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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force										Date: May 2017		
Appropriation/Budget Activity					R-1 Program Element (Number/Name)							
3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					PE 1203001F I Family of Advanced BLoS Terminals (FAB-T)							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	-	12.313	52.578	32.426	0.000	32.426	21.871	23.506	17.841	18.527	Continuing	Continuing
672490: Family of Advanced Beyond Line-of-Sight Terminals (FAB-T)	-	12.313	52.578	32.426	0.000	32.426	21.871	23.506	17.841	18.527	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY2018, PE 0303001F, Family of Advanced BLoS Terminals (FAB-T) efforts were transferred to PE 1203001F, Family of Advanced BLoS Terminals (FAB-T) due to the creation of a new Major Force Program for Space. FY2016 and FY2017 funding is now documented in the exhibits for PE 1203001F.

Prior Years Funding \$180.602M was executed in PE 0303601F.

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. This includes, but is not limited to, planning and programming activities in support of implementing FAB-T requirements to support protected and survivable beyond line of sight EHF communications to platforms supporting conduct of global combat and reconnaissance operations via the Force Element Terminal (FET).

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, site installation and checkout activities, training and technical manuals, network transition support, identification of deficiencies in overall PNVC system capability, and logistics 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.

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 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	3.895	42.378	0.000	0.000	0.000
Current President's Budget	12.313	52.578	32.426	0.000	32.426
Total Adjustments	8.418	10.200	32.426	0.000	32.426
• 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	8.680	0.000			
• SBIR/STTR Transfer	-0.262	0.000			
• Other Adjustments	0.000	10.200	32.426	0.000	32.426
Change Summary Explanation					
FY 2016: \$8.68M increase for FAB-T FET CCA was added.					
FY 2017: \$10.2M increase for PNVC Integrator added in the Request for Additional Appropriation (RAA)					
FY 2018: \$21.246M increase for PNVC Integrator.					
FY 2018: \$11.18M increase for FAB-T Force Element Terminal (FET) Cost Capability Analysis (CCA).					
C. Accomplishments/Planned Programs (\$ in Millions)	FY 2016	FY 2017	FY 2018		
Title: FAB-T CPT Development	3.533	14.555	-		
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 2016 Accomplishments: FAB-T continued development efforts on CPT and conducted qualification testing on the Ground Transportable Antenna (GTA) and new antenna configurations.					
FY 2017 Plans: FAB-T will continue development efforts on CPT, continue flight and ground tests and conduct Functional Configuration Audit/ Physical Configuration Audit (FCA/PCA) on the Ground Transportable Antenna (GTA), new antenna configurations, and Block 2.					
Title: PNVC Integrator	0.100	38.023	21.246		

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
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 fielding of hardware from these other programs. PNVC components will be installed at ground fixed and mobile command locations, as well as in the airborne E-4B, E-6B and Very Important Person Special Airlift Mission (VIPSAM) aircraft.				
FY 2016 Accomplishments: AFPEO/SP approved entry into the acquisition lifecycle as a post MS-A ACAT III Program of Record in January 2016. PNVC Integrator developed a requirements traceability matrix among previously approved operational requirements documents to individual component specifications. A preliminary logistics assessment focused on gaining User feedback on sufficiency of component program training and technical orders (TO's) from a system perspective was conducted to inform a Request For Information for a future Product Support Integrator contract.				
FY 2017 Plans: Conduct PNVC Technical Review of system specification traceability, verification cross reference matrix, and system test verification plan for program office and end user authentication. Support site verification, validation, installation, and checkout fielding activities. Conduct Risk Reduction Test events focused on assessing cybersecurity and system functionality. Release solicitation for Product Support Integrator contract to address enterprise logistics shortfalls based on results from the Logistics Assessment focusing on training, technical publications, and system health metric reporting.				
FY 2018 Plans: Execute Developmental Test focused on system functional performance with expanded number of network participants in a scintillated environment potentially with Airborne Variant components if available. Continue support of fielding activities. Execute factory test with production assets to assess component compliance with authenticated system specification. Award Product Support Integrator contract to establish training and technical publications required to support Developmental and Operational Testing activities. Continue program office and other related support activities that may include, but are not limited to studies, technical analysis, etc.				
Title: FAB-T FET CCA Description: Conduct a Force Element Terminal (FET) Cost Capability Analysis (CCA) that includes requirements refinement, platform integration, and industry engagement addressing FET program start. FET CCA is a sub-program under FAB-T.		8.680	-	-
FY 2016 Accomplishments:				

