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

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1203001F / <i>Family of Advanced BLoS Terminals (FAB-T)</i>
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
Total Program Element	26.251	58.582	195.288	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	280.121
672490: <i>Family of Advanced Beyond Line-of-Sight Terminals (FAB-T)</i>	26.251	58.582	16.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100.833
673035: <i>Presidential and National Voice Conferencing</i>	0.000	0.000	65.911	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	65.911
673040: <i>Force Element Terminal</i>	0.000	0.000	113.377	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	113.377

Program MDAP/MAIS Code: 199

A. Mission Description and Budget Item Justification

In FY2021, PE 1203001F, Family of Advanced BLoS Terminals efforts were transferred to Appropriation 3620, Research, Development, Test & Evaluation, Space Force, PE 1203001SF, Family of Advanced BLoS Terminals from Appropriation 3600, Budget Activity 7 due to the creation of a new Appropriation for Space Force.

The FAB-T project replaces legacy Milstar terminals and will provide Extremely High Frequency (EHF), protected high data rate communication for nuclear and conventional forces to include Presidential and National Voice Conferencing (PNVC). FAB-T will provide the new, highly secure, state-of-the-art capability for DoD platforms to include strategic platforms and airborne/ground command posts via Milstar, and AEHF Satellites. FAB-T terminals will also support the critical command and control (C2) of the Milstar and AEHF satellite constellations. The Air Force will continue development of the FAB-T Command Post Terminal(CPT), performing activities to meet current and future emerging SATCOM requirements.

The Force Element Terminal (FET) project provides secure, protected, and survivable communications for the strategic and tactical warfighter through airborne based MILSATCOM terminals. The FET will provide the B-52, and RC-135 aircraft with worldwide nuclear and non-nuclear survivable, anti-jam Low Probability of Detect (LPD)/ Low Probability of Intercept (LPI), data and voice communications. The FET will be interoperable with Milstar, AEHF, Enhanced Polar Systems - Recapitalization (EPS-R), and Evolved Strategic SATCAM (ESS) Satellite constellations utilizing both Low Data Rate (LDR) and Extended Data Rate (XDR) waveforms.

The PNVC capability is a critical element of the Nuclear Command, Control, and Communications (NC3) System. PNVC is the Survivable Emergency Conferencing Network (SECN) replacement capability which provides anti-jam, anti-scintillation, survivable, and endurable voice communications through the AEHF satellite system for national and strategic users. There are several components being developed and procured by other organizations that must be synchronized to expeditiously field the capability. The PNVC Integrator is responsible for end-to-end integration of these components, to include requirements traceability, end-to-end system testing, configuration and checkout activities, training and technical manuals, network transition support, identification of deficiencies in overall PNVC system capability, enterprise and life cycle support for PNVC components. The AFPEO-SP approved entry into the acquisition lifecycle as post MS-A ACAT III Program of Record in January 2016. Starting in December 2018 PNVC Integrator is responsible for all program elements' requests for funding related to the Defense Information Systems and Agency (DISA) components of the PNVC System in accordance with FY 2018 National Defense Authorization Act, Sec. 1661.

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Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1203001F / <i>Family of Advanced BLoS Terminals (FAB-T)</i>	

In February 2019 the AFPEO/NC declared the PNVC Integrator an ACAT II Program based on the updated approved budget request.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver FAB-T weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605831F.

As directed in the FY 2018 NDAA, Sec 825, amendment to PL 114-92 FY 2016 NDAA, Sec 828 Penalty for Cost Overruns, the calculated percentage reduction to each research, development, test and evaluation and procurement account will be allocated proportionally from all programs, projects, or activities under such account.

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. Program Change Summary (\$ in Millions)	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Previous President's Budget	60.168	197.388	0.000	0.000	0.000
Current President's Budget	58.582	195.288	0.000	0.000	0.000
Total Adjustments	-1.586	-2.100	0.000	0.000	0.000
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	-2.100			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	0.000	0.000			
• SBIR/STTR Transfer	-1.586	0.000			

Change Summary Explanation

FY 2020: -\$5M Congressional mark due to underexecution.

