Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force

R-1 ITEM NOMENCLATURE

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

PE 0604256F: Threat Simulator Development

DATE: February 2011

BA 6: RDT&E Management Support

APPROPRIATION/BUDGET ACTIVITY

9 77											
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	25.375	21.245	22.420	-	22.420	23.234	22.379	20.592	19.923	Continuing	Continuing
662907: Electronic Combat Intel Support	2.197	2.215	2.243	-	2.243	2.274	2.204	2.135	2.066	Continuing	Continuing
663321: Electronic Warfare Ground Test Resources	15.593	11.441	12.502	-	12.502	13.700	13.608	12.663	12.251	Continuing	Continuing
667500: Foreign Materiel Acquisition/Analysis	7.585	7.589	7.675	-	7.675	7.260	6.567	5.794	5.606	Continuing	Continuing

A. Mission Description and Budget Item Justification

This PE provides funding for the elements necessary to support the Air Force Electronic Warfare (EW) Test Process, including Directed Energy (DE). This test process provides a scientific methodology to ensure the effective disciplined and efficient testing of EW and avionics systems. Each capability or facility improvement is pursued in concert with the others to avoid duplicate capabilities while at the same time producing the proper mix of test resources needed to support the AF EW Test Process and testing of EW systems which can be used in any action involving the use of electromagnetic and DE to control the electromagnetic spectrum or to attack the enemy. This PE provides funding for the management and technical oversight of implementation activities, development and improvement of digital EW models, measurement facilities improvements, hardware-in-the-loop test facilities improvements, and installed system test facility improvements. This PE also provides funding for planning, budgetary management, and technical support of the Air Force for corporate-level implementation of the EW Test Process, improvement and modernization (I&M) activities and application of the test and evaluation (T&E) infrastructure. Support includes requirements definition and analysis, project planning, programming and budgeting, technical oversight, and application of T&E facility I&M. Products include studies, analyses, and related documentation. Additionally, this PE provides funding to support the acquisition and analysis efforts of the Foreign Materiel Program and EW intelligence efforts.

Budget Activity Justification: 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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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force

APPROPRIATION/BUDGET ACTIVITY

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

BA 6: RDT&E Management Support

DATE: February 2011

R-1 ITEM NOMENCLATURE

PE 0604256F: Threat Simulator Development

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	23.331	21.245	22.495	-	22.495
Current President's Budget	25.375	21.245	22.420	-	22.420
Total Adjustments	2.044	-	-0.075	-	-0.075
 Congressional General Reductions 		-			
 Congressional Directed Reductions 		-			
 Congressional Rescissions 	-	-			
 Congressional Adds 		-			
 Congressional Directed Transfers 		-			
 Reprogrammings 	2.044	-			
SBIR/STTR Transfer	-	-			
 Other Adjustments 	-	_	-0.075	-	-0.075

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DATE: February 2011

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3600: Research, Development, Test BA 6: RDT&E Management Suppor		6F: <i>Threat</i> S	imulator Dev	relopment	662907: Electronic Combat Intel Support						
COST (\$ in Millions)	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost			
662907: Electronic Combat Intel Support	2.197	2.215	2.243	-	2.243	2.274	2.204	2.135	2.066	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force

ADDDODDIATION/DUDGET ACTIVITY

This project provides funding to support Foreign Materiel Operational Test and Evaluation (FMOT&E), which ensures the ability of operational commands to test and develop effective Electronic Attack/Electronic Protection (EA/EP) techniques and tactics. Funds are required for: deployment of blue systems to test facilities; travel of personnel to the test sites to evaluate and validate test results; range and laboratory costs; test consumables; costs for instrumentation of blue systems; and contracted engineering support for the conduct of tests and subsequent reporting. Funding for this program is required to prevent future aircraft losses due to improper and inaccurate aircrew tactics (e.g., lack of evasive action or proper tactics training to avoid missile attack).

Budget Activity Justification: 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.