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C. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
Conduct a Force Element Terminal (FET) Cost Capability Analysis (CCA) that includes requirements refinement, platform integration, and industry engagement addressing FET program start.												
Title: FAB-T FET										-	-	11.180
Description: Funding to ensure continued effort to complete the cost/capability analysis and begin development of force element terminals on B-52, RC-135, and tanker aircraft. FAB-T FET is a sub-program under FAB-T and previously funded in FY16 under FAB-T FET CCA.												
FY 2018 Plans: Funding to ensure continued effort to complete the cost/capability analysis and begin development of force element terminals on B-52, RC-135, and tanker aircraft. FAB-T FET is a sub-program under FAB-T and previously funded in FY16 under FAB-T FET CCA.												
Accomplishments/Planned Programs Subtotals										12.313	52.578	32.426
D. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost	
• APAF; BA05, FBLOST: FAB-T	43.843	4.673	22.252	0.000	22.252	14.410	1.985	1.589	0.000	0.000	88.752	
• APAF; BA05, PNVC: PNVC	0.000	0.000	2.464	0.000	2.464	0.000	0.000	0.000	0.000	0.000	2.464	
• SPAF; BA03, FBLOST:: FAB-T	52.192	88.963	144.758	0.000	144.758	28.096	32.357	8.569	0.000	0.000	354.935	
• SPAF; BA03, PNVC: PNVC	0.000	0.000	2.214	0.000	2.214	0.000	0.000	0.000	0.000	0.000	2.214	
• APAF; Aircraft Spares and Repair...: FAB-T	3.235	3.561	1.343	0.000	1.343	6.191	0.057	0.001	0.000	0.000	14.388	
• SPAF; SSPARE Spares and Repair P...: FAB-T	0.000	14.078	3.598	0.000	3.598	20.752	0.000	0.000	0.000	0.000	38.428	
• OPAF; BA03, 836700: FAB-T	44.436	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.00	44.436	
Remarks												
In FY 2016 APAF Spares and Repair Parts and FY 2016 OPAF Spares and Repair parts PE: 0303601F transferred to PE: 0303001F.												
In FY 2016 OPAF Project 836780 transferred to PROJECT: Space Programs FBLOST, same program element.												
In FY 2017 OPAF Spares and Repair Parts transferred to PROJECT: Space Programs SSPARE, same program element.												

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E. 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. 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. The PNVC End-to-End Integrator program is responsible for requirements traceability, End-to-End system testing, site installation and checkout activities, training and technical manuals, network transition support, identifying deficiencies in the PNVC capability, and logistics supports for all PNVC components.		
F. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.		

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Exhibit R-3, RDT&E Project Cost Analysis: FY 2018 Air Force												Date: May 2017			
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)					
Product Development (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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 Technical Mission Analysis	Various	Various : Various, MA	-	2.038	Jul 2016	10.400	Dec 2016	0.000		0.000		0.000	Continuing	Continuing	-
FAB-T FET CCA Prime Contract	Various	Various : Various, MA	-	4.619	Nov 2016	0.000		0.000		0.000		0.000	Continuing	Continuing	-
FAB-T FET CCA Technical Mission Analysis	Various	Various : Various, MA	-	2.803	Nov 2016	0.000		0.000		0.000		0.000	Continuing	Continuing	-
FAB-T FET Prime Contract	Various	Various : Various, MA	-	0.000		0.000		4.230	Jan 2018	0.000		4.230	Continuing	Continuing	-
FAB-T FET Technical Mission Analysis	Various	Various : Various, MA	-	0.000		0.000		4.200	Jan 2018	0.000		4.200	Continuing	Continuing	-
PNVC Prime Contract	Various	Not specified. : TBD	-	0.000		27.200	Jan 2017	11.394	Feb 2018	0.000		11.394	Continuing	Continuing	-
PNVC Technical Mission Analysis	Various	Not specified. : TBD	-	0.000		6.809	Jan 2017	5.149	Jan 2018	0.000		5.149	Continuing	Continuing	-
Subtotal			-	9.460		44.409		24.973		0.000		24.973	-	-	-
Support (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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
Subtotal			-	-		-		-		-		-	-	-	-
Test and Evaluation (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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 Government Test and LDTO Support	Various	Various : Various	-	0.600	Jan 2016	2.800		0.000		0.000		0.000	Continuing	Continuing	-
PNVC Government Test and LDTO Support	Various	Not specified. : TBD	-	0.000		0.500	Jan 2017	1.800	Jan 2018	0.000		1.800	Continuing	Continuing	-
Subtotal			-	0.600		3.300		1.800		0.000		1.800	-	-	-

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Management Services (\$ in Millions)				FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 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 A&AS	Various	Various : TBD	-	0.500		1.300		0.000		0.000		0.000	Continuing	Continuing	-
FAB-T Other Support	Various	Various : TBD	-	0.395		0.100		0.000		0.000		0.000	Continuing	Continuing	-
FAB-T FET CCA A&AS	Various	Various : TBD	-	1.258	Feb 2017	0.000		0.000		0.000		0.000	Continuing	Continuing	-
FAB-T FET A&AS	Various	Various : TBD	-	0.000		0.000		2.500		0.000		2.500	Continuing	Continuing	-
FAB-T FET Other Support	Various	Various : TBD	-	0.000		0.000		0.250		0.000		0.250	Continuing	Continuing	-
PNVC A&AS	Various	Not specified. : TBD	-	0.000		2.095		1.796		0.000		1.796	Continuing	Continuing	-
PNVC Other Support	Various	Various : TBD	-	0.100		1.374		1.107		0.000		1.107	Continuing	Continuing	-
Subtotal			-	2.253		4.869		5.653		0.000		5.653	-	-	-
			Prior Years	FY 2016		FY 2017		FY 2018 Base		FY 2018 OCO		FY 2018 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	12.313		52.578		32.426		0.000		32.426	-	-	-
Remarks FY17 RAA PNVC - +\$10.2M Prior Years Funding \$180.602M was executed in PE 0303601F															

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Air Force			Date: May 2017		
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	FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022			
	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 CPT Raytheon Development Contract																												
FAB-T Government Test Support																												
PNVC Integrator																												

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Exhibit R-4A, RDT&E Schedule Details: FY 2018 Air Force			Date: May 2017
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
FAB-T CPT Raytheon Development Contract	1	2016	1	2018
FAB-T Government Test Support	1	2016	1	2018
PNVC Integrator	4	2016	4	2022

Note
FAB-T Raytheon Development Contract actual award date 4Q 2012, completion is 3Q 2017.