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Exhibit R-2, RDT&E Budget Item Justification: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0408011F / <i>Special Tactics / Combat Control</i>
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COST (\$ in Millions)	Prior Years	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
Total Program Element	-	6.467	6.297	9.198	0.000	9.198	9.404	9.638	9.836	10.193	Continuing	Continuing
675138: <i>ST System Development</i>	-	6.467	6.297	9.198	0.000	9.198	9.404	9.638	9.836	10.193	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Special Tactics (ST) System Development project focuses on modernization development for the Special Warfare Acquisition Growth and Refresh (SWAGR). SWAGR will develop, test, train, and modernize the existing and future Family of Systems (FoS) that provide a state-of-the-art Command, Control, Communications, Computer, Intelligence, Surveillance, and Reconnaissance (C4ISR) capability. It also provides a suite of systems for all Air Force Specialty Codes supporting the ST community within the Air Force Special Operations Command's (AFSOC's) Special Warfare operators. ST System Development focuses on reducing the risk of fratricide and substantially reducing size and weight of the equipment carried through various core capabilities, which include but are not limited to: Human Machine Interface (HMI), Line of Sight (LOS) targeting, medical monitoring, Machine-to-Machine (M2M) C4ISR System, Electromagnetic Spectrum awareness/defensive/offensive capabilities and all other ST capability needs.

This program will develop and enhance technologies for Special Warfare ST operators to recognize, identify, range, nominate, and designate targets during both day and night operations. SWAGR will also significantly reduce the time required to find, track, fix targets, and engage the enemy by attacking adversary signals of interest, 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. SWAGR systems are light, compact, and portable for use by dismounted Special Warfare ST operators. FY24 SWAGR funding will provide significant improvements in operational capability, situational awareness, and precision lethality in the battle space while continuing to build and enhance the SWAGR family of systems. This may be conducted through industry technology demonstrations, prototypes, and associated engineering support to posture the SWAGR for technology insertion. These efforts will deliver enhanced capability for the dismounted soldier in terms of dramatic weight reduction and increase mission effectiveness across the conflict spectrum. SWAGR also supports AFSOC Tactical Command and Control (TAC C2) programs to develop and enhance communications systems and equipment essential for ST combat controllers, pararescue, special reconnaissance, and tactical air controller parties within AFSOC to perform their mission. The ST operators use this equipment to gather and transmit assault zone suitability and weather data and to perform tactical airfield/assault landing/drop zone operations. Due to the rapidly changing threat environment, the acquisition program manager has the authority to redirect funding as necessary to meet current slated and emerging requirements. The above efforts may change based on the need to support current Air Force mission requirements.

SWAGR funding also supports innovation activities to include studies, analyses, requirements definition, and quick-reaction capability prototypes/demonstrations to accelerate planning for technology transition, technology insertion and future acquisition programs.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F,

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0606398F. In FY23 \$1.694M was expended for civilian pay expenses in this program element, and in FY24 \$1.730M is forecasted for civilian pay expenses in this program element.

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.

B. Program Change Summary (\$ in Millions)	FY 2022	FY 2023	FY 2024 Base	FY 2024 OCO	FY 2024 Total
Previous President's Budget	6.640	6.297	9.177	0.000	9.177
Current President's Budget	6.467	6.297	9.198	0.000	9.198
Total Adjustments	-0.173	0.000	0.021	0.000	0.021
• 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	-0.173	0.000	0.021	0.000	0.021

C. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
Title: Human Machine Interface (HMI)	1.595	1.600	2.021
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, electromagnetic spectrum Awareness, defensive/offensive capabilities and power generation and management systems.			
FY 2023 Plans:			
-Continue to support digitally aided combat close air support operations. Plan to develop and operate tests for full spectrum certification (Joint Interoperable Test Command (JITC), Air Force System Interoperability Test (AFSIT), and Authority to Operate (ATO)).			
-Continue to explore and define requirements for implementation of the Iridium waveform granting DoD dedicated airtime.			
-Continue communications development: will upgrade HMI efforts which reduce the Size, Weight, and Power (SWAP) required to be carried by the Special Tactics Community. Specifically includes wireless technology.			
-Require maturation of available technology for future dismounted communication contract in order to meet the requirements of the user.			

