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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 I BA 6: RDT&E Management Support					R-1 Program Element (Number/Name) PE 0605712F I Initial Operational Test & Evaluation							
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	-	11.172	11.529	15.523	0.000	15.523	13.178	13.896	14.102	14.356	Continuing	Continuing
660191: Initial Operational Test and Eval	-	11.172	11.529	15.523	0.000	15.523	13.178	13.896	14.102	14.356	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This program element funds Congressionally mandated Initial Operational Test and Evaluation (IOT&E) to support major weapon system acquisition decisions beyond Low-Rate Initial Production (LRIP), Milestone C, full rate production, fielding, and declaration of Initial Operational Capability (IOC). For major defense acquisition programs, the law requires IOT&E be completed under realistic operating conditions before proceeding beyond LRIP. IOT&E will be planned to completely and unambiguously answer all critical operational issues (COI) as thoroughly as possible. IOT&E is conducted to determine the operational effectiveness and suitability and resolve overall mission capability of systems undergoing research and development (R&D) efforts. It is an evaluation of a system's performance when the complete system is tested and evaluated against operational criteria by personnel with the same qualifications as those who will operate, maintain and support the system when deployed. In general, IOT&E is performed on new systems in development, major modifications, and other systems as directed. This PE funds the Air Force Operational Test Agency's participation in Integrated Test and Evaluation (IT&E), Multiservice Operational Test and Evaluation (MOT&E), and Follow-on Operational Test and Evaluation (FOT&E) when it is the continuation of IOT&E activities past the full rate production decision. FOT&E answers specific questions about unresolved COIs and test issues or completes areas not finished during the IOT&E. This PE funds related operational test and evaluation (OT&E) activities such as Early Influence, Operational Utility Evaluations (OUE), Early Operational Assessments (EOA), Operational Assessments (OA), independent IOT&E which support major milestones and decision points prior to Milestone C, full rate production, fielding, or declaration of IOC. IOT&E programs are identified in several system categories: Air; Space; Weapons; Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR); and Combat Support. This program element is driven by Congressional and DoD acquisition mandated requirements for operational testing.

This program is in Budget Activity 6, RDT&E Management Support because this budget activity includes research, development, test and evaluation efforts and funds to sustain and/or modernize the installations or operations required for general research, development, test and evaluation.

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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	10.476	11.529	11.985	0.000	11.985	
Current President's Budget	11.172	11.529	15.523	0.000	15.523	
Total Adjustments	0.696	0.000	3.538	0.000	3.538	
• 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	0.696	0.000				
• SBIR/STTR Transfer	0.000	0.000				
• Other Adjustments	0.000	0.000	3.538	0.000	3.538	
Change Summary Explanation						
FY18: \$2.5M increase for additional FY18 testing requirements and \$1.0M increase for cyber testing infrastructure requirements associated with the AF FY18 cyber campaign plan.						
C. Accomplishments/Planned Programs (\$ in Millions)				FY 2016	FY 2017	FY 2018
Title: Air Systems OT&E				4.197	4.255	7.039
Description: Plan, execute and report OT&E for Air Systems						
FY 2016 Accomplishments:						
-Advanced Pilot Training (APT T-X): Conducted early influence						
-AWACS Block 40/45: Conducted FOT&E						
-B-2 Flex Strike P6.2 Block Upgrade: Conducted OA						
-C-130J Block Upgrade 8.1: Conducted OA						
-Combat Rescue Helicopter (CRH): Conducted OA1						
-(Diminishing Manufacturing Sources) Replacement of Avionics for Global Operations and Navigation (E-3 DRAGON): Conducted OA						
-F-15 Eagle Passive and Active Warning and Survivability System (F-15 EPAWSS): Conducted early influence						
-F-15 Infrared Search and Track System (F-15 IRST): Conducted early influence						
-F-22A 3.2B: Completed OA						
-Global Hawk Ground Segment Modernization Program GH GSMP): Conducted early influence						
-Joint Mission Planning System RQ-4 Mission Planning Element (JMPS RQ-4 MPE): Planned for IOT&E						
-JSTARS Recap: Conducted early influence						

