Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Air Force DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0605712F: Initial Operational Test & Evaluation

BA 6: RDT&E Management Support

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	29.085	25.833	20.665	0.000	20.665	17.826	16.239	15.562	14.673	Continuing	Continuing
660191: Initial Operational Test & Eval	29.085	25.833	20.665	0.000	20.665	17.826	16.239	15.562	14.673	Continuing	Continuing

A. Mission Description and Budget Item Justification

Initial Operational Test and Evaluation (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 Congressionally mandated 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 systems designated for use in combat, the law requires IOT&E be completed under realistic field conditions before proceeding beyond LRIP. IOT&E will be planned to completely and unambiguously answer all critical operational issues (COI) as thoroughly as possible. This PE funds the OT participation in Integrated Developmental Test/Operational Test (IDT/OT), the Air Force participation in 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 also funds related operational test and evaluation (OT&E) activities such as, Operational Utility Evaluations (OUE), Early Operational Assessments (EOA) and Operational Assessments (OA), and 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, and Intelligence (C4I); Combat Support;

This program element is in Budget Activity 6, RDT&E Management Support, because it funds weapon system IOT&E tests conducted to evaluate a system's operational effectiveness and suitability and to identify any operational deficiencies or need for modifications in support of the acquisition process.

Exhibit R-2, **RDT&E Budget Item Justification:** PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

3600: Research, Development, Test & Evaluation, Air Force

PE 0605712F: Initial Operational Test & Evaluation

BA 6: RDT&E Management Support

B. Program Change Summary (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	29.085	25.833	0.000	0.000	0.000
Current President's Budget	29.085	25.833	20.665	0.000	20.665
Total Adjustments	0.000	0.000	20.665	0.000	20.665
 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	20.665	0.000	20.665

Change Summary Explanation

FY11: The FY 2010 President's Budget submittal did not reflect FY 2010 through FY 2015 funding. Therefore, explanation of changes between the two budget positions cannot be made in a relevant manner.

Exhibit R-2A, RDT&E Project Just	orce						DATE: Feb	ruary 2010				
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support					R-1 ITEM NOMENCLATURE PE 0605712F: Initial Operational Test & Evaluation				PROJECT 660191: Initial Operational Test & Eval			
COST (\$ in Millions) FY 2009 FY 2010 Base			FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost	
660191: Initial Operational Test & Eval	29.085	25.833	20.665	0.000	20.665	17.826	16.239	15.562	14.673	Continuing	Continuing	
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0			

A. Mission Description and Budget Item Justification

Initial Operational Test and Evaluation (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 Congressionally mandated 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 systems designated for use in combat, the law requires IOT&E be completed under realistic field conditions before proceeding beyond LRIP. IOT&E will be planned to completely and unambiguously answer all critical operational issues (COI) as thoroughly as possible. This PE funds the OT participation in Integrated Developmental Test/Operational Test (IDT/OT), the Air Force participation in 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 also funds related operational test and evaluation (OT&E) activities such as, Operational Utility Evaluations (OUE), Early Operational Assessments (EOA) and Operational Assessments (OA), and 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, and Intelligence (C4I); Combat Support;

This program element is in Budget Activity 6, RDT&E Management Support, because it funds weapon system IOT&E tests conducted to evaluate a system's operational effectiveness and suitability and to identify any operational deficiencies or need for modifications in support of the acquisition process.

