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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force										Date: May 2017		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 Program Element (Number/Name) PE 1206760F I Protected Tactical Enterprise Service (PTES)							
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	-	0.000	0.000	18.150	0.000	18.150	77.021	115.292	114.511	154.058	Continuing	Continuing
643726: PTES	-	0.000	0.000	18.150	0.000	18.150	77.021	115.292	114.511	154.058	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY 2018, Project 657104, MILSATCOM SMI, funds were transferred from PE 1206431F, Advanced EHF MILSATCOM (SPACE), in order to transition from MILSATCOM Space Modernization Initiative to a stand alone program.

A. Mission Description and Budget Item Justification

Develop the Protected Tactical Enterprise Service (PTES) ground system to provide worldwide, anti-jam, Low Probability of Intercept (LPI) communications for tactical warfighters. PTES will utilize the Protected Tactical Waveform (PTW) to provide anti-jam communications via military and commercial satellite systems for tactical users in all Services. Initially, PTES will utilize the Wideband Global SATCOM (WGS) system and be expanded later to include commercial satellites.

The PTES program is developing a mission management system (MMS), a key management system (KMS) and hub system to enable PTW via transponded WGS satellites, with future extension to commercial SATCOM. PTW modems for user terminals are being developed by the Protected Tactical Service Field Demonstration (PTSFD) and will be separately acquired by each Service and by international partners.

PTES addresses the gap in protected communications capability identified in the Joint Space Communications Layer (JSCL) Initial Capabilities Document (ICD), the Protected Satellite Communications Services (PSCS) Analysis of Alternatives (AoA) and the PSCS AoA Follow-on for Resiliency (PAFR). The PSCS AoA confirmed the validity of tactical user requirements for protected communications. Specific gaps identified that are pertinent to PTES are: protection and connectivity to mobile users operating in a contested environment, and wideband coverage and capacity in concentrated theaters. There is a projected shortfall (i.e. 60-75%) in the needed capacity for protected tactical communications in a contested environment. This gap is especially acute for small, mobile terminals. Secondly, there is a projected shortfall (i.e. 25-40%) in wideband coverage and capacity.

To meet the warfighter requirements for protected tactical MILSATCOM and the capability gaps identified in these studies, RDT&E funding is required for architectural development, acquisition strategy development, system requirements and system trades analysis, and engineering, manufacturing, developing, testing and evaluating PTES systems and segments.

This program is in Budget Activity 4, Advanced Component Development and Prototypes (ACD&P) because efforts are necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic environment.

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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	0.000	0.000	0.000	0.000	0.000	
Current President's Budget	0.000	0.000	18.150	0.000	18.150	
Total Adjustments	0.000	0.000	18.150	0.000	18.150	
• 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	18.150	0.000	18.150	
Change Summary Explanation						
+\$18.150M, transferred from MILSATCOM SMI (PE 1206431F, Project 657104) to the PTES program.						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2016	FY 2017	FY 2018
Title: Acquisition Strategy Development				0.000	0.000	7.246
Description: The JSCL ICD and PSCS AoA defined the need for a more resilient, protected tactical architecture with increased capacity and bandwidth. In accordance with these requirements, the PTES program will develop an acquisition strategy to meet the required capabilities within an acceptable cost and schedule.						
FY 2016 Accomplishments:						
N/A						
FY 2017 Plans:						
See PE 1206431F, BPAC 657104						
FY 2018 Plans:						
Mature acquisition strategy. Develop documentation required for statutory and regulatory documentation to achieve DoD 5000.02 milestones. Evaluate results of PTSFD testing and incorporate lessons learned.						
Title: Source Selection & Contract Award				0.000	0.000	10.904
Description: Competitively award a single contract to develop and field PTES, including declaration of Initial Operational Capability (IOC) and Final Operational Capability (FOC). The contractor will be responsible for developing all PTES segments and performing all system integration, including end-to-end tests of the complete PTES system.						

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Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 Program Element (Number/Name) PE 1206760F I Protected Tactical Enterprise Service (PTES)							
C. Accomplishments/Planned Programs (\$ in Millions)										FY 2016	FY 2017	FY 2018
FY 2016 Accomplishments: N/A												
FY 2017 Plans: See PE 1206431F, BPAC 657104												
FY 2018 Plans: Conduct source selection and award contract for development of PTES. Plan for Integrated Baseline Review with PTES contractor. Continue program office and other related support activities that may include, but are not limited to, studies, technical analysis, etc.												
Accomplishments/Planned Programs Subtotals										0.000	0.000	18.150
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	
• RDT&E: BA05: PE 1206431F: Advanced EHF MILSATCOM (SPACE)	0.000	19.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	19.800	
Remarks												
E. Acquisition Strategy The objective of PTES is to provide an operational anti-jam communications capability via WGS using PTW. The PTES acquisition approach is to competitively award a single contract to develop and field PTES, including declaration of IOC and FOC. The contractor will be responsible for developing all PTES segments (MMS, KMS, and Hub) and performing all system integration, including end-to-end tests of the complete PTES system. The 46th Test Squadron is planned to be the PTES Developmental Test organization and AFOTEC is planned to be the Operational Test organization.												
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 / 4						R-1 Program Element (Number/Name) PE 1206760F / Protected Tactical Enterprise Service (PTES)				Project (Number/Name) 643726 / PTES					
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
Protected Tactical Enterprise Service	TBD	TBD : TBD	-	0.000		0.000		7.246	Jul 2018	0.000		7.246	Continuing	Continuing	-
Technical Mission Analysis	MIPR	Aerospace : El Segundo, CA	-	0.000		0.000		3.467	Jan 2018	0.000		3.467	Continuing	Continuing	-
Enterprise SE&I	C/CPAF	LinQuest : Los Angeles, CA	-	0.000		0.000		4.339	Jan 2018	0.000		4.339	Continuing	Continuing	-
Subtotal			-	0.000		0.000		15.052		0.000		15.052	-	-	-
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
Subtotal			-	-		-		-		-		-	-	-	-
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
FFRDC	Various	Various : TBD	-	0.000		0.000		1.546	Jan 2018	0.000		1.546	Continuing	Continuing	-
Other Support	Various	Various : TBD	-	0.000		0.000		0.100	Jan 2018	0.000		0.100	Continuing	Continuing	-
A&AS	Various	Various : TBD	-	0.000		0.000		1.452	Jan 2018	0.000		1.452	Continuing	Continuing	-
Subtotal			-	0.000		0.000		3.098		0.000		3.098	-	-	-

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	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	-	0.000		0.000		18.150		0.000		18.150	-	-	-
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: FY 2018 Air Force			Date: May 2017		
Appropriation/Budget Activity 3600 / 4		R-1 Program Element (Number/Name) PE 1206760F / <i>Protected Tactical Enterprise Service (PTES)</i>			Project (Number/Name) 643726 / PTES

	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
Conduct Source Selection																												
Award Development Contract																												
Mission Management System Design																												
Key Management System Design																												
Milestone B Decision																												
IOC Build																												
Begin Developmental/Operational Testing																												
Milestone C Decision																												

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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
Conduct Source Selection	1	2018	4	2018
Award Development Contract	4	2018	4	2018
Mission Management System Design	1	2019	4	2020
Key Management System Design	1	2019	4	2020
Milestone B Decision	2	2020	2	2020
IOC Build	4	2020	4	2021
Begin Developmental/Operational Testing	4	2021	4	2022
Milestone C Decision	3	2022	3	2022