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
-KC-46A: Conducted OA -Miniature Air Launched Decoy - Jammer (MALD-J): Conducted FOT&E -MQ-9 Increment 1: Conducted FOT&E -Presidential Aircraft Recapitalization (PAR): Planned for OA -RQ-4B Global Hawk Block 30 Multi-Spectral Intelligence (MSI): Planned for OUE -UH-1N Replacement: Conducted early influence FY 2017 Plans: -Advanced Pilot Training (APT T-X): Plan for OA -B-2 Flex Strike P6.2 Block Upgrade: Plan for IOT&E -B-52 Radar Modernization Program (B-52 RMP): Conduct early influence -C-130J Block Upgrade 8.1: Plan for IOT&E -Combat Rescue Helicopter (CRH): Plan for OA2 -(Diminishing Manufacturing Sources) Replacement of Avionics for Global Operations and Navigation (E-3 DRAGON): Complete OA -F-15 Eagle Passive and Active Warning and Survivability System (F-15 EPAWSS): Conduct early influence -F-15 Infrared Search and Track System (F-15 IRST): Conduct early influence -F-22A 3.2B: Conduct IOT&E -Global Hawk Ground Segment Modernization Program GH GSMP): Conduct early influence -Joint Mission Planning System RQ-4 Mission Planning Element (JMPS RQ-4 MPE): Plan for IOT&E -JSTARS Recap: Conduct early influence -KC-46A: Conduct OA -Miniature Air Launched Decoy - Jammer (MALD-J): Complete FOT&E -MQ-9 Increment 1: Plan for OA -Presidential Aircraft Recapitalization (PAR): Conduct OA -RQ-4B Global Hawk Block 30 Multi-Spectral Intelligence (MSI): Plan for OUE -UH-1N Replacement: Conduct early influence -Conduct other planning and operational testing for new air system programs as the requirement becomes known to AFOTEC FY 2018 Plans: -Advanced Pilot Training (APT T-X): Conduct OA -B-2 Flex Strike P6.2 Block Upgrade: Conduct IOT&E -B-52 Radar Modernization Program (B-52 RMP): Conduct early influence -C-130J Block Upgrade 8.1: Conduct IOT&E -Combat Rescue Helicopter (CRH): Plan for OA2				

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
-(Diminishing Manufacturing Sources) Replacement of Avionics for Global Operations and Navigation (E-3 DRAGON): Conduct IOT&E -F-15 Eagle Passive and Active Warning and Survivability System (F-15 EPAWSS): Plan for OA -F-15 Infrared Search and Track System (F-15 IRST): Plan for OA -F-22A 3.2B: Complete IOT&E -Global Hawk Ground Segment Modernization Program GH GSMP): Plan for OA -Joint Mission Planning System RQ-4 Mission Planning Element (JMPS RQ-4 MPE): Conduct IOT&E -JSTARS Recap: Plan for OA -KC-46A: Conduct IOT&E -MQ-9 Increment 1: Plan for OA -Presidential Aircraft Recapitalization (PAR): Complete OA -RQ-4B Global Hawk Block 30 Multi-Spectral Intelligence (MSI): Conduct OUE -UH-1N Replacement: Plan for IOT&E -Conduct other planning and operational testing for new air system programs as the requirement becomes known to AFOTEC				
Title: Space Systems OT&E Description: Plan, execute and report OT&E for Space Systems OT&E FY 2016 Accomplishments: -Advanced Extremely High Frequency Satellite Communications (Advanced EHF): Conducted early influence -Airborne Launch Control System Replacement (ALCS-R): Conducted early influence -Enhanced Polar System (EPS): Planned for MOT&E -Global Broadcast Service (GBS): Planned FOT&E -Global Positioning System Block III (GPS III): Conducted early influence -Military GPS User Equipment (GPS MGUE): Conducted early influence -Global Positioning System III Contingency Operations (GPS III COps): Conducted early influence -GPS Next Generation Control Segment (GPS OCX): Conducted early influence -Inter-Continental Ballistic Missile Fuze (ICBM FUZE): Conducted early influence -Integrated Strategic Planning and Analysis Network Increment 4 (ISPAN Inc IV): Conducted OA -Joint Space Operations Center (JSpOC) Mission System (JMS): Planned for OUE -Protected Tactical Enterprise Services (PTES): Conducted early influence -Space Based Infrared System (SBIRS): Conducted OUE -Space Based Infrared System Follow-On (SBIRS FO): Conducted early influence -Space Based Space Surveillance Follow-On (SBSS FO): Conducted early influence		1.693	1.532	1.433