B. Accomplishments/Planned Programs (\$ in Millions)			FY 2012	FY 2012	FY 2012
	FY 2010	FY 2011	Base	oco	Total
Title: FMOT&E	2.197	2.215	2.243	-	2.243
Description: Supports Foreign Materiel Operational Test and Evaluation (FMOT&E)					
FY 2010 Accomplishments: Conduct foreign materiel operational analysis (FMOA) for fighter and bomber testing; mobility/special operations transport/helicopter testing; classified operational assessments; and extensive evaluations and reporting of blue system effectiveness.					
FY 2011 Plans: Continue to conduct foreign materiel operational analysis (FMOA) for fighter and bomber testing; mobility/special operations transport/helicopter testing; classified operational assessments; and extensive evaluations and reporting of blue system effectiveness.					
FY 2012 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
	PE 0604256F: Threat Simulator Development	662907: <i>Ele</i>	ectronic Combat Intel Support
BA 6: RDT&E Management Support			

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continue to conduct foreign materiel operational analysis (FMOA) for fighter and bomber testing; mobility/special operations transport/helicopter testing; classified operational assessments; and extensive evaluations and reporting of blue system effectiveness.					
FY 2012 OCO Plans: Not applicable					
Accomplishments/Planned Programs Subtotals	2.197	2.215	2.243	-	2.243

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

			FY 2012	FY 2012	FY 2012					Cost To	
<u>Line Item</u>	FY 2010	FY 2011	Base	OCO	<u>Total</u>	FY 2013	FY 2014	FY 2015	FY 2016	Complete	Total Cost
N/A: Not Applicable	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Not applicable.

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.

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Exhibit R-2A, RDT&E Project Justi	khibit R-2A, RDT&E Project Justification: PB 2012 Air Force DATE: February 2011										
APPROPRIATION/BUDGET ACTIV 3600: Research, Development, Test BA 6: RDT&E Management Support	Research, Development, Test & Evaluation, Air Force PE 0604256F: Threat Simulator Development 663321: Electronic Warfal					fare Ground	Test				
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
663321: Electronic Warfare Ground Test Resources	15.593	11.441	12.502	-	12.502	13.700	13.608	12.663	12.251	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The AF requires a comprehensive set of test facilities to implement the Air Force Electronic Warfare (EW) Test Process in order to test EW systems, including Directed Energy (DE). To manage program risk effectively throughout the weapons system acquisition process, and conduct T&E effectively and efficiently, a broad multispectrum, integrated set of T&E capabilities for modeling and simulation through open-air ranges (OAR) are required. The EW Test Process Support task provides for investment management, coordinated technical oversight, and application of EW T&E facilities, including studies, analyses, and related documentation. The National Radar Cross Section (RCS) Test Facility (NRTF) at Holloman AFB, NM, provides timely, accurate, and secure RCS and antenna measurements for tri-service and joint program offices, DoD laboratories, DARPA and industry. The NRTF tests fielded and developmental systems and technology to meet Low Observable (a.k.a. stealth) and EW customer requirements. The Air Force Electronic Warfare Evaluation Simulator (AFEWES) and the Digital Integrated Air Defense System (DIADS) provide the ability to realistically evaluate hardware components and simulated weapon systems against manned hardware threat representations throughout the acquisition process. AFEWES provides simulations of advanced Infrared (IR) & Radio Frequency (RF) semi-active Surface-to-Air Missiles (SAMs), Air-to-Air Missiles (AAMs), RF missile warning, IR and Laser countermeasure functions; integration of actual threat hardware and ground clutter into advanced threat RF and IR missile simulations. DIADS provides algorithm based enemy command and control (C2) capabilities plus early warning radar detection, limited ground control intercept features and also allows man-in-the-loop interaction for the enemy C2 positions. The Installed Test Integration Program (ITIP) develops a multi-spectral synthetic battlespace with virtual and constructive modeling and simulation T&E capabilities at Edwards AFB, CA. The Advanced Warfare Test and Evaluation Capability (AWTEC) will replace 90's technology with state-of-the-art stimulators to upgrade the Benefield Anechoic Facility (BAF) at Edwards AFB, CA. Improvement and modernization efforts within this PE are identified in one mission area category: EW. EW provides planning, improvements, and modernization needed for test capabilities to conduct and support the AF EW test process, including DE. This test process provides a scientific methodology to ensure the effective disciplined and efficient testing of EW and avionics systems.

