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

Appropriation/Budget Activity 2040: <i>Research, Development, Test & Evaluation, Army / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0305179A / <i>Integrated Broadcast Service (IBS)</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	5.430	9.926	9.456	-	9.456	5.835	1.712	1.731	1.750	0.000	35.840
EF4: <i>Integrated Broadcast System</i>	-	5.430	9.926	9.456	-	9.456	5.835	1.712	1.731	1.750	0.000	35.840

A. Mission Description and Budget Item Justification

The Joint Program Office (JPO) for Integrated Broadcast Service (IBS) Terminals supports the Joint Services and the Special Operations Command (SOCOM). The JPO is responsible for coordinating modernization and sustainment of IBS terminals compatible with the UHF SATCOM IBS broadcasts in support of Air and Missile Defense, Long Range Precision Fires, Soldier Lethality, and Network Command, Control, Communications and Intelligence Cross Functional Teams and Tactical Intelligence Targeting Access Node. The IBS transmits worldwide time-sensitive tactical and strategic intelligence and targeting data to all echelons of Joint Service operational users. The Joint Tactical Terminal (JTT) is the official IBS system and ensures continued IBS interoperability to a variety of tactical producers and consumers across the Joint Services. The transmit/receive-capable JTT systems currently consist of the JTT-Senior and JTT-IBS configurations. The JPO is executing updates to the JTT terminal to incorporate Mobile User Objective System (MUOS)-Wideband Code Division Multiple Access (WCDMA) elements based on modernization requirements.

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	5.430	9.926	9.655	-	9.655
Current President's Budget	5.430	9.926	9.456	-	9.456
Total Adjustments	0.000	0.000	-0.199	-	-0.199
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Adjustments to Budget Years	-	-	-0.199	-	-0.199

Change Summary Explanation

Decreased funding to support higher Army priorities.

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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
EF4: <i>Integrated Broadcast System</i>	-	5.430	9.926	9.456	-	9.456	5.835	1.712	1.731	1.750	0.000	35.840
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Program Office (JPO) for Integrated Broadcast Service (IBS) Terminals supports the Joint Services and the Special Operations Command (SOCOM). The JPO is responsible for coordinating modernization and sustainment of IBS terminals compatible with the UHF SATCOM IBS broadcasts in support of Air and Missile Defense, Long Range Precision Fires, Soldier Lethality, and Network Command, Control, Communications and Intelligence Cross Functional Teams and Tactical Intelligence Targeting Access Node. The IBS transmits worldwide time-sensitive tactical and strategic intelligence and targeting data to all echelons of Joint Service operational users. The Joint Tactical Terminal (JTT) is the official IBS system and ensures continued IBS interoperability to a variety of tactical producers and consumers across the Joint Services. The transmit/receive-capable JTT systems currently consist of the JTT-Senior and JTT-IBS configurations. The JPO is executing updates to JTT systems to incorporate Mobile User Objective System-Wideband Code Division Multiple Access (WCDMA) based on modernization requirements. The IBS network uses Type-1 encryption, Common Interactive Broadcast (CIB), and Common Message Format (CMF).

FY 2024 RDTE Dollars in the amount of \$9.456M will be used for Vendor terminal software development and porting, vendor testing and evaluation, independent testing, integration and certification by government and contracting agencies (JITC, NSA, Navy, General Dynamics) in support of IBS and MUOS modernization efforts.

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

	FY 2022	FY 2023	FY 2024
Title: Program Management Description: Management Support FY 2024 Plans: Managerial oversight of ongoing JTT-NG activities, to include testing and certification, validated production and ordering, to ensure adherence to schedule, cost and performance. FY 2023 to FY 2024 Increase/Decrease Statement: Program Management line item is established in FY24 to provide greater fidelity and alignment with cost categories.	-	-	0.617
Title: Test and Certification Description: Engineering and Testing Support FY 2024 Plans:	-	-	1.626

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
Will continue engineering and testing support to obtain operational certification from external agencies to include JITC, Navy SSC PAC, and NSA FY 2023 to FY 2024 Increase/Decrease Statement: Test and Certification line item is established in FY24 to provide greater fidelity and alignment with cost categories.				
Title: Support Costs and Management Services Description: Engineering and Testing support FY 2023 Plans: Will continue engineering and testing support to obtain operational certification from external agencies to include JITC, Navy SSC and PAC. FY 2023 to FY 2024 Increase/Decrease Statement: FY 2024 decrease due to the creation of Program Management and Test and Certification line items in an effort to provide greater fidelity and alignment with cost categories.		0.500	2.501	-
Title: Modernization Efforts Description: Joint Tactical Terminal (JTT) and Integrated Broadcast Services (IBS) modernization efforts. FY 2023 Plans: Funds are required to continue Joint Tactical Terminal (JTT) and Integrated Broadcast Services (IBS) modernization efforts to include design reviews, MUOS SW development and porting, SW prototyping, integration and testing, SW configuration management, IBS-LEO/IBS-Alt path upgrades and support to MUOS testing, MIL-STD compliance & certification. FY 2024 Plans: Funds are required to continue Joint Tactical Terminal (JTT) and Integrated Broadcast Services (IBS) modernization efforts to include design reviews, MUOS SW development and porting, SW prototyping, integration and testing, SW configuration management, IBS-LEO/IBS-Alt path upgrades and support to MUOS testing, MIL-STD compliance & certification. FY 2023 to FY 2024 Increase/Decrease Statement: FY24 level of effort anticipated to remain stable.		4.930	7.425	7.213
Accomplishments/Planned Programs Subtotals		5.430	9.926	9.456