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
-Space Fence: Conducted early influence -Weather System Follow-on (WSF): Conducted early influence FY 2017 Plans: -Advanced Extremely High Frequency Satellite Communications (Advanced EHF): Conduct early influence -Airborne Launch Control System Replacement (ALCS-R): Conduct early influence -Enhanced Polar System (EPS): Plan for MOT&E -Global Broadcast Service (GBS): Conduct FOT&E -Global Positioning System Block III (GPS III): Conduct early influence -Military GPS User Equipment (GPS MGUE): Plan for OA -Global Positioning System III Contingency Operations (GPS III COps): Conduct early influence -GPS Next Generation Control Segment (GPS OCX): Conduct early influence -Inter-Continental Ballistic Missile Fuze (ICBM FUZE): Plan for OA -Integrated Strategic Planning and Analysis Network Increment 4 (ISPAN Inc IV): Plan for IOT&E -Joint Space Operations Center (JSpOC) Mission System (JMS): Conduct OUE -Protected Tactical Enterprise Services (PTES): Conduct early influence -Space Based Infrared System (SBIRS): Plan for IOT&E -Space Based Infrared System Follow-On (SBIRS FO): Conduct early influence -Space Based Space Surveillance Follow-On (SBSS FO): Conduct early influence -Space Fence: Conduct early influence -Weather System Follow-on (WSF): Conduct early influence -Conduct other planning and operational testing for new space system programs as the requirement becomes known to AFOTEC FY 2018 Plans: -Advanced Extremely High Frequency Satellite Communications (Advanced EHF): Conduct early influence -Airborne Launch Control System Replacement (ALCS-R): Plan for EOA -Enhanced Polar System (EPS): Conduct MOT&E -Global Positioning System Block III (GPS III): Plan for OUE -Military GPS User Equipment (GPS MGUE): Conduct OA -Global Positioning System III Contingency Operations (GPS III COps): Plan for OUE -GPS Next Generation Control Segment (GPS OCX): Plan for OA -Inter-Continental Ballistic Missile Fuze (ICBM FUZE): Conduct OA -Integrated Strategic Planning and Analysis Network Increment 4 (ISPAN Inc IV): Conduct IOT&E -Joint Space Operations Center (JSpOC) Mission System (JMS): Conduct IOT&E -Protected Tactical Enterprise Services (PTES): Conduct early influence				

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
-Space Based Infrared System (SBIRS): Conduct IOT&E -Space Based Infrared System Follow-On (SBIRS FO): Conduct early influence -Space Based Space Surveillance Follow-On (SBSS FO): Conduct early influence -Space Fence: Plan for IOT&E -Weather System Follow-on (WSF): Plan for EOA -Conduct other planning and operational testing for new space system programs as the requirement becomes known to AFOTEC				
Title: Weapons OT&E Description: Plan, execute and report OT&E for Weapons OT&E FY 2016 Accomplishments: -AIM-120C Advanced Electronic Protection Improvement Program (AIM-120C Advanced EPIP): Conducted MOT&E 1 -AIM-9X Block II 9.4xx (AIM-9X Blk II 9.4xx): Conducted early influence -B-61 Life Extension Program (B-61 LEP): Conducted early influence -Hard Target Void Sensing Fuze (HTVSF): Conducted MOT&E -Offensive Anti-Surface Warfare/Increment I (OASuW Inc I): Planned for OUE -Small Diameter Bomb II (SDB II): Planned for MOT&E FY 2017 Plans: -AIM-120C Advanced Electronic Protection Improvement Program (AIM-120C Advanced EPIP): Complete MOT&E 1 -AIM-9X Block II 9.4xx (AIM-9X Blk II 9.4xx): Conduct early influence -B-61 Life Extension Program (B-61 LEP): Plan for OA -Electronic Bomb Fuze FMU-139D/B (FMU-139D/B): Conduct early influence -Hard Target Void Sensing Fuze (HTVSF): Complete MOT&E -Offensive Anti-Surface Warfare/Increment I (OASuW Inc I): Conduct OUE -Small Diameter Bomb II (SDB II): Plan for MOT&E -Conduct other planning and operational testing for new weapons system programs as the requirement becomes known to AFOTEC FY 2018 Plans: -AIM-120C Advanced Electronic Protection Improvement Program (AIM-120C Advanced EPIP): Conduct MOT&E 2 -AIM-9X Block II 9.4xx (AIM-9X Blk II 9.4xx): Plan for FOT&E -B-61 Life Extension Program (B-61 LEP): Conduct OA -Electronic Bomb Fuze FMU-139D/B (FMU-139D/B): Plan for OUE -Offensive Anti-Surface Warfare/Increment I (OASuW Inc I): Complete OUE		3.798	0.981	4.599