FY 2021: -\$246M Funds transferred from RDT&E, Air Force to RDT&E, Space Force

FY 2020 received a -\$5M Congressional mark decrease for underexecution. The FY 2020 total in this document is incorrect in the data base. The correct total for FY 2020 should be \$192.388M.

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force										Date: February 2020		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 1203001F / Family of Advanced BLoS Terminals (FAB-T)				Project (Number/Name) 672490 / Family of Advanced Beyond Line-of-Sight Terminals (FAB-T)			
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
672490: Family of Advanced Beyond Line-of-Sight Terminals (FAB-T)	26.251	58.582	16.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	100.833
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

In FY2021, PE 1203001F, Family of Advanced BLoS Terminals efforts were transferred to Appropriation 3620, Research, Development, Test & Evaluation, Space Force, PE 1203001SF, Family of Advanced BLoS Terminals from Appropriation 3600, Budget Activity 7 due to the creation of a new Appropriation for Space Force.

In FY 2020 PE 1203001F, Project 672490, transferred to PE 1203001F, Project 673035 for PNVC and Project 673040 for FET for program transparency.

The FAB-T program replaces legacy Milstar terminals and will provide Extremely High Frequency (EHF), protected high data rate communication for nuclear and conventional forces to include Presidential and National Voice Conferencing (PNVC). FAB-T will provide this new, highly secure, state-of-the-art capability for DoD platforms to include strategic platforms and airborne/ground command posts via Milstar, AEHF, and Enhanced Polar System (EPS) satellites. FAB-T terminals will also support the critical command and control (C2) of the Milstar, AEHF and EPS satellite constellations. The Air Force will continue development of the FAB-T Command Post Terminal (CPT), performing systems engineering, architecture studies, development & operational test efforts, FAB-T terminal interoperability with the full AEHF satellite constellation activities, and other program activities to meet current and future emerging SATCOM requirements.

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

	FY 2019	FY 2020	FY 2021
Title: FAB-T CPT Development	10.085	16.000	0.000
Description: The FAB-T program will provide EHF voice and data MILSATCOM for nuclear and conventional forces as well as airborne and ground command posts with connectivity to Milstar, AEHF, and EPS satellites.			
FY 2020 Plans: The FAB-T program will continue to provide EHF voice and data MILSATCOM for nuclear and conventional forces as well as airborne and ground command posts with connectivity to Milstar, AEHF, and EPS satellites. Additional development will be for National Security Agency (NSA) AEHF terminal certification.			
Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, prototyping, etc.			
FY 2021 Plans:			

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203001F / Family of Advanced BLoS Terminals (FAB-T)	Project (Number/Name) 672490 / Family of Advanced Beyond Line-of-Sight Terminals (FAB-T)

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
N/A			
FY 2020 to FY 2021 Increase/Decrease Statement: N/A			
Title: PNVC Integrator Description: PNVC is the SECN replacement capability which provides anti-jam, anti-scintillation, survivable, and endurable voice communications through the AEHF satellite system for national and strategic users. The PNVC capability consists of constituent programs being developed and produced by other organizations. This program will integrate test and support configuration of hardware from these other programs. PNVC components will be installed at ground fixed and mobile command locations, as well as three aircraft platforms. FY 2020 Plans: N/A FY 2021 Plans: N/A	26.361	0.000	0.000
Title: FAB-T FET Description: Funding ensures the continued development of Force Element Terminals. Development activities related to FET design, development and qualification testing will be executed. FY 2020 Plans: N/A FY 2021 Plans: N/A	22.136	0.000	0.000
Accomplishments/Planned Programs Subtotals	58.582	16.000	0.000

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2019	FY 2020	FY 2021	FY 2021	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Cost To	
			Base	OCO	Total					Complete	Total Cost
• APAF 05 FBLOST: FAB-T	14.280	9.610	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	23.890
• SPAF 01 FBLOST: FAB-T	22.268	32.105	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	54.373
• SPAF 01 PNVC: PNVC	0.000	1.915	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.915
• SPAF 01 FAB-T: FAB-T	6.134	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.134

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

<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>			<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• SPAF 02 SSPARE Spares and Repair....: <i>FAB-T</i>	15.568	0.057	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.625

Remarks

D. Acquisition Strategy

FAB-T Acquisition Strategy: In FY 2012, the government restructured the FAB-T development program to introduce competition into the acquisition strategy in order to reduce risk in delivering this capability as well as to drive down production costs. To ensure the best value to the government, the Air Force awarded production contracts in September 2013 to both contractors (Boeing and Raytheon). The production contracts began with production planning for both contractors. In June 2014, the Air Force down-selected to Raytheon. Development and production of FAB-T Command Post Terminals continued with Raytheon. The first Production contract options to produce CPT terminals were exercised after a successful Milestone C decision was approved September 1, 2015.

