Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force											Date: February 2016	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0207418F / *Tactical Airborne Control Systems*							
COST ($ in Millions)	**Prior Years**	**FY 2015**	**FY 2016**	**FY 2017 Base**	**FY 2017 OCO**	**FY 2017 Total**	**FY 2018**	**FY 2019**	**FY 2020**	**FY 2021**	**Cost To Complete**	**Total Cost**
Total Program Element	-	3.650	6.001	2.442	0.000	2.442	3.645	3.714	3.783	3.849	Continuing	Continuing
675234: *TACP Support*	-	3.650	6.001	2.442	0.000	2.442	3.645	3.714	3.783	3.849	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Joint Terminal Control Training and Rehearsal (JTC TRS) project, under the Tactical Airborne Control System, funds development necessary to provide a Distributed Mission Operations (DMO) capable, high-fidelity simulator for Battlefield Airmen, to include Joint Terminal Attack Controller (JTAC) operations, Special Tactics Combat Control Team (CCT) Air Traffic Control (ATC), Assault Zone operations, Guardian Angel combat rescue, and Air Support Operations Center (ASOC) operations.

JTC TRS is essential to provide initial training, mission qualification training, continuation training, and currency control requirements to JTACs and Special Tactics personnel. JTAC control training requirements exceed the ability of live-fly aircraft to meet, and JTC TRS is the only capability projected to enable JTACs to achieve and maintain minimum required training for both qualification and proficiency in accordance with the U.S and Partner Nation Memorandum of Agreement for JTAC certification and qualification.

The JTC TRS Project provides research and development to facilitate interoperability with joint and sister Service air-ground simulation using industry standards. Future JTC TRS development will provide the capability to network aircrew full mission trainers and training centers in a live-virtual-constructive network. This development effort will also integrate ASOCs with the Joint Theater Air Ground Simulation System (JTAGSS) trainer for Joint Fires integration. The Personnel Recovery (PR) capability is envisioned to be a "plug and play" module for the host JTC TRS. The PR capability will provide Guardian Angel personnel with an immersive LVC environment to plan, train, and rehearse their employment, rescue/recovery, and combat trauma care skills. The simulator will supplement live field training and live-fly sorties to provide realistic introductory, proficiency, currency, and upgrade training in a simulated battlefield, disaster, or humanitarian relief environment.

b. JTAGSS is a continuation of the ASOC simulation trainer initially funded in 2009 and complements the JTC TRS trainer by providing a total air-ground constructive simulation environment for integrated networked training and mission rehearsal capability that will develop JTAC/CCT and ASOC/Special Operations Forces (SOF) Command and Control (C2) battle staff skills. JTAGSS will provide the ASOC, SOF, and TACP (Tactical Air Control Party) with the vertical and horizontal C2 communications and coordination training and mission rehearsal required for mission effectiveness. There are insufficient exercises and live training events available to meet mandated readiness requirements. The system will include a secure network connection, a constructive simulation environment generator with sharable databases, computer work stations that have synthetic reflex agent applications for each ASOC/SOF crew position to execute the air tasking order.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts for systems, fielded or approved, for production, that have been fully validated through formal Operation Utility Evaluation (OUE) and anticipate production funding in the current or subsequent fiscal year.

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0207418F / *Tactical Airborne Control Systems*	

B. Program Change Summary ($ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	3.754	6.001	4.301	0.000	4.301
Current President's Budget	3.650	6.001	2.442	0.000	2.442
Total Adjustments	-0.104	0.000	-1.859	0.000	-1.859
• 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	-0.104	0.000	-1.859	0.000	-1.859

C. Accomplishments/Planned Programs ($ in Millions)	FY 2015	FY 2016	FY 2017
Title: JTC TRS Trainer Development	0.000	0.000	2.000
Description: Development and test of Engineering Change Proposals (ECPs) for Tactical ATC and TACP-CASS. ***FY 2015 Accomplishments:*** N/A ***FY 2016 Plans:*** N/A ***FY 2017 Plans:*** Development and test of Engineering Change Proposals (ECPs) for Tactical ATC and TACP-CASS.			
Title: JTAGSS Trainer Development	3.650	6.001	0.442
Description: Develops high fidelity simulation system for ASOC/SOF Command and Control System that supports JTAC training. Currently an AFRL program funded by Air Combat Command ***FY 2015 Accomplishments:*** Continued Phase 2 development of JTAGSS simulator configuration. ***FY 2016 Plans:*** Completed JTAGSS Phase 2 and transition to acquisition. ***FY 2017 Plans:***			

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force	Date: February 2016
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0207418F / *Tactical Airborne Control Systems*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2015	FY 2016	FY 2017
Complete JTAGSS 3.0. Integrate TACP Close Air Support System 1.4.4. and complete internal agents.			
Accomplishments/Planned Programs Subtotals	3.650	6.001	2.442

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• OPAF: BA 03: Line Item # 837100: *Tactical C-E Equipment*	9.063	43.187	15.728	0.000	15.728	4.111	13.023	3.891	3.961	Continuing	Continuing

