Exhibit R-2, RDT&E Budget Item Justification: FY 2018 Air Force											Date: May 2017	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0305128F / *Security and Investigative Activities*							
COST ($ in Millions)	**Prior Years**	**FY 2016**	**FY 2017**	**FY 2018 Base**	**FY 2018 OCO**	**FY 2018 Total**	**FY 2019**	**FY 2020**	**FY 2021**	**FY 2022**	**Cost To Complete**	**Total Cost**
Total Program Element	-	0.455	0.405	0.415	0.000	0.415	0.421	0.428	0.436	0.445	0.000	3.005
671931: *TECH SURVEIL COUNTER MEAS EQPT*	-	0.455	0.405	0.415	0.000	0.415	0.421	0.428	0.436	0.445	0.000	3.005
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Air Force Office of Special Investigations (AFOSI) conducts specialized investigative activities and force protection support for Air Force (AF) commanders worldwide. This assists AF commanders in protecting their people and resources. AFOSI's mission includes investigating criminal matters affecting AF personnel, contract fraud and economic crimes involving AF weapons systems and spare parts, the investigation of environmental crime, counterdrugs, computer intrusion detection and forensic media analysis of computer crimes. This element supports Technical Surveillance Countermeasures (TSCM), Computer Crime Investigations (CCI), and technical support to criminal and counterintelligence investigations and operations conducted by AFOSI. AFOSI's TSCM mission conducts counterintelligence investigations for both AF and DoD facilities and programs in order to deter and detect technical surveillance operations conducted by Foreign Intelligence Services to compromise classified or sensitive information. The purpose of CCI research is to improve AF and DoD Information Operations capability by enhancing AFOSI's ability to deter or prevent spies, hackers, or saboteurs from manipulating, damaging, or stealing sensitive war fighting data or systems. Failing that, to investigate, identify, and prosecute those who do. While most research to meet operational requirements is Operational System Development, there is also research in the category of Engineering and Manufacturing Development due to a need for modifications to present technology. The equipment required to provide technical support to investigations is unique and complex. This equipment must be continually updated to provide state-of-the-art capabilities to detect and neutralize criminal activities targeted against the AF and DoD. In an era of advancing technology, reduced manning, and increasingly high level fraud, environmental crime and computer crime investigations, technical investigative equipment must be continuously updated to enable AFOSI special agents to have the most cost effective and best possible means of thwarting criminal acts. The evolution of a new wave of computer crimes has made AFOSI responsible for the collection, investigative analysis, national level law enforcement coordination, and dissemination of hacker activity and intrusion incidents for the Air Force. AFOSI's computer crime equipment must stay on the leading edge of technology to collect criminal information as well as pursue and apprehend criminals through a global medium. AFOSI must continually update its existing high tech computer surveillance equipment to support ongoing and future investigative operations to identify hackers and hacker groups, as well as potential hostile government activities targeting Air Force communication and control systems. Critical Infrastructure Protection identifies weaknesses in the Air Force Critical infrastructure, highlights critical countermeasures and acquires and deploys cost-effective solutions. The intent is to provide an Air Force-wide review of current infrastructure vulnerabilities; prioritize AF protection planning and integrate with existing programs; identify gaps based on AF needs; direct studies to refine AF requirements.

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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B. Program Change Summary ($ in Millions)	**FY 2016**	**FY 2017**	**FY 2018 Base**	**FY 2018 OCO**	**FY 2018 Total**
Previous President's Budget	0.472	0.405	0.414	0.000	0.414
Current President's Budget	0.455	0.405	0.415	0.000	0.415
Total Adjustments	-0.017	0.000	0.001	0.000	0.001
• 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	-0.017	0.000	0.001	0.000	0.001

C. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
Title: TSCM	0.455	0.405	0.415

Description: These funds will support development of a suite of specialized law enforcement and counterintelligence restricted tools needed to exploit cyberspace, digital media storage and mobile audio/visual/data communications for the collection of evidence against a wide variety of serious offenses. They will develop next generation Technical Surveillance Countermeasures (TSCM) to defend against emerging foreign technical intelligence capabilities targeting sensitive protected information for exploitation. The concerted efforts of criminal, terrorist and foreign intelligence elements to evade law enforcement and compromise protected systems, all while remaining undetected using the latest technical advances available, require persistent development of tools to defeat their efforts.