B. Accomplishments/Planned Program (\$ in Millions)

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force			DATE: Febr	uary 2010			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0605712F: Initial Operational Test & Evaluation	PROJECT 660191: Ini					
B. Accomplishments/Planned Program (\$ in Millions)							
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
MAJOR THRUST: Plan, execute, and report IOT&E activities of Air Sys	stems. 19.24	14.930	14.102	0.000	14.102		
FY 2009 Accomplishments: In FY 2009 the following programs were supported: - ALR-69A Radar Warning Receiver (ALR-69A): Conducted OA - AWACS Block 40/45 (AWACS Block 40/45): Planned for IOT&E - B-2 Radar Modernization Program (RMP): Conducted IOT&E - B-52 COmbat NEtwork Communications Technology (CONECT): - C-130 Aircraft Modernization Program (AMP): Conducted OA - F-15 Mark XIIA Mode 5 (F-15 Mode 5): Planned for IOT&E - F-15E Radar Modernization Program (F-15E RMP): Planned for C - F-22: Conducted IDT/OT - HC/MC-130 Recapitalization (HC/MC-130 RECAP): Conducted O - Joint Cargo Aircraft (JCA): Conduct IDT/OT - Large Aircraft Infrared Countermeasures (LAIRCM) Phase II: Plar - Miniature Air Launched Decoy (MALD): Conducted IOT&E - RQ-4 Global Hawk: Conducted IDT/OT - Other systems	DA NA						
FY 2010 Plans: In FY 2010 support to the following programs is planned: - ALR-69A Radar Warning Receiver (ALR-69A): Plan for IOT&E - AWACS Block 40/45 (AWACS Block 40/45): Plan for IOT&E - B-2 Radar Modernization Program (RMP): Conduct FOT&E - B-52 COmbat NEtwork Communications Technology (CONECT): - Diminishing Manufacturing Sources Replacement of Avionics Glob (DRAGON): Plan for OA - F-15 Mark XIIA Mode 5 (F-15 Mode 5): Conduct IOT&E - F-15E Radar Modernization Program (F-15E RMP): Plan for OA							

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: Feb	ruary 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0605712F: Initial Operational Test Evaluation	&	PROJECT 660191: Initial Operational Test & Eval				
B. Accomplishments/Planned Program (\$ in Millions)							
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
- F-22: Plan for FOT&E Incr 31 - HC/MC-130 Recapitalization (HC/MC-130 RECAP): Plan for Joint Cargo Aircraft (JCA): Conduct MOT&E - Large Aircraft Infrared Countermeasures (LAIRCM) Phase II: - Modular Aircrew Helmet (MACH): Plan for IOT&E - Miniature Air Launched Decoy (MALD): Conduct IOT&E - RQ-4 Global Hawk: Conduct IOT&E - Other systems FY 2011 Base Plans: In FY 2011 support to the following programs is planned: - ALR-69A Radar Warning Receiver (ALR-69A): Conduct IOT - AWACS Block 40/45 (AWACS Block 40/45): Conduct IOT&E - B-52 COmbat NEtwork Communications Technology (CONE - Diminishing Manufacturing Sources Replacement of Avionics (DRAGON): Conduct OA - F-15 Mark XIIA Mode 5 (F-15 Mode 5): Publish Final Report - F-15E Radar Modernization Program (F-15E RMP): Conduct - F-22: Conduct FOT&E Incr 31 - HC/MC-130 Recapitalization (HC/MC-130 RECAP): Plan for - Large Aircraft Infrared Countermeasures (LAIRCM) Phase II: - Modular Aircrew Helmet (MACH): Conduct IOT&E - Miniature Air Launched Decoy-Jammer (MALD-J): Conduct - MQ-9: Conduct FOT&E - RQ-4 Global Hawk: Publish Final Report - Other systems	&E E CT): Conduct IOT&E S Global Operations and Navigation t OA IOT&E Conduct IOT&E						

Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0605712F: Initial Operational Evaluation	Test &	PROJECT 660191: Init	PROJECT 660191: Initial Operational Test & Eval		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: In FY 2011 OCO: Not applicable.						
MAJOR THRUST: Plan, execute, and report IOT&E activities for S	pace Systems:	3.332	3.113	1.323	0.000	1.323
FY 2009 Accomplishments: In FY 2009 the following programs were supported: - Advanced EHF Satellite Communications (Advanced EHF): F - Enhanced Polar System (EPS): Conducted EOA - Global Positioning System (GPS): Conducted OA - JSpOC Mission System (JMS): Planned for OUE - National Polar-orbiting Operational Environmental Satellite Sy - Space Based Infrared System (SBIRS): Conducted OUE - Space Based Space Surveillance (SBSS): Planned for IOT&F - Space Fence: Early Influence - Third Generation Infrared System (3GIRS): Early influence - Wideband Global SATCOM (WGS): Published final report - Other systems	rstem (NPOESS): Planned for OA					
FY 2010 Plans: In FY 2010 support to the following programs is planned: - Advanced EHF Satellite Communications (Advanced EHF): Communications (Bobal Positioning System (GPS): Conduct OA - JSpOC Mission System (JMS): Conduct OA - National Polar-orbiting Operational Environmental Satellite System (SBIRS): Publish OUE Report	rstem (NPOESS): Conduct OA					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: Feb	ruary 2010		
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0605712F: Initial Operational Test & Evaluation	§	PROJECT 660191: Ini	T nitial Operational Test & Eval			
B. Accomplishments/Planned Program (\$ in Millions)			1				
	F	Y 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
 Space Based Space Surveillance (SBSS): Conduct IOT&E Space Fence: Conduct EOA Third Generation Infrared System (3GIRS): Early Influence Other systems 							
FY 2011 Base Plans: In FY 2011 support to the following programs is planned: - Advanced EHF Satellite Communications (Advanced EHF): - Enhanced Polar System (EPS): Conduct IDT/OT - Global Positioning System (GPS): Publish OA Report - JSpOC Mission System (JMS): Conduct OUE - Mobile User Objective System (MUOS): Conduct MOT&E - National Polar-orbiting Operational Environmental Satellite S - Space Based Infrared System (SBIRS): Conduct OUE - Space Fence: Plan for OA - Third Generation Infrared System (3GIRS): Conduct EOA - Other systems							
FY 2011 OCO Plans: In FY 2011 OCO: Not applicable.							
MAJOR THRUST: Plan, execute, and report IOT&E activities for VI FY 2009 Accomplishments: In FY 2009 the following programs were supported: - AIM-9X Block II: Planned for OT-3C - Joint Air-to-Surface Standoff Missile Extended Range (JASS - Small Diameter Bomb Increment II (SDB II): Conducted EOA - Other systems	M-ER): Conducted OA	1.877	1.868	2.461	0.000	2.461	

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: Febr	ruary 2010	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support	PROJECT 660191: Ini	tial Operation	nal Test & E	/al		
B. Accomplishments/Planned Program (\$ in Millions)			1			
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: In FY 2010 support to the following programs is planned: - AIM-9X Block II: Conduct OT-3C - Joint Air-to-Surface Standoff Missile Extended Range (JASS) - Small Diameter Bomb Increment II (SDB II): Conduct OA - Other systems	M-ER): Conduct OA					
FY 2011 Base Plans: In FY 2011 support to the following programs is planned: - AIM-9X Block II: Conduct OT-3D - Joint Air-to-Surface Standoff Missile Extended Range (JASS - Small Diameter Bomb Increment II (SDB II): Continue OA - Other systems	M-ER): Conduct IOT&E					
FY 2011 OCO Plans: In FY 2011 OCO: Not applicable.						
MAJOR THRUST: Plan, execute, and report IOT&E activities for Computer, and Intelligence (C4I) Programs	Command, Control, Communications,	3.206	4.410	2.660	0.000	2.660
FY 2009 Accomplishments: In FY 2009 the following programs were supported: - Air Operations Center as a Weapon System (AOC): Early In: - Airborne Signals Intelligence Payload (ASIP): Conducted ID: - Airborne Signals Intelligence Payload 1C/2C (ASIP 1C/2C): - B-1 Fully Integrated Data Link (B-1 FIDL): Conducted OA: - B-2 Extremely High Frequency Satellite Communications and SATCOM): Planned for IDT/OT: - Battle Control System - Fixed (BCS-F): Early Influence	T/OT Planned OA					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: Feb	ruary 2010	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0605712F: Initial Operational Tes Evaluation	st &	val			
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
 DoD National Airspace System (DoD NAS): Conducted FOT&E Family of Advanced Beyond Line-of-Sight Terminals (FAB-T): Co Global Hawk 4 Multiple Platform-Radar Technology Insertion Pro OA Integrated Broadcast Service (IBS): Early Influence Joint Interface Control Officer (JICO) Support System (JSS): Cor Other systems FY 2010 Plans: In FY 2010 support to the following programs is planned: Air Operations Center as a Weapon System (AOC): Early Influer Airborne Signals Intelligence Payload (ASIP): Conduct IOT&E Airborne Signals Intelligence Payload 1C/2C (ASIP 1C/2C): Plan B-2 Extremely High Frequency Satellite Communications and Co SATCOM): Conduct IDT/OT Battle Control System - Fixed (BCS-F): Plan IOT&E Expeditionary Combat Support System (ECSS): Plan for OA Family of Advanced Beyond Line-of-Sight Terminals (FAB-T): Co Global Hawk 4 Multiple Platform-Radar Technology Insertion Pro OA Integrated Broadcast Service (IBS): Plan for OUE Joint Interface Control Officer (JICO) Support System (JSS): Cor Other systems FY 2011 Base Plans: In FY 2011 support to the following programs is planned: Air Operations Center as a Weapon System (AOC): Plan OA Airborne Signals Intelligence Payload (ASIP): Publish Final Repo 	gram (GH 4 MP-RTIP): Conducted inducted IDT/OT OA induct IDT/OT induct					