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

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203001F / Family of Advanced BLoS Terminals (FAB-T)	Project (Number/Name) 672490 / Family of Advanced Beyond Line-of-Sight Terminals (FAB-T)
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
FAB-T CPT Prime Contract	C/Various	Raytheon : Marlboro, MA	0.029	3.027	Feb 2019	13.174	Oct 2019	0.000		-		0.000	Continuing	Continuing	-
FAB-T CPT Technical Mission Analysis	Various	MITRE : Various, MA	1.424	5.907	Feb 2019	1.250	Jan 2020	0.000		-		0.000	Continuing	Continuing	-
FAB-T CPT GFE	Various	TBD: TBD : Various, MA	0.000	-		0.376	Oct 2019	0.000		-		0.000	Continuing	Continuing	-
FAB-T FET Prime Contracts	Various	Various : Various, MA	2.296	13.480	Dec 2018	-		-		-		-	0.000	15.776	-
FAB-T FET Technical Mission Analysis	Various	Various : Various, MA	1.519	5.769	Apr 2019	-		-		-		-	0.000	7.288	-
PNVC Prime Contract	Various	Various : Various, MA	12.210	14.044	Apr 2019	-		-		-		-	0.000	26.254	-
PNVC Technical Mission Analysis	Various	Various : Various, MA	2.300	4.167	Apr 2019	-		-		-		-	0.000	6.467	-
PNVC Enterprise SE&I	Various	Various : Various, MA	2.500	1.437	Jun 2019	-		-		-		-	0.000	3.937	-
PNVC GFE/GFP	Various	Various : Various, MA	0.200	2.935	Apr 2019	-		-		-		-	0.000	3.135	-
Subtotal			22.478	50.766		14.800		0.000		-		0.000	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PNVC Support	C/Various	Various : Various	0.000	0.100	Oct 2019	-		-		-		-	0.000	0.100	-
Subtotal			0.000	0.100		-		-		-		-	0.000	0.100	N/A

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

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Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
FAB-T CPT Test	PO	Various : Various	0.116	0.930	Feb 2019	0.000	Dec 2019	-		-		-	Continuing	Continuing	-
FAB-T FET Test and Evaluation	PO	Various : Various	0.000	0.015	Aug 2019	-		-		-		-	0.000	0.015	-
PNVC Government Test and LDTO Support	PO	Various : Various	0.000	1.153	Jun 2019	-		-		-		-	0.000	1.153	-
Subtotal			0.116	2.098		0.000		-		-		-	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
FAB-T CPT FFRDC	Various	Various : TBD	0.204	0.177	May 2019	-		-		-		-	Continuing	Continuing	-
FAB-T FET Other Support	Various	Various : MA	0.057	0.048	Nov 2018	-		-		-		-	0.000	0.105	-
FAB-T FET A&AS	Various	Various : MA	1.721	2.788	Feb 2019	-		-		-		-	0.000	4.509	-
PNVC FFRDC	MIPR	Various : CA	0.100	0.618	Mar 2019	-		-		-		-	0.000	0.718	-
PNVC A&AS	Various	Various : TBD	0.500	1.408	Nov 2018	-		-		-		-	0.000	1.908	-
PNVC Other Support	Various	Various : MA	1.000	0.499	Nov 2018	-		-		-		-	0.000	1.499	-
FAB-T CPT Other Support	Various	Various : MA	0.075	0.080	Oct 2018	1.200	Nov 2019	0.000		-		0.000	Continuing	Continuing	-
Subtotal			3.657	5.618		1.200		0.000		-		0.000	Continuing	Continuing	N/A

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract	
	Project Cost Totals		26.251	58.582	16.000	0.000	-	0.000	Continuing	Continuing

Remarks
Prior Years funding, FY 2016/FY 2017 \$95.229M was executed in PE 0303001F. Prior to FY 2016, \$180.602M was executed in PE 0303601F.