FY 2016 Accomplishments:
Continue development of Next Generation Technical Surveillance Countermeasures (TSCM) receiver. FY16 activities (based on FY15 results)will transition into more robust activities to identify, develop and test and evaluate receivers against state-of-the-art commercial and state-sponsored technical collection tools and capabilities. Evaluation and acceptance testing will facilitate the objective and technical evaluation towards meeting validated requirements prior to full-rate acquisition.

FY 2017 Plans:
These funds continue to support the development of a suite of specialized law enforcement and counterintelligence restricted tools needed to exploit cyberspace, digital media storage and mobile audio/visual/data communications for the collection of evidence against a wide variety of serious offenses and develop next generation Technical Surveillance Countermeasures (TSCM) to defend against emerging foreign technical intelligence capabilities targeting sensitive protected information for exploitation.

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2016	FY 2017	FY 2018
-$200,000 went to the Naval Research Laboratory to support a joint project to develop the capability to detect and geo-locate foreign intelligence optical threats, breaking ground on new capabilities for DoD. Reference MIPR F1DT886285GW02. -$153,500 went to the Armed Forces Experiential Training Activity (AFETA) to facilitate research, development, test and evaluation of the following technical services requirements; $28,500 to support development of a consolidated Tagging, Tracking, and Locating interface; $75,000 to research cost effective 3D room scanning technology for incorporation into AFOSI crime scene processing activities; $20,000 for test and evaluation of unmanned aerial systems for use on AFOSI crime scenes; $5,000 for test and evaluation of 360 degree high definition cameras for use on AFOSI crime scenes; $25,000 for test and evaluation of tactical assault kit server integration with other USG entities. Reference MIPR F1DT886285GW04. -$51,500 went to the Department of Energy/Idaho National Lab, Cyber & Information OPS for research and development of software to detect changes through photo comparisons associated with the disturbance or manipulation of a crime scene or foreign technical collection operation. Reference MIPR F1DT886291GW01.			
FY 2018 Plans: These funds continue to support the development of a suite of specialized law enforcement and counterintelligence restricted tools needed to exploit cyberspace, digital media storage and mobile audio/visual/data communications for the collection of evidence against a wide variety of serious offenses and develop next generation Technical Surveillance Countermeasures (TSCM) to defend against emerging foreign technical intelligence capabilities targeting sensitive protected information for exploitation. -$240,000 for research and development of GOTS software for the live capture of digital information from the Air Force Network. -$20,000 to research software defined radio software which integrates community standard radio software for incorporation into existing TSCM suites. -$200,000 will go to the Naval Research Laboratory to support a joint project to detect and geo-locate foreign intelligence optical threats breaking ground on new capabilities for DoD.			
Accomplishments/Planned Programs Subtotals	0.455	0.405	0.415

D. Other Program Funding Summary ($ in Millions)

N/A

Remarks

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E. Acquisition Strategy

Market Research is accomplished jointly within the DoD, Counterintelligence, and Law Enforcement communities with the various government laboratories and major contractors to identify locations with the ability to develop investigative tools unique to our mission needs. These technologies, capabilities, and limitations of current and future investigative tools is sometimes highly sensitive or classified. Market Research also allows inter-agency coordination and deconfliction to occur, reducing or eliminating duplicitous development efforts. Annually, stakeholders meet to discuss initiatives, challenges and organizational goals to coordinate or consolidate requirements to increase efficiency. Once Market Research and any applicable coordination/deconfliction is completed, acquisition channels are analyzed and selected based on the ability to meet operational and technical security requirements.

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.