Budget Activity Justification: 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.

B. Accomplishments/Planned Programs (\$ in Millions)			FY 2012	FY 2012	FY 2012
	FY 2010	FY 2011	Base	oco	Total
Title: I&M	14.447	10.250	11.298	-	11.298
Description: Provides for planning and improvement & modernization (I&M) of test capabilities to conduct and support the AF EW test process, including DE.					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			D	ATE: Febru	ary 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support	R-1 ITEM NOMENCLATURE PE 0604256F: Threat Simulator Develop	PROJECT lopment 663321: Electronic Warfare Ground Test Resources						
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total		
FY 2010 Accomplishments: AFEWES test capability I&M continues updates to support high-fid effectiveness of DoD and Allied EW systems; DIADS architecture evolving threats; ITIP integration of stand-alone EW stimulators co scenarios; AWTEC is providing a suite of state-of-the-art stimulato continues to enhance efficiency of operations and accuracy for me and antennas.	upgrades add new capabilities to simulate ntinues development of integrated EW test rs to replace 90's technology; and the NRTF							
FY 2011 Plans: AFEWES test capability I&M will continue to advance high-fidelity effectiveness of DoD and Allied EW systems; DIADS architecture capabilities to simulate evolving threats; AWTEC will continue to p 90's technology; and the NRTF will continue to enhance efficiency RCS of Low Observable platforms and antennas.	upgrades will continue to advance new rovide state-of-the-art stimulators to replace							
FY 2012 Base Plans: DIADS architecture upgrades will continue to advance new capabi will continue to provide state-of-the-art stimulators to replace 90's enhance efficiency of operations and accuracy for measuring RCS	echnology; and the NRTF will continue to							
FY 2012 OCO Plans: Not applicable.								
Title: EC Test Process Support		1.146	1.191	1.204	-	1.204		
Description: Electronic Combat (EC) Test Process Support. Con in support of Air Force investments in EW test infrastructure.	duct requirements analyses and other studies							
FY 2010 Accomplishments: Continue to provide Systems Engineering / Technical Assistance (the EW Test Process, including I&M of the EW test infrastructure.	SETA) support for Air Force implementation of							
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Air Force Page 6 of 9 R-1 Line Item #92

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 6: RDT&E Management Support

DATE: February 2011

R-1 ITEM NOMENCLATURE
PE 0604256F: Threat Simulator Development
Resources

B. Accomplishments/Planned Programs (\$ in Millions) FY 2012 FY 2012 FY 2012 FY 2010 FY 2011 Base OCO Total Continue to provide Systems Engineering / Technical Assistance (SETA) support for Air Force implementation of the EW Test Process, including I&M of the EW test infrastructure. FY 2012 Base Plans: Continue to provide Systems Engineering / Technical Assistance (SETA) support for Air Force implementation of the EW Test Process, including I&M of the EW test infrastructure. FY 2012 OCO Plans: Not applicable.

