date: May 2021
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604771D8Z / <i>Joint Tactical Information Distribution System (JTIDS)</i>	Project (Number/Name) 771 / <i>Link-16 Tactical Data Link (TDL) Transformation</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Link-16 Comm Tactical Data Link (TDL) Transformation</i>				
Contract Awards	1	2021	3	2022

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Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0604771D8Z / <i>Joint Tactical Information Distribution System (JTIDS)</i>				Project (Number/Name) 105 / <i>Cyber Capability & Platform Resilience</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
105: <i>Cyber Capability & Platform Resilience</i>	40.138	16.726	22.671	-	-	-	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

Provides resources for developmental acquisition support and portfolio management in support of three primary Goals in support of the Department of Defense (DoD) Cyber Strategy

- 1) Trained and Equipped Cyber Mission Force
- 2) Cyber Hardened Weapon Systems and Critical Infrastructure
- 3) Enhanced Defense Industrial Base (DIB) Cyber Security

The Office of the Undersecretary of Defense for Acquisition and Sustainment (OUSD(A&S)) conducts mission engineering for cyberspace operations to inform and support the development of Joint Cyber capabilities as the Department conceives, develops, and rapidly fields cyber capabilities for Cyberspace Operations. The newly established OUSD(A&S) Chief Information Security Office (CISO) was created to improve planning, coordination, synchronization, and integration of cyber activities and increase DoD wide emphasis on reducing the cyber risk to critical DoD missions and enhancing DIB Cyber Security.

Funds provide technical, systems engineering, trend analysis, and portfolio management of programs, projects, and activities developing cyber capabilities to maximize the Department's return on investment of cyberspace resources and effect a comprehensive approach for assessing, procuring, and sustaining critical cyber capabilities and cyber resilient systems and platforms from initial design, through development to capability delivery in support of weapons systems performance and military operations.

Additionally, these funds will provide systems analyses, portfolio management, and executive support of Senior Cyber Leadership forums, enterprise wide systems engineering and operational impact analyses related to Cyber capabilities, enhancing cyber resilience within systems and platforms, and enhancing the cybersecurity of the DIB.

Resources will also be used to provide expertise required for exercising technical direction over design, performance, cost parameters, and determining and mitigating cyber risks of key systems and their dependencies. The goal of this funding is to assure capability advantage, reduce time to the field, evaluate projects and concepts, minimize cyber related performance and operational risk of developing and fielding complex systems, ensure program dependencies are documented and included in acquisition decisions, and address cyber security requirements, gaps, and required technical solutions.

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

	FY 2020	FY 2021	FY 2022
Title: Cyber Capability and Platform Resilience	16.726	22.671	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Office of the Secretary Of Defense		Date: May 2021
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604771D8Z / <i>Joint Tactical Information Distribution System (JTIDS)</i>	Project (Number/Name) 105 / <i>Cyber Capability & Platform Resilience</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
<p>Description: FY 2020 Accomplishments:</p> <ul style="list-style-type: none"> - Initiated planning for Cyber Resilience V Game in support of all Combatant Commanders. - Completed Deep Cyber Resiliency Assessment of key elements of the US Transportation Command (USTRANSCOM) Global Logistics Infrastructure. - Began DCRAs in support of USSTRATCON/AFGSC; the PNT Oversight Council; USTRANSCOM; and USEUCOM - In partnership with USCYBERCOM initiated a joint approach to strategic sensing of critical elements of the Department of Defense Weapon Systems and Critical Infrastructure. - Completed Cyber Resilience IV (28 OCT - 1 NOV) examined the cyber risks to USINDOPACOM missions that are enabled by Wideband Global SATCOM (WGS). Objectives included an assessment of the people, processes, policies and technologies associated with reducing mission risks in a cyber contested environment. - Advanced and matured tools and methodologies for conducting Deep Cyber Resiliency Assessments (DCRA). <p>FY 2021 Plans:</p> <p>Goal 1: Trained and Equipped Cyber Mission Force</p> <ul style="list-style-type: none"> - Continue to advance and mature capabilities for conducting mission engineering for cyberspace operations. - With USCYBERCOM, manage the portfolio of Joint Cyber Warfighting Architecture (JCWA) components to enable the cyber mission force to efficiently and effectively conduct offensive and defensive cyber missions. Support offensive and defensive architecture development and portfolio management in collaboration with USCYBERCOM. - As PSA OPR for the UP, oversee the Air Force's, as DoD EA, capability development via portfolio management and governance. Assess UP's interfaces, dependencies, and linkages with other components of the JCWA to integrate and analyze data from offensive and defensive operations and enable effective and efficient offensive and defensive effects. - Manage the portfolio of DoD cyber training systems; including the DoDs PCTE and govern the PCTE as a member of the PCTE governance boards. - In support of Mission Engineering for Cyberspace Operations, continue to build CMM to include cyberspace tools and payloads. Directly inform JCWA decisions using M&S tools. - Continue to synchronize and govern the DoD Cyber Ranges that support Cyber Training and Testing and Evaluations as a member of the Cyber Ranges governance boards. Implement DoD Cyber Strategy by incorporating the cyber ranges reference architecture into the JCWA. - Advance Missions Analysis/Mission Engineering Capabilities for cyberspace operations through application of data science development of an operational level model for cyber warfare. <p>Goal 2: Cyber Hardened Weapon Systems and Critical Infrastructure</p> <ul style="list-style-type: none"> - Continue to mature and enhance the OUSD(A&S) CISO Organization 			

