

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force										Date: February 2018		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)					R-1 Program Element (Number/Name) PE 0207423F I Advanced Communications Systems							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	0.000	0.000	14.888	0.000	14.888	14.888	0.000	0.000	0.000	Continuing	Continuing
655068: Joint Tactical Radio System (JTRS)	-	0.000	0.000	14.888	0.000	14.888	14.888	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note
Protected Tactical Waveforms (PTW) development is a new start in FY19 under PE 0207423F

A. Mission Description and Budget Item Justification

Protected Tactical Waveform (PTW) is a waveform designed to mitigate the effects of advanced jamming in Anti-Access/Area Denial environments. PTW provides worldwide, beyond line of sight, Anti-Jam (AJ), Low Probability of Intercept communications, via military and commercial satellite systems for tactical users in all Services. This effort funds PTW modem development and aperture development on suitable platforms like (but not limited to) RQ-4 Global Hawk and EQ-4B/E-11A Battlefield Airborne Communications Node (BACN). PTW provides communications path diversity by increasing SATCOM resilience through satellite, spectral, and waveform diversity. This effort continues work started in Protected Tactical Service Field Demonstration (PTSFD) to complete PTW maturity and modem development, leveraging TALON Tacet Avis aperture work to develop PTW antenna and radome. It includes terminal certification efforts (Information Assurance (IA), NSA and MIL-STD). This effort funds continued development of PTW components, protected tactical terminal modems that will be capable of being fully integrated into existing wideband terminals and will ensure delivery of protected tactical SATCOM to the joint and coalition warfighters in contested, degraded environments. PTW development activities may also include technical and acquisition related studies, analysis, and early systems engineering and risk reduction activities addressing all subsystems to support both current program planning/execution and future AF program planning.

BA-5- This program is in Budget Activity 5, Advanced System Development and Demonstration (SDD) because it has passed Milestone B approval and is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force				Date: February 2018	
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)		R-1 Program Element (Number/Name) PE 0207423F I Advanced Communications Systems			
B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	0.000	0.000	0.000	0.000	0.000
Current President's Budget	0.000	0.000	14.888	0.000	14.888
Total Adjustments	0.000	0.000	14.888	0.000	14.888
• 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	14.888	0.000	14.888
Change Summary Explanation					
FY2019 Increase due to new start					
C. Accomplishments/Planned Programs (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Protected Tactical Waveform (PTW)	-	0.000	14.888	0.000	14.888
Description: Protected Tactical Waveform (PTW) is a waveform designed to mitigate the effects of advanced jamming in Anti-Access/Area Denial environments. PTW provides worldwide, beyond line of sight, Anti-Jam (AJ), Low Probability of Intercept communications, via military and commercial satellite systems for tactical users in all Services. This effort funds PTW modem development and aperture development on suitable platforms like (but not limited to) RQ-4 Global Hawk and EQ-4B/E-11A Battlefield Airborne Communications Node (BACN). PTW provides communications path diversity by increasing SATCOM resilience through satellite, spectral, and waveform diversity. This effort continues work started in Protected Tactical Service Field Demonstration (PTSFD) to complete PTW maturity and modem development, leveraging TALON Tacet Avis aperture work to develop PTW antenna and radome.					
FY 2018 Plans: N/A					
FY 2019 Base Plans:					

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force				Date: February 2018		
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 5: System Development & Demonstration (SDD)</i>		R-1 Program Element (Number/Name) PE 0207423F <i>I Advanced Communications Systems</i>				
C. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Continue PTW modem development and aperture development on suitable platforms like (but not limited to) RQ-4 Global Hawk and EQ-4B/E-11A Battlefield Airborne Communications Node (BACN).						
FY 2019 OCO Plans: N/A						
FY 2018 to FY 2019 Increase/Decrease Statement: Funding increase due to new start						
Accomplishments/Planned Programs Subtotals		-	0.000	14.888	0.000	14.888
Other Service Funding Adjustment		-	-	0.000	0.000	0.000
Air Force Subtotals		-	0.000	14.888	0.000	14.888
D. Other Program Funding Summary (\$ in Millions) N/A						
Remarks						
E. Acquisition Strategy TBD						
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.						

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2019 Air Force												Date: February 2018			
Appropriation/Budget Activity 3600 / 5						R-1 Program Element (Number/Name) PE 0207423F / <i>Advanced Communications Systems</i>				Project (Number/Name) 655068 / <i>Joint Tactical Radio System (JTRS)</i>					

Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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 Waveform (PTW)	TBD	Not specified. : TBD	-	0.000		0.000		14.888		0.000		14.888		Continuing	Continuing	-
Subtotal			-	0.000		0.000		14.888		0.000		14.888		Continuing	Continuing	N/A

Remarks
PTW development TBD is a new start beginning in FY 19.

	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Subtotals	-	0.000	0.000	14.888	0.000	14.888	Continuing	Continuing	N/A
Other Service Funding Adjustment	-	-	-	0.000	0.000	0.000			-
Project Cost Totals	-	0.000	0.000	14.888	0.000	14.888	0.000	0.000	-

Remarks

UNCLASSIFIED

Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force										Date: February 2018									
Appropriation/Budget Activity 3600 / 5					R-1 Program Element (Number/Name) PE 0207423F / Advanced Communications Systems					Project (Number/Name) 655068 / Joint Tactical Radio System (JTRS)									

	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	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
Protected Tactical Waveform Development																												
PTW Development																												

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force		Date: February 2018
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0207423F / Advanced Communications Systems	Project (Number/Name) 655068 / Joint Tactical Radio System (JTRS)

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Protected Tactical Waveform Development				
PTW Development	1	2019	4	2020