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2022	FY 2023	FY 2024
<p>.</p> <p>FY 2024 Plans:</p> <ul style="list-style-type: none"> - Will continue to support digitally aided combat close air support operations. Plan to develop and operate tests or full spectrum certification (Joint Interoperable Test Command (JITC), Air Force System Interoperability Test (AFSIT), and Authority to Operate (ATO)). - Will continue to explore and define requirements for implementation of the Iridium waveform granting DoD dedicated airtime. - Will continue communications development: will upgrade HMI efforts which reduce the Size, Weight, and Power (SWAP) required to be carried by the Special Tactics Community. Specifically includes wireless technology. - Will require maturation of available technology for future dismounted communication contract in order to meet the requirements of the user. <p>FY 2023 to FY 2024 Increase/Decrease Statement: Current increase to FY24 funding allows for the development to continue with the HMI effort for the BAO FOS CDD.</p>				
<p>Title: Line of Sight</p> <p>Description: Line of Sight (LOS) targeting enables the Special Warfare ST operators 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 dimensions. LOS generates vital imagery both pre and post-strike at a fraction of the weight and is more efficient than legacy equipment carried by the operator. Non Line of sight (XLOS) targeting device exploration and development will help capture future capabilities to the Special Tactics community. XLOS devices allow for a remote expendable reporting environmental sensor that enhances AFSOC Special Tactics Team's ability to provide timely, accurate, and critical deep battle space weather reconnaissance and intelligence.</p> <p>FY 2023 Plans: -Continue to explore and develop future Non Line of sight (XLOS) targeting device capabilities for Special Tactics community.</p> <p>FY 2024 Plans: - Will continue to explore and develop future Non Line of sight (XLOS) targeting device capabilities and capabilities for sensing (passive and active) enemy activity within the electromagnetic spectrum (RF communication) and jamming effectiveness (EMS awareness), develop and integrate LPI/LPD capabilities, and Small UAS comm relay systems for Special Tactics community.</p> <p>FY 2023 to FY 2024 Increase/Decrease Statement: Current FY24 funding increase in overall budget, supports our exploration and development to help capture future capabilities to the Special Tactics community.</p>		0.278	0.222	0.003
Title: Machine-to-Machine (M2M) Software Development		4.594	4.475	7.174

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C. Accomplishments/Planned Programs (\$ in Millions)	FY 2022	FY 2023	FY 2024
<p>Description: This program is a Modern Software Development Program (MSDP). The software acquisition uses a modern software development methodology and is not primarily in sustainment. It has no objective system and will use iterative development across the project's lifecycles.</p> <p>A suite of map-centric software applications that enables M2M transfer of precision targeting, information management, C4ISR (Command, Control Communications, Computers, Intelligence, Surveillance, and Reconnaissance), and Situational Awareness (SA) information. Provides the Special Warfare ST operators 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 SA on the battlefield.</p> <p>FY 2023 Plans:</p> <ul style="list-style-type: none"> -Continue to explore requirements to address future FoS capability gaps. -Continue research, develop and test efforts to support requirements in BAO FoS CDD, which includes but is not limited to Assault Zones, Fires, Weather, Personnel Recovery, and Enabling Capabilities. <p>FY 2024 Plans:</p> <ul style="list-style-type: none"> - Will continue to explore requirements to address future FoS capability gaps. - Will continue research, develop and test efforts to support requirements in BAO FoS CDD, which includes but is not limited to Assault Zones, precision approach, Fires, Weather, Personnel Recovery, electromagnetic spectrum awareness/defensive/offensive and enabling capabilities. <p>FY 2023 to FY 2024 Increase/Decrease Statement:</p> <p>FY24 funding allows for the development to continue with the M2M effort for the Special Tactics CDD.</p>			
Accomplishments/Planned Programs Subtotals	6.467	6.297	9.198

D. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2022	FY 2023	FY 2024	FY 2024	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	Cost To Complete	Total Cost
			Base	OCO	Total						
• OPAF 03 Line Item 837100: <i>Tactical C-E Equipment</i>	38.136	19.054	24.297	-	24.297	26.278	27.016	27.549	28.100	Continuing	Continuing
• OPAF 04 Line Item 842990: <i>Personal Safety and Rescue Equipment</i>	21.647	2.339	2.512	-	2.512	2.477	2.553	2.609	2.661	Continuing	Continuing

Remarks

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E. Acquisition Strategy

Special Warfare Acquisition Growth and Refresh (SWAGR) awarded a contract in FY16 to complete M2M software development. In FY20 this contract was extended to FY23, the plan is to compete a new M2M contract to the follow on contract and is in source selection and scheduled to award in FY23. This effort will include system engineering, design, integration, and fielding support for M2M software. The above efforts may change based on the need to support current Air Force mission requirements. Wright Patterson AFB, OH manages the contract effort.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2024 Air Force **Date:** March 2023

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0408011F / <i>Special Tactics / Combat Control</i>	Project (Number/Name) 675138 / <i>ST System Development</i>
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Product Development (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Human Machine Interface (HMI)	C/Various	Various : Various	-	1.442	Dec 2021	1.035	Dec 2022	1.500	Dec 2023	-		1.500	Continuing	Continuing	-
Line of Sight	SS/ Various	Physical Optics Corporation : Torrance, CA	-	0.002	Nov 2021	0.002	Nov 2022	0.003	Nov 2023	-		0.003	Continuing	Continuing	-
Machine-To-Machine (M2M) Software Development	C/CPFF	General Dynamics IT : Dayton, OH	-	2.253	Feb 2022	0.600	Oct 2022	0.000	Oct 2023	-		0.000	Continuing	Continuing	-
Machine-To-Machine (M2M) Software Development(New Contract)	C/TBD	TBD : TBD	-	1.000		1.736	Feb 2023	4.665	Oct 2023	-		4.665	Continuing	Continuing	-
Subtotal			-	4.697		3.373		6.168		-		6.168	Continuing	Continuing	N/A

Support (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Direct Cite Civilian Pay	WR	TBD : WP AFB, OH	-	0.434	Oct 2021	0.770	Oct 2022	0.787	Oct 2023	-		0.787	0.000	1.991	-
DCA Civilian Pay	WR	TBD : Hurlburt Field, FL	-	0.578	Oct 2021	0.924	Oct 2022	0.943	Oct 2023	-		0.943	0.000	2.445	-
Subtotal			-	1.012		1.694		1.730		-		1.730	0.000	4.436	N/A

Test and Evaluation (\$ in Millions)				FY 2022		FY 2023		FY 2024 Base		FY 2024 OCO		FY 2024 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Agency Support	Various	46 TS : Eglin AFB, FL	-	0.380	Dec 2021	0.800	Jan 2023	0.862	Jan 2024	-		0.862	Continuing	Continuing	-
Subtotal			-	0.380		0.800		0.862		-		0.862	Continuing	Continuing	N/A

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Exhibit R-4, RDT&E Schedule Profile: PB 2024 Air Force		Date: March 2023
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FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027				FY 2028			
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

<i>ST System Development</i>	
Human Machine Interface (HMI)	
Line of Sight	
Machine-To-Machine Software Development	

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Exhibit R-4A, RDT&E Schedule Details: PB 2024 Air Force		Date: March 2023
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>ST System Development</i>				
Human Machine Interface (HMI)	1	2022	4	2028
Line of Sight	1	2022	4	2028
Machine-To-Machine Software Development	1	2022	4	2028