Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force											Date: February 2015	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0408011F / *Special Tactics / Combat Control*							
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
Total Program Element	-	6.021	8.312	7.963	-	7.963	8.046	8.146	8.194	8.341	Continuing	Continuing
675138: *ST System Development*	-	6.021	8.312	7.963	-	7.963	8.046	8.146	8.194	8.341	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Special Tactics/Combat Control, Special Tactics (ST) System Development project focuses on modernization developments for the Battlefield Airmen Operations (BAO) Kit. The project is a program within the overarching Battlefield Airmen Modernization (BA-Mod) Program. BAO Kit will develop, test, train and modernize the existing and future Family of Systems (FoS) that provides a state-of-the-art Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) suite for Air Force Special Operations Command's (AFSOC's) Battlefield Airmen. Efforts in the Special Tactics System Development project focus on reducing the risk of fratricide and substantially reducing size and weight of the equipment carried through three core capabilities: Human Machine Interface (HMI), Line of Sight (LOS) targeting, and Machine to Machine (M2M) C4ISR System.

This program will develop and enhance technologies for Battlefield Airmen Special Tactics Operators (STO)/Combat Controllers (CCT) to recognize, identify, range, nominate and designate targets during both day and night operations. BAO Kit will also significantly reduce the time required to find, fix, track, target and engage the enemy by providing highly accurate target grid coordinates in three dimensions, generating target imagery both pre and post-strike, and transmitting target data to Command and Control centers. All BAO Kit systems are light, compact and portable for use by dismounted Battlefield Airmen. FY16 BAO Kit funding will provide significant improvements in operational capability, situational awareness and precision lethality in the battle space and continue to build and enhance the BAO Kit system of systems. These efforts will deliver enhanced capability for the dismounted soldier in terms of dramatic weight reduction and increased mission effectiveness across the conflict spectrum.

The Special Tactics (ST) System Development activities also include studies and analysis to support both current and future program planning and execution.

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.

The FY2016 funding request was reduced by $0.260 million to account for the availability of prior execution balances.

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Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0408011F / *Special Tactics / Combat Control*	

B. Program Change Summary ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	6.174	8.405	8.275	-	8.275
Current President's Budget	6.021	8.312	7.963	-	7.963
Total Adjustments	-0.153	-0.093	-0.312	-	-0.312
• Congressional General Reductions	-	-0.093			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.153	-			
• Other Adjustments	-	-	-0.312	-	-0.312

C. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Title: Human Machine Interface	1.350	3.481	3.796	-	3.796
Description: HMI is a system of systems that provides integrated operator interface between all the machine components by using unified visual and auditory displays and controls, such as head-mounted displays, tactical earplug connectivity with man pack or handheld communications, integrated tactical computing solution and power generation and management systems. ***FY 2014 Accomplishments:*** - Spectrum Management: testing and certification of new waveforms via 88th Communications Group. - Handheld Link-16: Collaborated with Southern Command (SOCOM) for encryption modular size reduction; enabling form factor usage in handheld devices. This effort enables reduction in weight of the unit for Special Operations Forces (SOF) operators in critical capabilities in Area of Responsibility (AOR)s allowing intra-operations with US and coalition air assets. ***FY 2015 Plans:*** - Will continue to develop/test special tactics integrated combat system. System development will enhance combat situational awareness and precision lethality in the battle space. Combines heads up display, increased audio capabilities and integrated tactical system for combat effects. - Develop alternative energy and power capabilities to support special tactics mission sets and mission durations. Industry has evolved with more robust solutions while decreasing size and weight allowing the dismounted operator more capability in the battle space. Handheld Link-16 receiver/transmitter will be a focus					

