

UNCLASSIFIED

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

Appropriation/Budget Activity 3620F: Research, Development, Test & Evaluation, Space Force I BA 7: Operational Systems Development	R-1 Program Element (Number/Name) PE 1203001SF I Family of Advanced BLoS Terminals (FAB-T) CPT
---	--

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	0.000	0.000	0.000	247.229	0.000	247.229	190.594	102.337	76.196	74.578	0.000	690.934
672490: Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) CPT	0.000	0.000	0.000	18.294	0.000	18.294	15.000	2.800	0.000	0.000	0.000	36.094
673035: Presidential and National Voice Conferencing	0.000	0.000	0.000	62.199	0.000	62.199	43.525	27.878	3.246	0.291	0.000	137.139
673040: Force Element Terminal	0.000	0.000	0.000	166.736	0.000	166.736	132.069	71.659	72.950	74.287	0.000	517.701

Program MDAP/MAIS Code: 199

A. Mission Description and Budget Item Justification

In FY 2021, PE 1203001F, Family of Advanced BLoS Terminals (FAB-T) CPT efforts were transferred to Appropriation 3620, Research, Development, Test & Evaluation, Space Force, PE 1203001SF Family of Advanced BLoS Terminals (FAB-T) CPT from Appropriation 3600, Budget Activity 07 due to the creation of a new Appropriation for Space Force.

The FAB-T CPT, FET and PNVC Integrator programs transitioned from AFPEO/SP to AFPEO/NC effective December 2018.

The FAB-T CPT 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 CPT terminals will also support the critical command and control (C2) of the Milstar and AEHF satellite constellations.

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 SATCOM (ESS) satellite constellations utilizing both Low Data Rate (LDR) and Extended Data Rate (XDR) waveforms. FET was designated as MTA Middle Tier Acquisition in Feb 2019.

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,

UNCLASSIFIED

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

Appropriation/Budget Activity 3620F: <i>Research, Development, Test & Evaluation, Space Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1203001SF / <i>Family of Advanced BLoS Terminals (FAB-T) CPT</i>
---	---

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. Starting in December 2018 PNVC Integrator is responsible the requests for funding of all program elements 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.

In February 2019, the AFPEO/NC declared the PNVC Integrator an ACAT II Program based on the inclusion of DISA funding in the program budget.

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

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.

B. Program Change Summary (\$ in Millions)	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021 Base</u>	<u>FY 2021 OCO</u>	<u>FY 2021 Total</u>
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	247.229	0.000	247.229
Total Adjustments	0.000	0.000	247.229	0.000	247.229
• 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	247.229	0.000	247.229

Change Summary Explanation

FY 2021: +\$247.229M; funds starting in FY 2021 were transferred from RDT&E, Air Force to RDT&E, Space Force.

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force										Date: February 2020		
Appropriation/Budget Activity 3620F / 7					R-1 Program Element (Number/Name) PE 1203001SF / Family of Advanced BLoS Terminals (FAB-T) CPT				Project (Number/Name) 672490 / Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) CPT			
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) CPT	0.000	0.000	0.000	18.294	0.000	18.294	15.000	2.800	0.000	0.000	0.000	36.094
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

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	0.000	0.000	18.294
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: N/A			
FY 2021 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.			
FY 2020 to FY 2021 Increase/Decrease Statement: FY2020 PB to FY 2021 PB, Increased by \$1.3M the work being accomplished continues to include program office support, studies, technical analysis, experimentation, prototyping, etc. to fund continued Reliability Growth Testing of the new Airborne Antenna CPT configuration to ensure the configuration satisfies maintainability criteria.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	18.294

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3620F / 7	R-1 Program Element (Number/Name) PE 1203001SF / Family of Advanced BLoS Terminals (FAB-T) CPT	Project (Number/Name) 672490 / Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) CPT

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	1.575	-	1.575	-	-	-	-	0.000	25.465
• SPAF 01 FBLOST: FAB-T	22.268	32.105	60.994	-	60.994	34.100	22.210	19.100	13.800	0.000	204.577
• SPAF 01 PNVC: PNVC	-	1.915	5.244	-	5.244	5.877	1.577	1.606	1.636	0.000	17.855
• SPAF 01 FET:: FET	-	-	-	-	-	-	88.885	90.487	154.787	0.000	334.159
• SPAF 01 FAB-T: FAB-T	6.134	-	-	-	-	-	-	-	-	0.000	6.134
• SPAF 02 SSPARE Spares and Repair...: FAB-T	15.568	0.057	-	-	-	-	-	-	-	0.000	15.625
• RDTE 07 1203001F: FAB-T	58.582	195.288	-	-	-	-	-	-	-	0.000	245.870

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.