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203001F / <i>Family of Advanced BLoS Terminals (FAB-T)</i>	Project (Number/Name) 672490 / <i>Family of Advanced Beyond Line-of-Sight Terminals (FAB-T)</i>

FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

FAB-T	
FAB-T CPT Raytheon Development Contract	
FAB-T CPT Government Test Support	
FAB-T CPT AEHF Terminal Certification	

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203001F / <i>Family of Advanced BLoS Terminals (FAB-T)</i>	Project (Number/Name) 672490 / <i>Family of Advanced Beyond Line-of-Sight Terminals (FAB-T)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>FAB-T</i>				
FAB-T CPT Raytheon Development Contract	1	2019	2	2020
FAB-T CPT Government Test Support	1	2019	2	2020
FAB-T CPT AEHF Terminal Certification	2	2020	2	2020

Note
FAB-T Raytheon Development Contract actual award date 4Q 2012, completion is 2Q 2020.

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force										Date: February 2020		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 1203001F / Family of Advanced BLoS Terminals (FAB-T)					Project (Number/Name) 673035 / Presidential and National Voice Conferencing		
COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
673035: Presidential and National Voice Conferencing	0.000	0.000	65.911	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	65.911
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-	-	-

A. Mission Description and Budget Item Justification

In FY2021, PE 1203001F, Family of Advanced BLoS Terminals efforts were transferred to Appropriation 3620, Research, Development, Test & Evaluation, Space Force, PE 1203001SF, Family of Advanced BLoS Terminals from Appropriation 3600, Budget Activity [07] due to the creation of a new Appropriation for Space Force.

In FY 2020 PE 1203001F, the PNVC effort in Project 672490 transferred to PE 1203001F, Project 673035, PNVC, for additional transparency.

The PNVC capability is a critical element of the Nuclear Command, Control, and Communications (NC3) System. PNVC is the Survivable Emergency Conferencing Network (SECN) replacement capability which provides anti-jam, anti-scintillation, survivable, and endurable voice communications through the AEHF satellite system for national and strategic users. There are several components being developed and procured by other organizations that must be synchronized to expeditiously field this capability. The PNVC Integrator is responsible for end-to-end integration of these components, to include requirements traceability, end-to-end system testing, configuration and checkout activities, training and technical manuals, network transition support, identification of deficiencies in overall PNVC system capability, enterprise and life cycle support for PNVC components. The AFPEO/SP approved entry into the acquisition lifecycle as a post MS-A ACAT III Program of Record in January 2016. In February 2019 the AF PEO/NC declared the PNVC Integrator an ACAT II Program based on updated approved budget request.

Starting in December 2018, PNVC Integrator is responsible for all program elements' requests for funding related to the Defense Information Systems Agency (DISA) components of the PNVC System in accordance with FY 2018 National Defense Authorization Act, Sec. 1661.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver PNVC weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605831F.

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

	FY 2019	FY 2020	FY 2021
Title: PNVC Integrator	0.000	65.911	0.000
Description: PNVC is the SECN replacement capability which provides anti-jam, anti-scintillation, survivable, and endurable voice communications through the AEHF satellite system for national and strategic users. The PNVC capability consists of constituent programs being developed and produced by other organizations. This program will integrate test and support configuration of hardware from these other programs. PNVC components will be installed at ground fixed and mobile command locations as well as three aircraft platforms.			

