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| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force | DATE: April 2013 |
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| APPROPRIATION/BUDGET ACTIVITY | | | | | R-1 ITEM NOMENCLATURE | | | | | | | |
|--|-----------------|---------|----------------------|--------------|--|---------------|---------|---------|---------|---------|------------------|------------|
| 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i> | | | | | PE 0408011F: <i>Special Tactics / Combat Control</i> | | | | | | | |
| COST (\$ in Millions) | All Prior Years | FY 2012 | FY 2013 [#] | FY 2014 Base | FY 2014 OCO ^{##} | FY 2014 Total | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Cost To Complete | Total Cost |
| Total Program Element | - | 5.040 | 4.984 | 6.213 | - | 6.213 | 8.509 | 8.371 | 8.032 | 8.177 | Continuing | Continuing |
| 675138: <i>ST System Development</i> | - | 5.040 | 4.984 | 6.213 | - | 6.213 | 8.509 | 8.371 | 8.032 | 8.177 | Continuing | Continuing |
| Quantity of RDT&E Articles | | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | |

[#] FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

^{##} The FY 2014 OCO Request will be submitted at a later date

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 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 the weight and bulk of the equipment carried through three core capabilities: Human Machine Interface (HMI), Line of Sight (LOS) targeting, and Machine to Machine 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. 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. FY14 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 family 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.

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| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force | | | | DATE: April 2013 | | |
| APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development | | R-1 ITEM NOMENCLATURE PE 0408011F: Special Tactics / Combat Control | | | | |
| B. Program Change Summary (\$ in Millions) | FY 2012 | FY 2013 | FY 2014 Base | FY 2014 OCO | FY 2014 Total | |
| Previous President's Budget | 5.040 | 4.984 | 6.213 | - | 6.213 | |
| Current President's Budget | 5.040 | 4.984 | 6.213 | - | 6.213 | |
| Total Adjustments | 0.000 | 0.000 | 0.000 | - | 0.000 | |
| • Congressional General Reductions | - | 0.000 | | | | |
| • Congressional Directed Reductions | - | 0.000 | | | | |
| • Congressional Rescissions | 0.000 | 0.000 | | | | |
| • Congressional Adds | - | 0.000 | | | | |
| • Congressional Directed Transfers | - | 0.000 | | | | |
| • Reprogrammings | 0.000 | 0.000 | | | | |
| • SBIR/STTR Transfer | 0.000 | 0.000 | | | | |
| • Other Adjustments | 0.000 | 0.000 | 0.000 | - | 0.000 | |
| C. Accomplishments/Planned Programs (\$ in Millions) | | | | FY 2012 | FY 2013 | FY 2014 |
| Title: Human Machine Interface | | | | 1.316 | 1.316 | 4.713 |
| Description: BAO Kit is a family 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 communications, integrated tactical computing solution and power generation and management systems. | | | | | | |
| FY 2012 Accomplishments: Continued exploration of fuel cell prototypes for power generation of HMI systems through development and testing of universal batteries to drastically reduce weight and increase longevity and effectiveness for the entire suite of electronics within the BAO kit versus legacy batteries and charging systems through incorporating test feedback into subsequent iterations of the universal battery. | | | | | | |
| FY 2013 Plans: Continuing exploration of fuel cell prototypes for power generation of HMI systems through development and testing of universal batteries to drastically reduce weight and increase longevity and effectiveness for the entire suite of electronics within the BAO kit versus legacy batteries and charging systems through incorporating test feedback into subsequent iterations of the universal battery to further decrease system complexity, and simplify use by incorporating intelligent power regulation and integrating low profile cabling. | | | | | | |
| FY 2014 Plans: Will continue 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 | | | | | | |

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| C. Accomplishments/Planned Programs (\$ in Millions) | | FY 2012 | FY 2013 | FY 2014 |
| tactical system for combat effects. Development of alternative energy and power capabilities to support special tactics mission sets and mission durations. | | | | |
| 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 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 2012 Accomplishments: Continued development/testing of Machine to Machine technology and interfaces for C4ISR; enabling reduced kill chains and will provide greater battlefield situational awareness while engaged with the enemy, reducing the possibility of fratricide. FY 2013 Plans: Continuing testing Line of Sight material solution for detection of enemy forces. Will incorporate testing feedback into system refinements. FY 2014 Plans: Will 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. | | 0.530 | 2.168 | 1.250 |
| Title: PMA Contract Services Description: Developmental engineering responsible for integration, interoperability, and testing for BAO Kit family of systems. Effort is critical to combining independent material solutions into one unique system allowing for situational awareness, precision effects, battle space coordination in a combat air support environment. FY 2012 Accomplishments: Continued developmental engineering responsible for integration, interoperability, and testing for BAO Kit family of systems. Effort is critical to combining independent material solutions into one unique system allowing for situational awareness, precision effects, battle space coordination in a combat air support environment. FY 2013 Plans: Continuing developmental engineering responsible for integration, interoperability, and testing for BAO Kit family of systems. Effort is critical to combining independent material solutions into one unique system allowing for situational awareness, precision effects, battle space coordination in a combat air support environment. FY 2014 Plans: | | 0.685 | 0.550 | 0.250 |