UNCLASSIFIED

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

Appropriation/Budget Activity 3620F / 7	R-1 Program Element (Number/Name) PE 1203001SF / Family of Advanced BLoS Terminals (FAB-T) CPT	Project (Number/Name) 672490 / Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) CPT
---	--	--

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	-	-		-		16.782	Oct 2020	-		16.782	Continuing	Continuing	-
FAB-T CPT Technical Mission Analysis	Various	MITRE : Various, MA	-	-		-		1.348	Oct 2020	-		1.348	Continuing	Continuing	-
FAB-T CPT GFE	Various	TBD: TBD : Various, MA	-	-		-		0.002	Dec 2020	-		0.002	Continuing	Continuing	-
Subtotal			-	-		-		18.132		-		18.132	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
FAB-T CPT Other Support	Various	Various : MA	-	-		-		0.162	Dec 2020	-		0.162	Continuing	Continuing	-
Subtotal			-	-		-		0.162		-		0.162	Continuing	Continuing	N/A

Project Cost Totals	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	Cost To Complete	Total Cost	Target Value of Contract
-	-	-	0.000	18.294	-	18.294	Continuing	Continuing	N/A

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.

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3620F / 7	R-1 Program Element (Number/Name) PE 1203001SF / <i>Family of Advanced BLoS Terminals (FAB-T) CPT</i>	Project (Number/Name) 672490 / <i>Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) CPT</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>FAB-T</i>				
FAB-T CPT AEHF Terminal Certification	1	2021	2	2023

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

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force										Date: February 2020		
Appropriation/Budget Activity 3620F / 7					R-1 Program Element (Number/Name) PE 1203001SF / Family of Advanced BLoS Terminals (FAB-T) CPT				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	0.000	62.199	0.000	62.199	43.525	27.878	3.246	0.291	0.000	137.139
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

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 and 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	0.000	62.199
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: PNVC Integrator government team will conduct Phase 2 Developmental Test for the remaining operational nodes and end-to-end system test with support from the integrator contractor. In parallel, the integrator contractor and component contractors will			

UNCLASSIFIED

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

Appropriation/Budget Activity 3620F / 7	R-1 Program Element (Number/Name) PE 1203001SF / Family of Advanced BLoS Terminals (FAB-T) CPT	Project (Number/Name) 673035 / Presidential and National Voice Conferencing
---	--	---

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
<p>continue to resolve any hardware and software deficiencies identified during test, conduct regression and interoperability testing using both contractor and government test laboratories, and conduct planning for future planned system upgrades. The PNVC Integrator will also conduct integration and checkout activities and training at remaining operational sites world-wide, conduct cybersecurity testing, and continue to work closely with sustainment organizations on the preparations for transition to depot support.</p> <p>PNVC Integrator activities will include but are not limited to program office support, studies, technical analysis, prototyping, test planning and execution, deficiency resolution, logistics and sustainment support planning, component product support, risk reduction activities, technical analysis and studies, platform integration support, and integration laboratory support.</p> <p>Rapidly respond to implement system resiliency and situational awareness necessary to operate in the contested space domain. Activities may include, but are not limited to program office support, studies, technical analysis, experimentation, prototyping, etc.</p> <p>FY 2020 to FY 2021 Increase/Decrease Statement: FY2020 PB to FY2021 PB PNVC Decreased by \$3.184M. In FY2021 PNVC will continue developmental tests, resolve any hardware and software deficiencies, conduct integration and checkout activities and training at remaining operational sites and continue to work closely with sustainment organizations on the preparations for transition to depot support.</p>			
Accomplishments/Planned Programs Subtotals	0.000	0.000	62.199