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203001F / Family of Advanced BLoS Terminals (FAB-T)	Project (Number/Name) 673035 / Presidential and National Voice Conferencing

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
<p>FY 2020 Plans: PNVC Integrator government team will conduct Phase 1 Developmental Test for ground based systems, with prime contractor support. In parallel, prime contractor and component contractors will identify and resolve hardware and software deficiencies identified during risk reduction testing, and conduct regression and interoperability testing post-disposition using both contractor and government test laboratories. Prime contractor will also be conducting Phase 2 risk reduction and contractor test for two airborne and a SMART-T nodes, and executing integration and checkout of PNVC systems at ground fixed locations world-wide. Finally, government and contract teams will conduct technical order verification and conducting user training across all nodes and sites.</p> <p>Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, experimentation, prototyping, etc.</p> <p>FY 2021 Plans: N/A</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: N/A</p>			
Accomplishments/Planned Programs Subtotals	0.000	65.911	0.000

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2019	FY 2020	FY 2021	FY 2021	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
			Base	OCO	Total						
• RDTE 07 672490: PNVC	23.961	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	23.961
• APAF 05 FBLOST: FAB-T	14.280	9.610	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	23.890
• SPAF 01 FBLOST: FAB-T	22.268	32.105	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	54.373
• SPAF 01 PNVC: PNVC	0.000	1.915	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.915
• APAF 06 Aircraft Spares and Repa...: FAB-T	6.134	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.134
• SPAF 02 SSPARE Spares and Repair...: FAB-T	15.568	0.057	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.625

Remarks
In FY 2020, PE 1203001F, PE Family of Advanced Beyond Line-of-Sight Terminals, Project 673035, Presidential and National Voice Conferencing efforts were transferred from PE 1203001F, PE Family of Advanced Beyond Line-of-Sight Terminals, Project 672490, Family of Advanced Beyond Line-of-Sight Terminals.

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D. Acquisition Strategy

PNVC Acquisition Strategy: On May 15, 2015 the Deputy Secretary of Defense assigned the PNVC End-to-End Integration responsibility to the Air Force; effective May 16, 2015, SAF/AQ designated the AFPEO/SP. In February 2019 the AF PEO/NC declared the PNVC Integrator an ACAT II Program based on updated approved budget request. The PNVC End-to-End Integrator program is responsible for requirements traceability, End-to-End system testing, site configuration activities, training and technical manuals, network transition support, identifying deficiencies in the PNVC capability, and enterprise and life cycle support for all PNVC components. Starting in December 2018 PNVC Integration is responsible for all program elements' requests for funding related to the Defense Information Systems and Agency (DISA) components of the PNVC System in accordance with FY 2018 National Defense Authorization Act, Sec. 1661.

Beginning in FY2020, all PNVC funds were transferred from DISA to BPAC 673035, for execution.

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

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203001F / <i>Family of Advanced BLoS Terminals (FAB-T)</i>	Project (Number/Name) 673035 / <i>Presidential and National Voice Conferencing</i>
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Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Product Development	C/CPAF	Not specified. : TBD	0.000	-		-		-		-		-	0.000	0.000	-
PNVC Prime Contract	Various	Various : Various, MA	0.000	-		48.781	Nov 2019	0.000		-		0.000	Continuing	Continuing	-
PNVC Technical Mission Analysis	Various	Various : Various, MA	0.000	-		5.430	Dec 2019	0.000		-		0.000	Continuing	Continuing	-
PNVC Enterprise SE&I	Various	Various : Various, MA	0.000	-		2.900	Dec 2019	0.000		-		0.000	Continuing	Continuing	-
PNVC GFE/GFP	Various	Various : Various, MA	0.000	-		-		-		-		-	Continuing	Continuing	-
Subtotal			0.000	-		57.111		0.000		-		0.000	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Management Services	C/CPAF	Not specified. : TBD	0.000	-		-		-		-		-	0.000	0.000	-
PNVC FFRDC	MIPR	TBD : TBD	0.000	-		2.000	Nov 2019	0.000		-		0.000	Continuing	Continuing	-
PNVC A&AS	Various	Various : Various TBD	0.000	-		1.600	Dec 2019	0.000		-		0.000	Continuing	Continuing	-
PNVC Other Support	Various	Various : MA	0.000	-		5.200	Nov 2019	0.000		-		0.000	Continuing	Continuing	-
Subtotal			0.000	-		8.800		0.000		-		0.000	Continuing	Continuing	N/A

	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	-	65.911	0.000	-	0.000	Continuing	Continuing	N/A

Remarks
 In FY 2020, PE 1203001F, PE Family of Advanced Beyond Line-of-Sight Terminals, Project 673035, Presidential and National Voice Conferencing efforts were transferred from PE 1203001F, PE Family of Advanced Beyond Line-of-Sight Terminals, Project 672490, Family of Advanced Beyond Line-of-Sight Terminals.