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| Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Air Force | | | | | | | | | | DATE: April 2013 | | |
| APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development | | | | | R-1 ITEM NOMENCLATURE PE 0408011F: Special Tactics / Combat Control | | | | | | | |
| C. Accomplishments/Planned Programs (\$ in Millions) | | | | | | | | | | FY 2012 | FY 2013 | FY 2014 |
| Execute developmental engineering responsible for integration, interoperability, and testing for BAO Kit family of systems. Effort is critical to combining independent material solutions into one unique system allowing for situational awareness, precision effects, battle space coordination in a combat air support environment. | | | | | | | | | | | | |
| Title: Machine to Machine C4ISR System | | | | | | | | | | 2.509 | 0.950 | 0.000 |
| Description: Machine to Machine Command, Control, Communications and Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) 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 operators situational awareness on the battlefield. | | | | | | | | | | | | |
| FY 2012 Accomplishments: Continued development and testing of Machine to Machine technology and interface for C4ISR; enabling reduced kill chains and will provide greater battlefield situational awareness and reducing the possibility of fratricide | | | | | | | | | | | | |
| FY 2013 Plans: Continuing to develop and test material prototypes of machine to machine interface for C4ISR; enabling a reduced kill chain and will provide greater battlefield situational awareness while engaged with the enemy, reducing the possibility of fratricide. | | | | | | | | | | | | |
| Accomplishments/Planned Programs Subtotals | | | | | | | | | | 5.040 | 4.984 | 6.213 |
| D. Other Program Funding Summary (\$ in Millions) | | | | | | | | | | | | |
| Line Item | FY 2012 | FY 2013 | FY 2014 Base | FY 2014 OCO | FY 2014 Total | FY 2015 | FY 2016 | FY 2017 | FY 2018 | Cost To Complete | Total Cost | |
| • OPAF: BA03: Line Item # 837100: Tactical C-E Equipment | 24.133 | 18.469 | 17.242 | | 17.242 | 16.796 | 15.730 | 16.254 | 16.547 | Continuing | Continuing | |
| • APAF: BA04: Line Item # WASP00: STUASLO | 2.472 | 0.000 | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 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. | | | | | | | | | | | | |

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| <u>F. Performance Metrics</u> 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: PB 2014 Air Force | | | | | | | | | | | | DATE: April 2013 | | | |
| APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development | | | | | | R-1 ITEM NOMENCLATURE PE 0408011F: Special Tactics / Combat Control | | | | PROJECT 675138: ST System Development | | | | | |
| Product Development (\$ in Millions) | | | | FY 2012 | | FY 2013 | | FY 2014 Base | | FY 2014 OCO | | FY 2014 Total | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | All Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| Human Machine Interface (HMI) | C/Various | Various:Various, NA | - | 1.316 | Jun 2012 | 0.334 | Jun 2013 | 0.000 | | - | | 0.000 | Continuing | Continuing | TBD |
| Line of Sight | C/FPIF | Argon ST, Inc:Orlando, FL | - | 0.740 | Dec 2011 | 2.300 | Jan 2013 | 1.500 | May 2013 | - | | 1.500 | Continuing | Continuing | TBD |
| Machine-To-Machine Software Development | C/CPFF | Systems Research & Applications Corp:Dayton, OH | - | 1.149 | Feb 2012 | 1.300 | Feb 2013 | 4.463 | May 2014 | - | | 4.463 | Continuing | Continuing | TBD |
| Subtotal | | | 0.000 | 3.205 | | 3.934 | | 5.963 | | 0.000 | | 5.963 | | | |
| Support (\$ in Millions) | | | | FY 2012 | | FY 2013 | | FY 2014 Base | | FY 2014 OCO | | FY 2014 Total | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | All 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 | | | 0.000 | 0.000 | | 0.000 | | 0.000 | | 0.000 | | 0.000 | 0.000 | 0.000 | 0.000 |
| Test and Evaluation (\$ in Millions) | | | | FY 2012 | | FY 2013 | | FY 2014 Base | | FY 2014 OCO | | FY 2014 Total | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | All Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| Test Agency Support | RO | 46 TS:Eglin AFB, FL | - | 1.100 | Feb 2012 | 0.500 | Apr 2013 | 0.000 | | - | | 0.000 | Continuing | Continuing | TBD |
| Integration and Certification | WR | AFRL RYT:WPAFB, OH | - | 0.050 | Feb 2012 | 0.000 | | 0.000 | | - | | 0.000 | Continuing | Continuing | TBD |
| Subtotal | | | 0.000 | 1.150 | | 0.500 | | 0.000 | | 0.000 | | 0.000 | | | |
| Management Services (\$ in Millions) | | | | FY 2012 | | FY 2013 | | FY 2014 Base | | FY 2014 OCO | | FY 2014 Total | | | |
| Cost Category Item | Contract Method & Type | Performing Activity & Location | All Prior Years | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Award Date | Cost | Cost To Complete | Total Cost | Target Value of Contract |
| Program Management Administration | Various | Various:Various, NA | - | 0.685 | Mar 2012 | 0.550 | Mar 2013 | 0.250 | | - | | 0.250 | Continuing | Continuing | TBD |
| Subtotal | | | 0.000 | 0.685 | | 0.550 | | 0.250 | | 0.000 | | 0.250 | | | |