C. Other Program Funding Summary (\$ in Millions)											
Line Item	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
• RDTE 07 1203001F: PNVC	23.961	-	-	-	-	-	-	-	-	0.000	23.961
• APAF 05 FBLOST: FAB-T	14.280	9.610	1.575	-	1.575	-	-	-	-	0.000	25.465
• SPAF 01 FBLOST: FAB-T	22.268	32.105	60.994	-	60.994	34.100	22.210	9.100	13.800	0.000	194.577
• SPAF 01 PNVC: PNVC	-	1.915	5.244	-	5.244	5.877	1.577	1.606	1.636	0.000	17.855
• SPAF 01 FET: FET	-	-	-	-	-	-	88.885	90.487	154.787	0.000	334.159
• APAF 06 Aircraft Spares and Repa...: FAB-T	6.134	-	-	-	-	-	-	-	-	0.000	6.134
• SPAF 02 SSPARE Spares and Repair...: FAB-T	15.568	0.057	-	-	-	-	-	-	-	0.000	15.625

Remarks

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3620F / 7	R-1 Program Element (Number/Name) PE 1203001SF / Family of Advanced BLoS Terminals (FAB-T) CPT	Project (Number/Name) 673035 / Presidential and National Voice Conferencing

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.

PNVC will continue to support component fielding, conduct site integration and checkout, and prepare for and execute integrated developmental test activities in advance of the PNVC system Initial Operating Capability.

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

UNCLASSIFIED

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)							
3620F / 7				PE 1203001SF / Family of Advanced BLoS Terminals (FAB-T) CPT				673035 / Presidential and National Voice Conferencing							
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
PNVC Prime Contract	Various	Various : Various, MA	-	-		-		43.284	Oct 2020	-		43.284	Continuing	Continuing	-
PNVC Technical Mission Analysis	Various	Various : Various, MA	-	-		-		10.110	Oct 2020	-		10.110	Continuing	Continuing	-
PNVC Enterprise SE&I	Various	Various : Various, MA	-	-		-		1.990	Oct 2020	-		1.990	Continuing	Continuing	-
Subtotal			-	-		-		55.384		-		55.384	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
PNVC Government Test and LDTO Support	Various	Various : Various	-	-		-		2.020	Oct 2020	-		2.020	Continuing	Continuing	-
Subtotal			-	-		-		2.020		-		2.020	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	-
PNVC FFRDC	MIPR	TBD : TBD	-	-		-		2.730	Oct 2020	-		2.730	Continuing	Continuing	-
PNVC A&AS	Various	Various : Various TBD	-	-		-		1.790	Oct 2020	-		1.790	Continuing	Continuing	-
PNVC Other Support	Various	Various : MA	-	-		-		0.275	Oct 2020	-		0.275	Continuing	Continuing	-
Subtotal			-	-		-		4.795		-		4.795	Continuing	Continuing	N/A
Project Cost Totals			-	-		0.000		62.199		-		62.199	Continuing	Continuing	N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2021 Air Force							Date: February 2020			
Appropriation/Budget Activity 3620F / 7			R-1 Program Element (Number/Name) PE 1203001SF / <i>Family of Advanced BLoS Terminals (FAB-T) CPT</i>			Project (Number/Name) 673035 / <i>Presidential and National Voice Conferencing</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

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3620F / 7	R-1 Program Element (Number/Name) PE 1203001SF / Family of Advanced BLoS Terminals (FAB-T) CPT	Project (Number/Name) 673035 / Presidential and National Voice Conferencing

	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 II Dry-Runs & Development Test 2																												
Multi-Service Operational Test & Evaluation																												
Test, Integration, & Check Out																												
Deficiency Workoff																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3620F / 7	R-1 Program Element (Number/Name) PE 1203001SF / <i>Family of Advanced BLoS Terminals (FAB-T) CPT</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 II Dry-Runs & Development Test 2	2	2021	3	2021
Multi-Service Operational Test & Evaluation	1	2022	2	2022
Test, Integration, & Check Out	1	2021	1	2025
Deficiency Workoff	1	2021	1	2022

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force										Date: February 2020		
Appropriation/Budget Activity 3620F / 7					R-1 Program Element (Number/Name) PE 1203001SF / Family of Advanced BLoS Terminals (FAB-T) CPT				Project (Number/Name) 673040 / Force Element Terminal			
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	0.000	166.736	0.000	166.736	132.069	71.659	72.950	74.287	0.000	517.701
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

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	0.000	166.736
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: N/A			
FY 2021 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 Critical Design Review. FET development activities will include nuclear hardness parts analysis and testing, performance of reliability growth testing, fabrication of prototypes and test assets to support terminal environmental and functional qualification and flight testing.			
Planning and support activities will continue qualification test planning, logistics support planning, risk reduction activities, technical analysis and studies, platform integration support, and program office support.			
Rapidly respond to implement system resiliency and situational awareness necessary to operate in the contested space domain. Activities may include, but are not limited to program office support, studies, technical analysis, experimentation, prototyping, etc.			
FY 2020 to FY 2021 Increase/Decrease Statement:			