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203001F / <i>Family of Advanced BLoS Terminals (FAB-T)</i>	Project (Number/Name) 673035 / <i>Presidential and National Voice Conferencing</i>

FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

<i>PNVC Integrator</i>	
Phase I Ground Development Test 1	██████████
Test, Integration, & Check Out	██████████
Deficiency Workoff	██████████

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203001F / <i>Family of Advanced BLoS Terminals (FAB-T)</i>	Project (Number/Name) 673035 / <i>Presidential and National Voice Conferencing</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>PNVC Integrator</i>				
Phase I Ground Development Test 1	2	2020	3	2020
Test, Integration, & Check Out	4	2019	1	2020
Deficiency Workoff	3	2019	1	2020

Note
FAB-T / FET was started in prior year BPAC 672490.

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

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203001F / Family of Advanced BLoS Terminals (FAB-T)	Project (Number/Name) 673040 / Force Element Terminal
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COST (\$ in Millions)	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	Cost To Complete	Total Cost
673040: Force Element Terminal	0.000	0.000	113.377	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	113.377
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

In FY2021, PE 1203001F, Family of Advanced BLoS Terminals efforts were transferred to Appropriation 3620, Research, Development, Test & Evaluation, Space Force, PE 1203001SF, Family of Advanced BLoS Terminals from Appropriation 3600, Budget Activity [07] due to the creation of a new Appropriation for Space Force.

In FY 2020, PE 1203001F, Family of Advanced Beyond Line-of-Sight Terminals, Project 673040, Force Element Terminal efforts were transferred from PE 1203001F, PE Family of Advanced Beyond Line-of-Sight Terminals, Project 672490, Family of Advanced Beyond Line of Sight Terminals to provide program transparency.

The Force Element Terminal (FET) program provides secure, protected, and survivable communications for the strategic and tactical warfighter through airborne based MILSATCOM terminals. The FET will provide the B-52, and RC-135 aircraft with worldwide nuclear and non-nuclear survivable, anti-jam, Low Probability of Detect (LPD)/Low Probability of Intercept (LPI), data and voice communications. The FET will be interoperable with Milstar, AEHF, Enhanced Polar Systems - Recapitalization (EPS-R), and Evolved Strategic SATCOM (ESS) Satellite constellations utilizing both Low Data Rate (LDR) and Extended Data Rate (XDR) waveforms.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver FAB-T FET weapon system capability. The use of such program funds would be in addition to the civilian pay expenses budgeted in program element 0605831F.

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

	FY 2019	FY 2020	FY 2021
Title: FAB-T FET	0.000	113.377	0.000
Description: Description: Continue development of Force Element Terminals. Development activities include, but are not limited to, FET design, development and qualification testing.			
FY 2020 Plans: Funding is for the continued development of Force Element Terminals. Design activities will include, but not limited to, the conduct of design reviews including a Systems Requirement Review, Preliminary Design Review, and Critical Design Review. FET development activities will include nuclear hardness parts analysis and testing, performance of reliability growth testing, and fabrication of prototypes and test assets to support terminal environmental and functional qualification and flight testing.			

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Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203001F / <i>Family of Advanced BLoS Terminals (FAB-T)</i>	Project (Number/Name) 673040 / <i>Force Element Terminal</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, prototyping, etc. Planning and support activities will include qualification test planning, logistics support planning, risk reduction activities, technical analysis and studies, and platform integration support.			
FY 2021 Plans: N/A			
FY 2020 to FY 2021 Increase/Decrease Statement: N/A			
Accomplishments/Planned Programs Subtotals	0.000	113.377	0.000

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2021</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>Cost To</u>	<u>Total Cost</u>
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	
• RDTE 04 672490: <i>FET</i>	22.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	22.100
• APAF 05 FBLOST: <i>FAB-T</i>	14.280	9.610	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	23.890
• SPAF 01 FBLOST: <i>FAB-T</i>	22.268	32.105	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	54.373
• RDTE 07 PNVC: <i>PNVC</i>	26.261	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	26.261
• APAF 06 Aircraft Spares and Repa...: <i>FAB-T</i>	6.134	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.134
• SPAF 02 SSPARE Spares and Repair...: <i>FAB-T</i>	15.568	0.057	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	15.625