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
-Small Diameter Bomb II (SDB II): Conduct MOT&E -Conduct other planning and operational testing for new weapons system programs as the requirement becomes known to AFOTEC				
Title: C4ISR OT&E Description: Plan, execute and report OT&E for C4ISR OT&E FY 2016 Accomplishments: -Three Dimensional Expeditionary Long Range Radar (3DELRR): Conducted early influence -Air Force Distributed Common Ground System (AF DCGS): Planned for OUE -Air Force Integrated Personnel and Pay System (AF-IPPS): Conducted early influence -Air Operations Center (AOC WS Inc 10.2): Conducted early influence -Command and Control Air Operations Suite/Command and Control Information Services (C2AOS-C2IS): Conducted early influence -Enclave Control Node (ECN): Conducted early influence -Family of Advanced Beyond Line Of Sight Terminals (FAB T): Conducted early influence -Presidential and National Voice Conferencing (PNVC): Conducted early influence -RQ-4 Global Hawk Block 30/Airborne Signals Intelligence Payload (ASIP): Planned for FOT&E -RQ-4B Global Hawk Block 40: Completed IOT&E -Wide Area Surveillance (WAS): Conduct early influence FY 2017 Plans: -Three Dimensional Expeditionary Long Range Radar (3DELRR): Conduct early influence -Air Force Distributed Common Ground System (AF DCGS): Conduct OUE -Air Force Integrated Personnel and Pay System (AF-IPPS): Conduct early influence -Air Operations Center (AOC WS Inc 10.2): Plan for OA -B-52 EHF Satcom: Conduct early influence -Command and Control Air Operations Suite/Command and Control Information Services (C2AOS-C2IS): Conduct early influence -Enclave Control Node (ECN): Plan for OUE -Family of Advanced Beyond Line Of Sight Terminals (FAB T): Plan for IOT&E -Nuclear Planning and Execution System Recapitalization (NPES): Conduct early influence -Presidential and National Voice Conferencing (PNVC): Plan for EOA -RQ-4 Global Hawk Block 30/Airborne Signals Intelligence Payload (ASIP): Plan for FOT&E -Wide Area Surveillance (WAS): Plan for IOT&E		1.416	4.199	2.135

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
-Conduct other planning and operational testing for new C4ISR programs as the requirement becomes known to AFOTEC FY 2018 Plans: -Three Dimensional Expeditionary Long Range Radar (3DELRR): Plan for OA -Air Force Distributed Common Ground System (AF DCGS): Conduct IOT&E -Air Force Integrated Personnel and Pay System (AF-IPPS): Conduct early influence -Air Operations Center (AOC WS Inc 10.2): Conduct OA -B-52 EHF Satcom: Conduct early influence -Command and Control Air Operations Suite/Command and Control Information Services (C2AOS-C2IS): Plan for MOT&E -Enclave Control Node (ECN): Conduct OUE -Family of Advanced Beyond Line Of Sight Terminals (FAB T): Conduct IOT&E -Nuclear Planning and Execution System Recapitalization (NPES): Conduct early influence -Presidential and National Voice Conferencing (PNVC): Conduct EOA -RQ-4 Global Hawk Block 30/Airborne Signals Intelligence Payload (ASIP): Conduct FOT&E -Wide Area Surveillance (WAS): Conduct IOT&E -Conduct other planning and operational testing for new C4ISR programs as the requirement becomes known to AFOTEC				
Title: Combat Support OT&E Description: Plan, execute and report OT&E for Combat Support OT&E FY 2016 Accomplishments: -Deliberate and Crisis Action Planning and Execution Segments Increment 2B (DCAPES Inc 2B): Planned for OUE -Integrated Aircrew Ensemble (IAE): Conducted early influence -Joint Mission Planning System B-2 (JMPS B-2): Planned for IOT&E -Maintenance, Repair, and Overhaul Initiative (MROI): Conducted early influence -Modular Handgun System (MHS): Conducted OA -Mission Planning System Increment 5 (MPS Inc 5): Planned for IOT&E 1 & 2 FY 2017 Plans: -Deliberate and Crisis Action Planning and Execution Segments Increment 2B (DCAPES Inc 2B): Plan for OUE -Integrated Aircrew Ensemble (IAE): Plan for IOT&E -Joint Mission Planning System B-2 (JMPS B-2): Plan for IOT&E -Maintenance, Repair, and Overhaul Initiative (MROI): Conduct early influence -Modular Handgun System (MHS): Conduct MOT&E -Mission Planning System Increment 5 (MPS Inc 5): Conduct IOT&E 1 & 2		0.068	0.562	0.317

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
-Conduct other planning and operational testing for new combat support programs as the requirement becomes known to AFOTEC <i>FY 2018 Plans:</i> -Deliberate and Crisis Action Planning and Execution Segments Increment 2B (DCAPES Inc 2B): Conduct OUE -Integrated Aircrew Ensemble (IAE): Conduct IOT&E -Joint Mission Planning System B-2 (JMPS B-2): Conduct IOT&E -Maintenance, Repair, and Overhaul Initiative (MROI): Conduct early influence -Mission Planning System Increment 5 (MPS Inc 5): Conduct IOT&E 3 -Conduct other planning and operational testing for new combat support programs as the requirement becomes known to AFOTEC				
Accomplishments/Planned Programs Subtotals		11.172	11.529	15.523
D. Other Program Funding Summary (\$ in Millions) N/A				
Remarks				
E. Acquisition Strategy N/A				
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.				