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| | All Prior Years | FY 2012 | FY 2013 | FY 2014 Base | FY 2014 OCO | FY 2014 Total | Cost To Complete | Total Cost | Target Value of Contract | |
| Project Cost Totals | 0.000 | 5.040 | 4.984 | 6.213 | 0.000 | 6.213 | | | | |

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2014 Air Force

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0408011F: Special Tactics / Combat Control

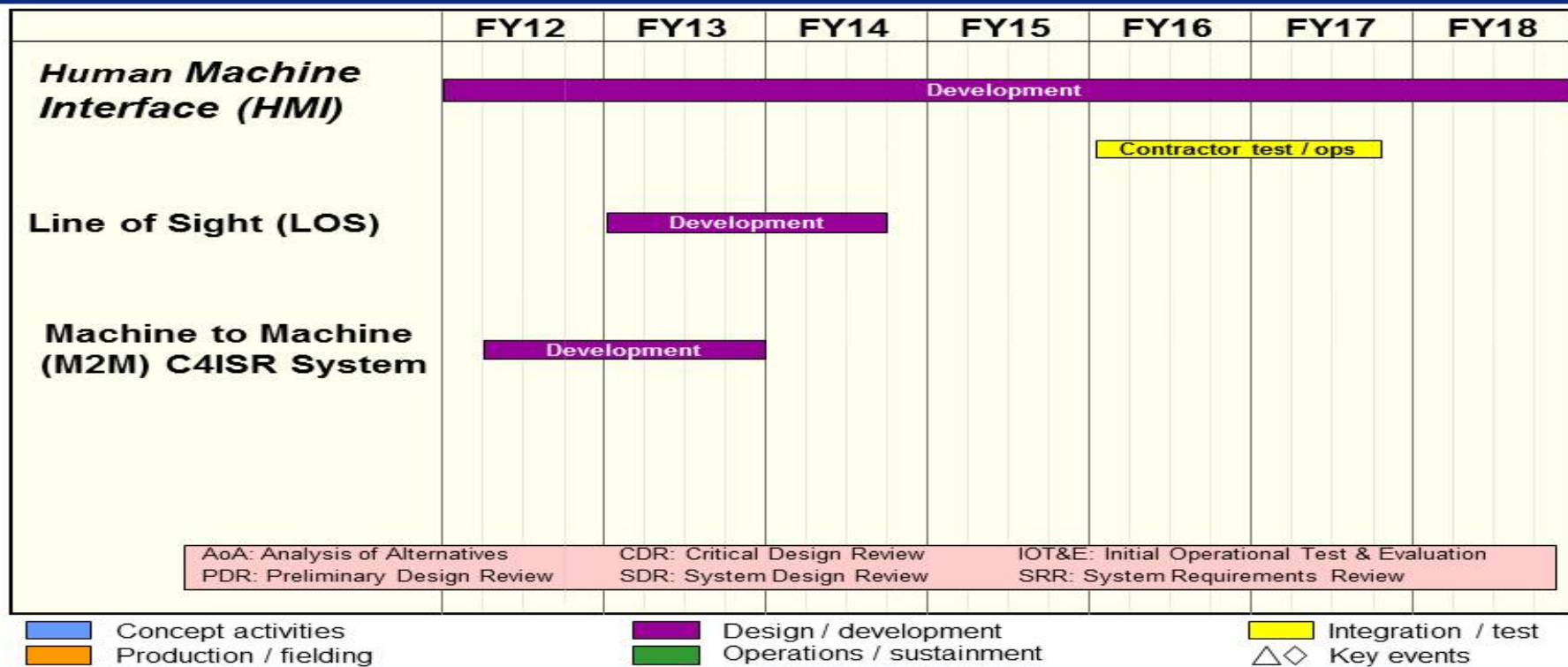
PROJECT

675138: ST System Development



U.S. AIR FORCE

BAO Kit Schedule



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| Exhibit R-4A, RDT&E Schedule Details: PB 2014 Air Force | | | DATE: April 2013 |
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Schedule Details

| Events | Start | | End | |
|---------------------------------|---------|------|---------|------|
| | Quarter | Year | Quarter | Year |
| Human Machine Interface (HMI) | 1 | 2012 | 4 | 2018 |
| Line of Sight (LOS) | 1 | 2013 | 3 | 2014 |
| Machine to Machine C4ISR System | 2 | 2012 | 4 | 2013 |