Remarks

D. Acquisition Strategy
 FET Acquisition Strategy: Per the Acquisition Strategy Panel briefed to SAF/AQ on February 7, 2019, FET is pursuing a Rapid Prototyping development Section 804 approach of the National Defense Authorization Act for FY 2016 (Public Law 114-92). FET will award a development effort in FY 2020 leading to a production decision in FY 2023. The development effort includes system design and build of sufficient test assets to allow for expeditious development, testing, qualification and integration support of the FET capability. FET will meet B-52 and RC-135 platform requirements to support USSTRATCOM's Strategic Nuclear Command Control and Communication (NC3) mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force												Date: February 2020			
Appropriation/Budget Activity				R-1 Program Element (Number/Name)				Project (Number/Name)							
3600 / 7				PE 1203001F / Family of Advanced BLoS Terminals (FAB-T)				673040 / Force Element Terminal							
Product Development (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development	C/CPAF	Not specified. : TBD	0.000	-		-		-		-		-	0.000	0.000	-
FAB-T FET Development Contracts	Various	TBD : TBD, MA	0.000	-		89.937	Dec 2019	0.000		-		0.000	Continuing	Continuing	-
FAB-T FET Technical Mission Analysis	Various	TBD : TBD, MA	0.000	-		15.420	Dec 2019	0.000		-		0.000	Continuing	Continuing	-
Subtotal			0.000	-		105.357		0.000		-		0.000	Continuing	Continuing	N/A
Test and Evaluation (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	C/CPAF	Not specified. : TBD	0.000	-		-		-		-		-	0.000	0.000	-
FAB-T FET Test & Evaluation and Assets	PO	Multiple Agencies : TBD	0.000	-		1.550	Jan 2020	0.000		-		0.000	Continuing	Continuing	-
Subtotal			0.000	-		1.550		0.000		-		0.000	Continuing	Continuing	N/A
Management Services (\$ in Millions)				FY 2019		FY 2020		FY 2021 Base		FY 2021 OCO		FY 2021 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Services	C/CPAF	Not specified. : TBD	0.000	-		-		-		-		-	0.000	0.000	-
FAB-T FET Other Support	Various	Various : Various, MA	0.000	-		1.100	Oct 2019	0.000		-		0.000	Continuing	Continuing	-
FAB-T FET A&AS	Various	Various : Various, MA	0.000	-		5.370	Jan 2020	0.000		-		0.000	Continuing	Continuing	-
Subtotal			0.000	-		6.470		0.000		-		0.000	Continuing	Continuing	N/A
Project Cost Totals			0.000	-		113.377		0.000		-		0.000	Continuing	Continuing	N/A

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force							Date: February 2020			
Appropriation/Budget Activity 3600 / 7			R-1 Program Element (Number/Name) PE 1203001F / <i>Family of Advanced BLoS Terminals (FAB-T)</i>			Project (Number/Name) 673040 / <i>Force Element Terminal</i>				
	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract	

Remarks
 In FY 2020, PE 1203001F, PE Family of Advanced Beyond Line-of-Sight Terminals, Project 673040, Force Element Terminal efforts were transferred from PE 1203001F, PE Family of Advanced Beyond Line-of-Sight Terminals, Project 672490, Family of Advanced Beyond Line of Sight Terminals.

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Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203001F / <i>Family of Advanced BLoS Terminals (FAB-T)</i>	Project (Number/Name) 673040 / <i>Force Element Terminal</i>

	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

FET																												
FAB-T Force Element Terminal Development																												
FAB-T FET Parts Hardness Testing																												
FAB-T FET Design, Fabrication and Development of Prototypes and Test Assets																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 1203001F / <i>Family of Advanced BLoS Terminals (FAB-T)</i>	Project (Number/Name) 673040 / <i>Force Element Terminal</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
FET				
FAB-T Force Element Terminal Development	1	2020	4	2020
FAB-T FET Parts Hardness Testing	1	2020	1	2020
FAB-T FET Design, Fabrication and Development of Prototypes and Test Assets	1	2020	4	2020