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Air Force				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0605712F: Initial Operational Tes Evaluation	itial Operational Test & Eval				
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
 - Airborne Signals Intelligence Payload 1C/2C (ASIP 1C/2C): Condetender - B-1 Fully Integrated Data Link (B-1 FIDL): Conduct IOT&E - B-2 Extremely High Frequency Satellite Communications and Consatton Satton): Conduct IOT&E - Battle Control System - Fixed (BCS-F): Conduct IOT&E - Expeditionary Combat Support System (ECSS): Conduct OA - Family of Advanced Beyond Line-of-Sight Terminals (FAB-T): Conforminated God - Global Hawk 4 Multiple Platform-Radar Technology Insertion Program OA FY 2011 OCO Plans: In FY 2011 OCO: Not applicable. 	mputer Upgrade Program (B-2 EHF					
MAJOR THRUST: Plan, execute, and report IOT&E activities for Comb	at Support Programs	1.429	1.512	0.119	0.000	0.119
FY 2009 Accomplishments: In FY 2009 the following programs were supported: - Combat Survivor Evader Locator (CSEL): Conducted Combined: - Joint Mission Planning System (JMPS): Conducted IOT&E - Other systems	Test Force Assessment					
FY 2010 Plans: In FY 2010 support to the following programs is planned: - Combat Survivor Evader Locator (CSEL): Complete Combined T - Joint Mission Planning System (JMPS): Conduct IOT&E - Other systems						
FY 2011 Base Plans: In FY 2011 support to the following programs is planned:						

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R-1 ITEM NOMENCLATURE

Exhibit R-2A, **RDT&E Project Justification**: PB 2011 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force PE 0605712

BA 6: RDT&E Management Support

PE 0605712F: Initial Operational Test &

Evaluation

PROJECT

660191: Initial Operational Test & Eval

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
 Joint Counter Radio-Controlled Improvised Explosive Device EW (JCREW): Conduct MOT&E Joint Mission Planning System (JMPS): Conduct IOT&E Other systems 						
FY 2011 OCO Plans: In FY 2011 OCO: Not applicable.						
Accomplishments/Planned Programs Subtotals	29.085	25.833	20.665	0.000	20.665	

C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	<u>Base</u>	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
PE Not Provided (1058): Activity	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Not Provided											

D. Acquisition Strategy

N/A

E. 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.