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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2025 Air Force **Date:** March 2024

<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 0604281F / <i>Tactical Data Networks Enterprise</i>
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COST (\$ in Millions)	Prior Years	FY 2023	FY 2024	FY 2025 Base	FY 2025 OCO	FY 2025 Total	FY 2026	FY 2027	FY 2028	FY 2029	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	0.022	0.000	0.022	0.041	0.035	0.078	0.182	Continuing	Continuing
675383: <i>Battlefield Airborne Comm Node (BACN)</i>	-	0.000	0.000	0.022	0.000	0.022	0.041	0.035	0.078	0.182	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

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

Air Force operations rely on secure communications capability for Command-and-Control messages, threat messages, target updates, etc. Adversaries continually attempt to detect, intercept, decrypt, defeat, disrupt, deny or degrade these communications capabilities--driving the Air Force to continuously upgrade its systems with enhanced encryption, increased technology for low probability of detection (LPD), low probability of interception (LPI), anti-jamming (AJ), increased security and performance engineering, and enhanced throughput and interoperability. These efforts ensure life-saving data can be transmitted before, during and after operations without adversary hostile intervention via secure and reliable communication paths. The communications paths utilized are often referred to as datalinks over which are transmitted messages via specific waveforms through radios, multi-function processors and affiliated and associated technologies in accordance with specifications and standards.

The Tactical Data Networks Enterprise (TDNE) program element analyzes and evaluates requirements, designs, develops, enhances, and fields prospective or needed systems. The TDNE focuses on the research, analysis, design, development, test, evaluation and fielding or other capability development of Tactical Datalink (TDL), gateway, radio, multi-function processor, antenna, multi-function aperture, license, waveform and other associated equipment, technology or capabilities. TDNE develops, enhances and fields technologies, architectures, documentation, tactics, techniques, procedures and capabilities. These efforts enhance Air Force communications capacity, efficiency, affordability, integration and optimization. TDNE supports interoperability of Air Force to: Air Force, Joint, Coalition, and NATO (Allied), and other partner platforms and systems, such as BACN; supports releasability engineering, cyber engineering, digital engineering, encryption and safety compliance, et al.

Budget Program Activity Code (BPAC) 675383 is primarily focused on Battlefield Airborne Communications Node (BACN) payload weapon system components. This funding will be represented in PE 0207238F BACN in future budget cycles.

This program element may include necessary civilian pay expenses required to support, manage, execute, and deliver weapon system capabilities across platforms, aerial network, and tactical data network enterprise. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY2023, 0.900M was expended for civilian pay expenses in this program element. In FY2024, 1.272M is forecasted for civilian pay expenses in this program element.

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.

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<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025 Base</b>	<b>FY 2025 OCO</b>	<b>FY 2025 Total</b>	
Previous President's Budget	0.000	0.000	0.000	0.000	0.000	
Current President's Budget	0.000	0.000	0.022	0.000	0.022	
Total Adjustments	0.000	0.000	0.022	0.000	0.022	
• 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	0.000	0.000				
• Other Adjustments	0.000	0.000	0.022	0.000	0.022	
<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>				<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
<b>Title:</b> Battlefield Airborne Communications Node (BACN)				0.000	0.000	0.022
<b>Description:</b> Battlefield Airborne Communication Node (BACN) enables tactical edge Joint and Coalition information interoperability via air, space, and surface systems. As requirements emerge, BACN will integrate new hardware and software capabilities that improve system performance, interoperability, availability, prototyping of activities in line with department approach of system development upgrades to support current/future technologies.						
<b>FY 2024 Plans:</b> -No FY24 funding						
<b>FY 2025 Plans:</b> -Will support future BACN development and/or modification initiatives for payload form factor updates, integration effort, and other aerial gateway systems.						
<b>FY 2024 to FY 2025 Increase/Decrease Statement:</b> FY2025 increase due to inflationary increase. This funding will be represented in PE 0207238F in future budget cycles.						
<b>Accomplishments/Planned Programs Subtotals</b>				0.000	0.000	0.022
<b>D. Other Program Funding Summary (\$ in Millions)</b>						
N/A						
<b>Remarks</b>						

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**E. Acquisition Strategy**

The Airborne Networking Directorate provides for common development, integration, and interoperability across the entire airborne network and ensures that data links are procured and maintained as a joint, end-to-end command and control system. Platform acquisition strategies vary by program, but the majority of development and integration is normally accomplished by the weapon system prime contractor.



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<b>Exhibit R-4, RDT&amp;E Schedule Profile:</b> PB 2025 Air Force		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0604281F / <i>Tactical Data Networks Enterprise</i>	<b>Project (Number/Name)</b> 675383 / <i>Battlefield Airborne Comm Node (BACN)</i>

	FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028				FY 2029			
	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>BACN Support</b>																												
BACN Support																												

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2025 Air Force		<b>Date:</b> March 2024
<b>Appropriation/Budget Activity</b> 3600 / 7	<b>R-1 Program Element (Number/Name)</b> PE 0604281F / <i>Tactical Data Networks Enterprise</i>	<b>Project (Number/Name)</b> 675383 / <i>Battlefield Airborne Comm Node (BACN)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<b>BACN Support</b>				
BACN Support	1	2025	4	2025