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3620F / 7	R-1 Program Element (Number/Name) PE 1203001SF / Family of Advanced BLoS Terminals (FAB-T) CPT	Project (Number/Name) 673040 / Force Element Terminal

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2019	FY 2020	FY 2021
FY2020 PB to FY2021 PB FET Increased by \$56.919M. Funding is for the continued development of Force Element Terminals. Design activities will include, but are not limited to, the conduct of design reviews including a Critical Design Review. FET development activities will include nuclear hardness parts analysis and testing, performance of reliability growth testing, and fabrication of prototypes test assets to support terminal environmental and functional qualification, and flight testing.			
Accomplishments/Planned Programs Subtotals	0.000	0.000	166.736

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

Line Item	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
• RDTE 04 1203001F: <i>FET</i>	22.100	-	-	-	-	-	-	-	-	0.000	22.100
• APAF 05 FBLOST: <i>FAB-T</i>	14.280	9.610	1.575	-	1.575	-	-	-	-	0.000	25.465
• APAF 05 PNVC: <i>PNVC</i>	-	-	-	-	-	-	-	-	-	0.000	0.000
• SPAF 01 FBLOST: <i>FAB-T</i>	22.268	32.105	60.994	-	60.994	34.100	22.200	19.100	13.800	0.000	204.567
• RDTE 07 PNVC: <i>PNVC</i>	26.261	-	-	-	-	-	-	-	-	0.000	26.261
• SPAF 01 SPAF FET: <i>FET</i>	-	-	-	-	-	-	88.885	90.487	154.787	0.000	334.159
• APAF 06 Aircraft Spares and Repa...: <i>FAB-T</i>	6.134	0.000	-	-	-	-	-	-	-	0.000	6.134
• SPAF 02 SSPARE Spares and Repair...: <i>FAB-T</i>	15.568	0.057	-	-	-	-	-	-	-	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). This Rapid Prototyping program enables FET to accelerate the nominal program development timeline in support of the accelerated USSTRATCOM-requested Initial Operating Capability. FET will award a development effort in FY 2020 leading to a rapid production decision in FY 2023. The rapid Prototyping effort enables FET to rapidly develop, install, and obtain operationally-representative test data from early B-52 and RC-135 FET prototypes which will also have residual operations capability. The overall 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.

UNCLASSIFIED

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)						
3620F / 7				PE 1203001SF / Family of Advanced BLoS Terminals (FAB-T) CPT					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
FAB-T FET Development Contracts	Various	TBD : TBD, MA	-	-		-		139.110	Oct 2020	-		139.110	Continuing	Continuing	-
FAB-T FET Technical Mission Analysis	Various	TBD : TBD, MA	-	-		-		19.619	Oct 2020	-		19.619	Continuing	Continuing	-
Subtotal			-	-		-		158.729		-		158.729	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
FAB-T FET Test & Evaluation and Assets	PO	Multiple Agencies : TBD	-	-		-		2.004		-		2.004	Continuing	Continuing	-
Subtotal			-	-		-		2.004		-		2.004	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
FAB-T FET Other Support	Various	Various : Various, MA	-	-		-		0.501	Nov 2020	-		0.501	Continuing	Continuing	-
FAB-T FET A&AS	Various	Various : Various, MA	-	-		-		5.502	Dec 2020	-		5.502	Continuing	Continuing	-
Subtotal			-	-		-		6.003		-		6.003	Continuing	Continuing	N/A
Project Cost Totals			-	-		0.000		166.736		-		166.736	Continuing	Continuing	N/A
Remarks															

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2021 Air Force		Date: February 2020
Appropriation/Budget Activity 3620F / 7	R-1 Program Element (Number/Name) PE 1203001SF / <i>Family of Advanced BLoS Terminals (FAB-T) CPT</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	2021	4	2024
FAB-T FET Parts Hardness Testing	1	2021	1	2021
FAB-T FET Design, Fabrication and Development of Prototypes and Test Assets	1	2021	4	2022
FAB-T FET Qualification Testing	3	2021	1	2023
FAB-T Force Element Terminal Production	1	2023	4	2025