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Office of the Secretary Of Defense		Date: May 2021
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604771D8Z / <i>Joint Tactical Information Distribution System (JTIDS)</i>	Project (Number/Name) 105 / <i>Cyber Capability & Platform Resilience</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2020	FY 2021	FY 2022
<ul style="list-style-type: none"> - Ensure PR/MA in support of the Strategic Cybersecurity Program - Ensure execution of the evaluation of cyber vulnerabilities of DoD critical infrastructure plan. - In support of CCMDs, assess the cyber risk to Defense Critical Missions through the conduct of cyber resiliency assessments. - Reduce cyber risk to Defense Critical Missions through employment of Mission Focused Cyber Hardening Teams to prioritize and drive mitigations of critical cyber vulnerabilities. - Perform Cyber Resiliency V in coordination with Combatant Commanders, involves the execution of one large event with up to seven smaller events. - Perform Deep Cyber Resiliency Assessments (DCRAs) in conjunction with the Combatant Commanders and the CR V effort - Employ strategic sensing plan based upon results of CRs and DCRAs in collaboration with USCYBERCOM - Advance Tools and Methodologies for conducting assessing cyber risks to DoD missions <p>Goal 3: Enhanced DIB Cybersecurity</p> <ul style="list-style-type: none"> - Develop automated methods for identifying vulnerabilities of DIB partners based upon Common Vulnerabilities - Develop automated methods to monitor critical DIB partners for potential attacks and exfiltration - Develop automated methods to identify potential attacks before the cyber actor reaches the DIB partner <p><i>FY 2022 Plans:</i> Funding realigned to 0606771D8Z.</p> <p><i>FY 2021 to FY 2022 Increase/Decrease Statement:</i> FY 2021 to FY 2022 decrease is because this program was moved to PE: 0606771D8Z</p>			
Accomplishments/Planned Programs Subtotals	16.726	22.671	0.000

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

N/A

Remarks

D. Acquisition Strategy

Utilize existing fixed-price and cost-plus contracts (where appropriate) to continue developmental acquisition support and portfolio management in support of three primary Goals in support of the Department of Defense (DoD) Cyber Strategy

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2022 Office of the Secretary Of Defense **Date:** May 2021

Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604771D8Z / Joint Tactical Information Distribution System (JTIDS)	Project (Number/Name) 105 / Cyber Capability & Platform Resilience
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Support (\$ 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			
Contract awards	C/CPFF	OUSD OCISO (A) : Pentagon/Mark Center	40.138	16.726		22.671		-		-		-	Continuing	Continuing	-
Subtotal			40.138	16.726		22.671		-		-		-	Continuing	Continuing	N/A

Remarks
NA

	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	40.138	16.726	22.671	-	-	-	Continuing	Continuing	N/A

Remarks
NA

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Office of the Secretary Of Defense		Date: May 2021
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604771D8Z / <i>Joint Tactical Information Distribution System (JTIDS)</i>	Project (Number/Name) 105 / <i>Cyber Capability & Platform Resilience</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 Capability and Platform Resilience	
Contract Awards	[REDACTED]

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Office of the Secretary Of Defense		Date: May 2021
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604771D8Z / <i>Joint Tactical Information Distribution System (JTIDS)</i>	Project (Number/Name) 105 / <i>Cyber Capability & Platform Resilience</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Cyber Capability and Platform Resilience</i>				
Contract Awards	1	2021	2	2022

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Office of the Secretary Of Defense										Date: May 2021		
Appropriation/Budget Activity 0400 / 5					R-1 Program Element (Number/Name) PE 0604771D8Z / Joint Tactical Information Distribution System (JTIDS)				Project (Number/Name) 028 / Cybersecurity: Cybersecurity Maturity Model Certification (CMMC) and Pathfinders			
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
028: Cybersecurity: Cybersecurity Maturity Model Certification (CMMC) and Pathfinders	0.000	12.771	10.272	-	-	-	-	-	-	-	-	-
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Implement and maintain Cybersecurity Maturity Model Certification (CMMC) framework that incorporates multiple cybersecurity standards and references into a unified standard that encompasses both the progression of cybersecurity practices as well as the institutionalization of processes to secure Controlled Unclassified Information (CUI) within the Defense Industrial Base (DIB) sector. Conduct pathfinders and pilots with Services, Agencies, and international partners to support risk reduction for the phased rollout of CMMC.