UNCLASSIFIED

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

<u>Line Item</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2024</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>FY 2028</u>	<u>Cost To</u>	<u>Total Cost</u>
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	
• V29600: <i>JTT/CIBS-M</i>	5.463	2.352	8.543	-	8.543	9.437	0.500	0.500	0.501	0.000	27.296

Remarks

FY 2024 Base procurement dollars in the amount of \$8.543 million supports transition to organic sustainment, contractor engineering, logistics support and fielding support documentation for all terminals.

D. Acquisition Strategy

The Integrated Broadcast Service (IBS) was designed to consolidate legacy broadcasts into an interoperable set of broadcasts that can carry threat warning and situational data to both users and producers. The requirement for IBS is documented in the Integrated SIGINT Information Mission Needs Statement (MNS) validated by the Joint Requirements Oversight Council (JROC) Memo (JROCM) 115-95 on 15 September 1995. The JTT program is an effort to provide common tactical terminals capable of receiving and transmitting into the IBS UHF broadcasts. To support IBS architecture modernization efforts, JTT-NG will incorporate MUOS and needed IBS upgrades into the software baseline in order to keep pace with evolving SATCOM requirements, IBS operational needs, and obsolescence. Additional requirements from the IBS Executive Agent will include enhancements to software and firmware to help mitigate from legacy to updated SATCOM constellations, also referred to as Block 2. To mitigate transition to the new architecture, the IBS-EA requires enhancing the IBS-A broadcast to modify the modulation, COMSEC, waveform, and support for Low Earth Orbiting (LEO) SATCOM integration in JTT-IBS and JTT-NG Block 1.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Army												Date: March 2023			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
2040 / 7				PE 0305179A / Integrated Broadcast Service (IBS)				EF4 / Integrated Broadcast System							
Management Services (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Project Management Support	Allot	PM IS&A : APG, MD; Fort Huachuca, AZ	0.075	-		-		0.617	Nov 2023	-		0.617	Continuing	Continuing	-
Subtotal			0.075	-		-		0.617		-		0.617	Continuing	Continuing	N/A
Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
IBS Modernization	SS/CPIF	DRS; Dayton, OH : DRS; Dayton, OH	0.448	4.930	Jan 2022	-		7.213	Feb 2024	-		7.213	0.000	12.591	-
Subtotal			0.448	4.930		-		7.213		-		7.213	0.000	12.591	N/A
Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
Project Management Support	Allot	PM IS&A : APG, MD; Fort Huachuca, AZ	0.075	-		0.575	Nov 2022	-		-		-	0.000	0.650	-
Subtotal			0.075	-		0.575		-		-		-	0.000	0.650	N/A
Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 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
IBS Modernization	MIPR	DRS; Dayton, OH : DRS; Dayton, OH	-	-		7.425	Feb 2023	-		-		-	0.000	7.425	-
Integration and Testing of JTT fleet Modernization	MIPR	JITC : Fort Huachuca, AZ; APG,MD, SSC PAC, GD-Scottsdale	1.470	0.500	Jun 2022	1.926	Jan 2023	1.626	Jan 2024	-		1.626	0.000	5.522	-
Subtotal			1.470	0.500		9.351		1.626		-		1.626	0.000	12.947	N/A

UNCLASSIFIED

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	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract		
Project Cost Totals	2.068	5.430	9.926	9.456	-	9.456	Continuing	Continuing	N/A		

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2024 Army		Date: March 2023
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Event Name	FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
	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
Next Generation IBS Terminals Integration and Test																												
Next Gen: JITC Testing and Certification					▲ 2																							
IBS Modernization Development																												
IBS Modernization Contract Award					▲ 1																							
IBS Modernization Testing and Certification																												
Modernization SW Block Delivery																	▲ 3											

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Army		Date: March 2023
Appropriation/Budget Activity 2040 / 7	R-1 Program Element (Number/Name) PE 0305179A / <i>Integrated Broadcast Service (IBS)</i>	Project (Number/Name) EF4 / <i>Integrated Broadcast System</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Next Generation IBS Terminals Integration and Test	2	2020	4	2025
Next Gen: JITC Testing and Certification	1	2023	1	2023
IBS Modernization Development	4	2022	4	2025
IBS Modernization Contract Award	4	2022	4	2022
IBS Modernization Testing and Certification	1	2023	4	2025
Modernization SW Block Delivery	4	2025	4	2025