Remarks

E. Acquisition Strategy

a. The JTC TRS acquisition will be a single step to full capability as defined in the CPD. A small business set-aside competitive lowest price technically acceptable source selection will be conducted and result in the award of a single contract to produce and sustain JTC TRS systems. Pre-priced production options will also include replacement or modification, as required, of current fielded active duty immersive JTAC training systems (Air National Guard (ANG) Advanced JTAC Training System (AAJTS)) to the JTC TRS software and EME baseline. The contract structure will allow for maintaining concurrency, implementing system improvements/ technical refresh, and other modifications as required. The JTC TRS acquisition strategy is to enter the acquisition process pre-Milestone C and obtain a decision to procure up to five Low-Rate Initial Production (LRIP) at contract award. An Operational Utility Evaluation (OUE) will be conducted in place of Operational Test and Evaluation. Following successful OUE, a Full Rate Production (FRP) decision will be sought to authorize procurement of the remaining total planned production quantity. Development will be required for engineering changes related to Air Traffic Control (ATC) and TACP-Close Air Support System.

b. The acquisition strategy for the JTAGSS trainer will be to field advance technology demonstration units to continue to perform proof of concept and technology validation of mission simulations for all ASOC crew positions including detailed communications planning, asset deconfliction, integration of joint fires, and other critical mission areas required for integrated TACP/ASOC C2 mission success. At the completion of the technology validation, a contract will be competitively awarded to complete JTAGSS development, deployment and integration. Current software is Government or Commercial Off-the-Shelf technologies (GOTS/COTS) allowing almost any training technology development company to compete, which lowers technical risk, schedule risk, and cost.

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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0207418F / *Tactical Airborne Control Systems*	**Project (Number/Name)** 675234 / *TACP Support*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTC TRS Trainer Develoment	C/FFP	AFLCMC/WNS, AFMC : Wright Patterson AFB, OH	-	0.000		0.000		2.000	Mar 2017	0.000		2.000	Continuing	Continuing	-
JTAGSS Development	C/CPFF	AFRL, AFMC : Wright Patterson AFB, OH	-	3.650	Dec 2014	6.001	Dec 2015	0.442	Dec 2016	0.000		0.442	Continuing	Continuing	-
		Subtotal	-	3.650		6.001		2.442		0.000		2.442	-	-	-

Remarks

JTC TRS 2.0
- Adds Air Traffic Control and Assault Zone operations for Special Operations Special Tactics personnel and TACP-CASS.

JTAGSS 2.0. This effort: a) Will increase the autonomous functionality and capability using reflex agents; b) improve internal ASOC crew capacity with increased voice recognition capabilities; c) make the JTAGSS system DMO ready and capable; and d) provide joint and coalition full mission rehearsal capability.
-ASOC/JTAGSS Metric Development.
-Scenario Authoring Tool.
-Distributed Mission Operations Ready
-Internal Reflex Agent Research and Development.
-Instructor Operator Station.
-After Action Review.
-JTAGSS Documentation and Rapid Transition Documentation.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0207418F / *Tactical Airborne Control Systems*	**Project (Number/Name)** 675234 / *TACP Support*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2015 Cost	FY 2015 Award Date	FY 2016 Cost	FY 2016 Award Date	FY 2017 Base Cost	FY 2017 Base Award Date	FY 2017 OCO Cost	FY 2017 OCO Award Date	FY 2017 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-		-	-	-	-

	Prior Years	FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	3.650		6.001		2.442		0.000		2.442	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0207418F / *Tactical Airborne Control Systems*	**Project (Number/Name)** 675234 / *TACP Support*

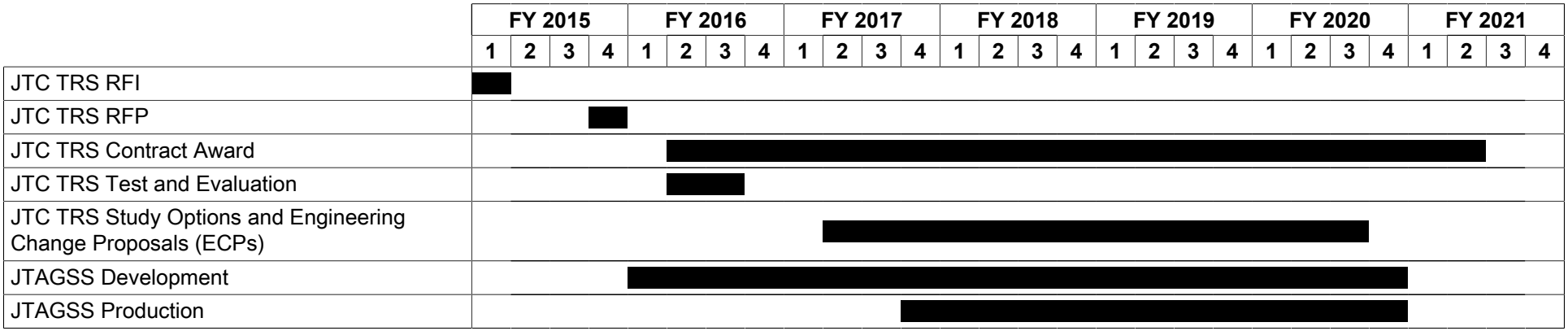

Exhibit R-4A, RDT&E Schedule Details: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0207418F / *Tactical Airborne Control Systems*	**Project (Number/Name)** 675234 / *TACP Support*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JTC TRS RFI	1	2015	1	2015
JTC TRS RFP	4	2015	4	2015
JTC TRS Contract Award	2	2016	2	2021
JTC TRS Test and Evaluation	2	2016	3	2016
JTC TRS Study Options and Engineering Change Proposals (ECPs)	2	2017	3	2020
JTAGSS Development	1	2016	4	2020
JTAGSS Production	4	2017	4	2020

THIS PAGE INTENTIONALLY LEFT BLANK