Conduct pathfinders to assess and demonstrate emerging capabilities for supply chain risk management and DIB cybersecurity. Partner with the DIB sector to analyze and demonstrate promising and cost-effective capabilities and candidate solutions. Also, work with DoD stakeholders and appropriate organizations dedicated to enhancing the training and education of cybersecurity best practices to the DIB sector with an emphasis on small businesses and manufacturers.

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

	FY 2020	FY 2021	FY 2022
Title: DIB Secure Cloud Managed Services Pilot	12.771	10.272	0.000
Description: FY 2020 Accomplishments: Developed CMMC Framework to include the release of the CMMC Model v1.0 to the public on January 31, 2020. Incorporated comments from DoD stakeholders, DIB sector, and public on draft versions of the CMMC Model. Developed CMMC Assessment Guides and draft training material for candidate CMMC assessors. Drafted and submitted a proposed Defense Federal Acquisition Regulation Supplement (DFARS) rule to implement CMMC across the Department in a phased rollout. Signed Memorandum of Understanding and a no-cost contract with the CMMC Accreditation Body, a non-profit entity, that specifies their roles and responsibilities with respect to the training and credentialing of individual assessors, accreditation of third-party assessment organizations, and the issuance of CMMC certificates to DIB contractors.			

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Exhibit R-2A, RDT&E Project Justification: PB 2022 Office of the Secretary Of Defense		Date: May 2021		
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604771D8Z / <i>Joint Tactical Information Distribution System (JTIDS)</i>	Project (Number/Name) 028 / <i>Cybersecurity: Cybersecurity Maturity Model Certification (CMMC) and Pathfinders</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2020	FY 2021	FY 2022
<p>Initiated a task order to DISA for the design, development, testing, and operations of CMMC Enterprise Mission Assurance Support Service (eMASS) database and infrastructure.</p> <p>Completed pathfinder that assessed the ability of commercial third-party cybersecurity vendors to provide insights into the cybersecurity posture of DIB partners through the external scanning of public facing Internet Protocol assets. The pathfinder normalized and compared the cybersecurity risk scores provided by each of the three vendors, assessed their ability to provide insights into compliance/non-compliance with a subset of DoD security requirements, and evaluated the usability of the vendors' platform and its ability to interface and port data to other systems.</p> <p>FY 2021 Plans: Develop CMMC framework, conduct related CMMC pathfinders and assessments of select DIB members, and plan for the needed infrastructure (tools, platforms, databases, etc.) to support the requirements for the 3rd party assessments and certifications.</p> <p>Conduct pathfinders to assess the feasibility and efficacy of employing emerging commercial services/tools/platforms that provide insights into cybersecurity threats and vulnerabilities that are relevant to the DIB sector and the DoD supply chain. Analyze data from pathfinders to inform the way forward.</p> <p>Partner with the DIB sector to develop and demonstrate cost-effective and scalable cybersecurity services that augment and/or enhance existing commercial capabilities and services.</p> <p>FY 2022 Plans: Funding realigned to 0606771D8Z.</p> <p>FY 2021 to FY 2022 Increase/Decrease Statement: FY 2021 to FY 2022 decrease is the result of the funds being moved to a PE: 0606771D8Z.</p>				
Accomplishments/Planned Programs Subtotals		12.771	10.272	0.000
C. Other Program Funding Summary (\$ in Millions)				
N/A				
Remarks				
D. Acquisition Strategy				
N/A				

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Exhibit R-4, RDT&E Schedule Profile: PB 2022 Office of the Secretary Of Defense							Date: May 2021				
Appropriation/Budget Activity 0400 / 5				R-1 Program Element (Number/Name) PE 0604771D8Z / <i>Joint Tactical Information Distribution System (JTIDS)</i>				Project (Number/Name) 028 / <i>Cybersecurity: Cybersecurity Maturity Model Certification (CMMC) and Pathfinders</i>			

FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019			
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

DIB Secure Managed Services Pilot																											
Cybersecurity: Cybersecurity Maturity Model Certification (CMMC) and Pathfinders																											

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

DIB Secure Managed Services Pilot																											
Cybersecurity: Cybersecurity Maturity Model Certification (CMMC) and Pathfinders																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2022 Office of the Secretary Of Defense		Date: May 2021
Appropriation/Budget Activity 0400 / 5	R-1 Program Element (Number/Name) PE 0604771D8Z / <i>Joint Tactical Information Distribution System (JTIDS)</i>	Project (Number/Name) 028 / <i>Cybersecurity: Cybersecurity Maturity Model Certification (CMMC) and Pathfinders</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>DIB Secure Managed Services Pilot</i>				
Cybersecurity: Cybersecurity Maturity Model Certification (CMMC) and Pathfinders	4	2019	3	2021