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force	Date: February 2015
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0408011F / *Special Tactics / Combat Control*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
for the dismounted operator and interaction with next generation aircraft. Capability will align in the digitally aided combat air support operations. - Handheld Link-16: Continue development in the handheld form factor enabling the legacy waveform to be utilized by the operators in the field. Spectrum Management: Continue research, test and analysis of waveform usage as they evolve. - Communications Development: Continue upgrading effort of the PRC-152 to the PRC-152A. This evolution would reduce the SWAP (Size, Weight and Power) additionally; the SPO is exploring opportunities to integrate the Selective Availability Anti-Spoofing Module (SAASM) GPS hardware into the PRC-152A to mirror the capability PRC-117G Manpack radio. ***FY 2016 Base Plans:*** - Mobile User Objective System (MUOS) waveform will allow DoD to operate without the dependency of civilian SATCOM services. - Secondly, the Navy is expected to complete their latest SATCOM constellation in FY16 that specifically supports MUOS simultaneous multi-channel radios (manpack and handheld). The proposed simultaneous multi-channel radios will offer additional operations capabilities by reducing the current configuration of two handheld radios to one unit while providing up to three operational channels (voice and data) simultaneously. - Handheld Link-16 receiver/transmitter will be a focus for the dismounted operator and interaction with next generation aircraft. Capability will align in the digitally aided combat air support operations. - Implementation of the Netted Iridium (Cosmic-Empyre State) waveform granting DoD dedicated airtime. This new satellite constellation is expected to provide SATCOM on the move capability enabling operators to maintain a more constant link for voice and data services. - Web-based Geographic Information System (GIS) management tool, used to store, display, update, and report operational information on sensitive global airfields and Assault Zones (AZ) while incorporating approval processes designed to support rapid Global Mobility missions for the USG. - Talon Point consists of three main system functions: A fully relational database with associated storage, visual GIS tool and a management tool/web application. ***FY 2016 OCO Plans:*** N/A					
Title: Line of Sight ***Description:*** Line of Sight-Short targeting enables the ST Battlefield Airmen to find, fix, track, target and engage the enemy at close range during day or night operations by providing highly accurate target coordinates in three	1.885	0.481	-	-	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force	Date: February 2015
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0408011F / *Special Tactics / Combat Control*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
dimensions and generates vital imagery both pre and post-strike at a fraction of the weight and more efficiently than legacy equipment carried by the operator. ***FY 2014 Accomplishments:*** - Completed assembly of Engineering, Manufacturing & Development (EMD) Unit #1 - Finalized plans for combined contractor qualification testing and government development testing. - Completed initial integration with BAO Kit software suite, and began assembly process for EMD Units #2 and #3. ***FY 2015 Plans:*** - Continue development and enhancement of a three in one target/geo-locate/designate capability for dismounted operations. - Enhanced capability will increase capability in the battle space while decreasing 27+ lbs to ground forces. ***FY 2016 Base Plans:*** N/A ***FY 2016 OCO Plans:*** N/A					
Title: Machine to Machine C4ISR System ***Description:*** A suite of map-centric software applications that enables M2M transfer of precision targeting, information management, C4ISR and Situational Awareness (SA) information. Provides the ST Battlefield Airmen the ability to find, fix, track, target and engage the enemy which greatly reduces the kill chain and drastically decreases the possibility of fratricide by enhancing the operator's situational awareness on the battlefield. ***FY 2014 Accomplishments:*** - Developed and tested material prototypes of M2M interfaces for C4ISR, provided enhanced Video Data Link (VDL) capability enabling greater battlefield situational awareness and interoperability. - Optimized system configuration and troubleshooting to drastically decrease operator burden; while incorporating Digitally Aided Close Air Support (DACAS) standardization ensuring digital communication interoperability across DoD and Coalition platforms increasing battle space interoperability and reducing the possibility of fratricide.	2.786	4.350	4.167	-	4.167

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force	Date: February 2015
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0408011F / *Special Tactics / Combat Control*

C. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
- The BAO Kit software release has been created, tested and fielded to operational units supporting overseas contingency operations. ***FY 2015 Plans:*** Continue to develop and test material prototypes of M2M interfaces for C4ISR; enhanced target mensuration, increasing precision strike capabilities, enabling a reduced kill chain and increase in speed of effects and lethality; continued critical tactical data link implementation, increasing digital communication and situational awareness capabilities; mapping engine optimization, providing greater battlefield situational awareness while engaged with the enemy; incorporation of Low Probability of Detection (LPD) communications for near peer adversaries in the Anti-Access Area-Denial (A2AD) environment; increase interoperability with land and sea based fire systems and enhancing lethality. ***FY 2016 Base Plans:*** Will continue to develop and test material prototypes of M2M interfaces for C4ISR; investigate alternate operating systems and application development; continued 5th Generation fighter integration; exploration of Net Enabled Weapons (NEW) employment; exploration of wireless and Bluetooth technologies to reduce the Size, Weight and Power of the system reducing operator load; exploitation of two-way Video Data Link capability, increasing interoperability; incorporation of theatre level intelligence systems enhancing SA to the war fighter and increasing survivability of the strike force. ***FY 2016 OCO Plans:*** N/A					
Accomplishments/Planned Programs Subtotals	6.021	8.312	7.963	-	7.963

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• OPAF: BA03: Line Item # 837100: *Tactical C-E Equipment*	14.339	16.520	11.207	-	11.207	15.258	15.493	15.547	16.038	Continuing	Continuing

Remarks

E. Acquisition Strategy

The evolutionary acquisition strategy will focus on meeting immediate requirements with current technology while pursuing future increments for improved accuracy, increased vertical and horizontal integration, and reduced weight. Future increments will be incorporated as funding and technology allow.

Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force	Date: February 2015
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*	**R-1 Program Element (Number/Name)** PE 0408011F / *Special Tactics / Combat Control*

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 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0408011F / *Special Tactics / Combat Control*	**Project (Number/Name)** 675138 / *ST System Development*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Human Machine Interface (HMI)	C/Various	Various : Various, NA	-	0.850	Sep 2014	2.661	Jan 2015	3.296	Oct 2015	-		3.296	Continuing	Continuing	-
Line of Sight	C/FPIF	Argon ST, Inc : Orlando, FL	-	1.885	Nov 2013	0.481	Oct 2014	-		-		-	Continuing	Continuing	-
Machine-To-Machine Software Development	C/CPFF	Systems Research & Applications Corp : Dayton, OH	-	2.786	Jan 2014	4.350	Oct 2014	4.167	Oct 2015	-		4.167	Continuing	Continuing	-
		Subtotal	-	5.521		7.492		7.463		-		7.463	-	-	-

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 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 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Agency Support	RO	46 TS : Eglin AFB, FL	-	0.500	Jan 2014	0.820	Oct 2014	0.500	Oct 2015	-		0.500	Continuing	Continuing	-
		Subtotal	-	0.500		0.820		0.500		-		0.500	-	-	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-		-	-	-	-

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force			Date: February 2015
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0408011F / *Special Tactics / Combat Control*	Project (Number/Name) 675138 / *ST System Development*	

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	6.021		8.312		7.963		-		7.963	-	-	-

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0408011F / *Special Tactics / Combat Control*	**Project (Number/Name)** 675138 / *ST System Development*

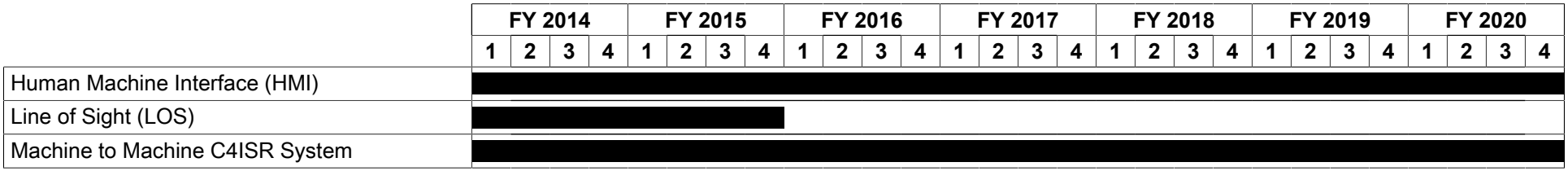

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0408011F / *Special Tactics / Combat Control*	**Project (Number/Name)** 675138 / *ST System Development*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Human Machine Interface (HMI)	1	2014	4	2020
Line of Sight (LOS)	1	2014	4	2015
Machine to Machine C4ISR System	1	2014	4	2020