Accomplishments/Planned Programs Subtotals

15.593

11.441

12.502

12.502

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

			FY 2012	FY 2012	FY 2012					Cost To	
<u>Line Item</u>	FY 2010	FY 2011	Base	OCO	<u>Total</u>	FY 2013	FY 2014	FY 2015	FY 2016	Complete	Total Cost
• RDT&E AF: <i>PE 0604759F, Major</i>	63.892	61.587	62.206	0.000	62.206	60.038	49.606	46.223	53.760	Continuing	Continuing
T&E Investment.											
• RDT&E AF (1): <i>PE 0605807F</i> ,	755.992	759.868	654.475	0.000	654.475	578.997	595.567	615.594	613.825	Continuing	Continuing
T&E Support.											
• RDT&E AF (2): <i>PE 0605976F</i> ,	52.190	46.327	44.547	0.000	44.547	45.723	44.236	40.071	38.191	Continuing	Continuing
Facility Restoration &											
Modernization											
• RDT&E AF (3): <i>PE 0605978F</i> ,	29.559	27.579	27.953	0.000	27.953	28.049	27.220	26.416	25.600	Continuing	Continuing
Facilities Sustainment											

D. Acquisition Strategy

This program element uses several different contracting strategies to provide the most cost effective T&E investment solutions. The main acquisition strategy is to use full and open competition wherever possible to improve and modernize existing test capabilities.

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.

DATE: February 2011

APPROPRIATION/BUDGET ACTI 3600: Research, Development, Tes BA 6: RDT&E Management Suppo			IOMENCLAT 6F: <i>Threat S</i>	FURE imulator Dev	relopment	PROJECT 667500: Foreign Materiel Acquisition/Analysis					
COST (\$ in Millions)	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost			
667500: Foreign Materiel Acquisition/Analysis	7.585	7.589	7.675	-	7.675	7.260	6.567	5.794	5.606	Continuing	Continuing
Quantity of RDT&F Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force

This project's specific purpose is to support USAF Foreign Materiel Program requirements through the acquisition and analysis of foreign materiel. Items considered for these Foreign Materiel Acquisition (FMA) funds are included in the prioritized Air Force FMA Top 20 list established each year. Each Major Command (MAJCOM) prepares and approves a Foreign Materiel - Mission Requirements Statement for each requirement. Annually, the MAJCOM commanders establish a list of their top 20 requirements. The MAJCOMs' requirements lists are integrated and prioritized into a classified Air Force requirement list. Each MAJCOM then approves the FMA Top 20 List and final validation comes from the Air Force Vice Chief of Staff. System analyses are based on and driven by acquisitions. The USAF provides assessments and data for threat systems to all DoD components.

Budget Activity Justification: 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.

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: FMP	7.585		7.675		7.675
Description: Supports USAF Foreign Materiel Program (FMP) Requirements through the acquisition and analysis of foreign materiel.					
FY 2010 Accomplishments: Fund acquisition of available Foreign Materiel IAW the prioritized Air Force Foreign Materiel List; analysis of acquired Foreign Materiel; and operations and maintenance of the specialized Foreign Materiel assets.					
FY 2011 Plans: Continue to fund acquisition of available Foreign Materiel IAW the prioritized Air Force Foreign Materiel List; analysis of acquired Foreign Materiel; and operations and maintenance of the specialized Foreign Materiel assets.					
FY 2012 Base Plans:					

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R-1 ITEM NOMENCI ATURE

DATE: February 2011

7.675

7.675

PROJECT.

7.585

7.589

3600: Research, Development, Test & Evaluation, Air Force BA 6: RDT&E Management Support	PE 0604256F: Threat Simulator Develo		667500: Foreign Materiel Acquisition/Analysis					
B. Accomplishments/Planned Programs (\$ in Millions)		FY 201	0 FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total		
Continue to fund acquisition of available Foreign Materiel IAW the prior analysis of acquired Foreign Materiel; and operations and maintenance assets.								

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

Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force

APPROPRIATION/BUDGET ACTIVITY

			FY 2012	FY 2012	FY 2012	<u>Cost To</u>					
<u>Line Item</u>	FY 2010	FY 2011	Base	OCO	<u>Total</u>	FY 2013	FY 2014	FY 2015	FY 2016	Complete	Total Cost
N/A: Not Applicable	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Accomplishments/Planned Programs Subtotals

D. Acquisition Strategy

FY 2012 OCO Plans:

Not applicable.

Not applicable.

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.

Air Force Page 9 of 9 R-1 Line Item #92