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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>				PE 0604602F: <i>Armament/Ordnance Development</i>							
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	21.423	6.693	10.055	-	10.055	9.933	7.078	5.686	5.786	Continuing	Continuing
653133: <i>Bombs &amp; Fuzes</i>	14.766	1.215	3.936	-	3.936	3.986	1.065	1.025	1.043	Continuing	Continuing
655361: <i>Stores-Aircraft Interface</i>	6.657	5.478	6.119	-	6.119	5.947	6.013	4.661	4.743	Continuing	Continuing

## A. Mission Description and Budget Item Justification

The Armament Ordnance Development program provides for initial and continuing development of weapons/munitions (kinetic and non-kinetic) and munitions equipment for support and operational use. This PE develops and improves the following weapons and weapons subsystems: bombs, bomb fuzes, insensitive explosive fills (Insensitive Munitions - IM), aircraft ammunition, stores-aircraft interface upgrades to include the Universal Armament Interface (UAI), directed energy technology transition to weapons, munitions materiel handling equipment (MMHE), munitions containers, and other weapon subsystems.

- Armament Subsystems: This project develops and improves conventional weapons/munitions (kinetic and non-kinetic) and fuzes. The project also provides an opportunity to quickly insert emerging technologies into existing and developing aircraft munitions. The project provides for research, development, and testing of medium caliber ammunition and enterprise management of guns, ammunition, and Munitions Materiel Handling Equipment (MMHE) systems integration and testing to ensure tested and certified medium caliber ammunition is provided to users. The project helps the AF meet Insensitive Munitions (IM) compliance through strategic planning, development of insensitive explosive fills, and bomb case modifications to make weapons insensitive to unplanned stimuli. Armament Standardization/Control/Munitions Materiel Handling Equipment (MMHE) is a continuing project to develop and improve the standardization and commonality of munitions handling and armament equipment to preclude duplication. This project also funds the operation of the tri-service Container Design Retrieval System (CDRS), maintaining a container database to preclude proliferation and duplication of munitions containers and supporting organic container design.

- Stores-Aircraft Interface: This project conducts stores-aircraft interface upgrades and standards development to include the Universal Armament Interface (UAI). UAI is an Air Force initiative to develop standardized software interfaces in aircraft, weapons and mission planning to support integration of weapons independent of aircraft Operation Flight Program (OFP) cycles.

This program is in Budget Activity 5 - System Development and Demonstration because the projects support the SDD phase of several munitions related items and functions.

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<b>B. Program Change Summary (\$ in Millions)</b>	<b><u>FY 2010</u></b>	<b><u>FY 2011</u></b>	<b><u>FY 2012 Base</u></b>	<b><u>FY 2012 OCO</u></b>	<b><u>FY 2012 Total</u></b>
Previous President's Budget	18.671	6.693	5.563	-	5.563
Current President's Budget	21.423	6.693	10.055	-	10.055
Total Adjustments	2.752	-	4.492	-	4.492
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	2.830	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.078	-	4.492	-	4.492

**Change Summary Explanation**

FY10 reprogramming of +\$2.83M reflects funds added to fund AF share of funding for the Fixed Wing Advanced Precision Kill Weapon System II (FW APKWS II) Joint Capability Technology Demonstration (JCTD).

FY12 delta of +\$4.492M reflects funds added to further address RDT&E concerns with medium caliber ammunition and other fact of life changes.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604602F: Armament/Ordnance Development				PROJECT 653133: Bombs & Fuzes			
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
653133: Bombs & Fuzes	14.766	1.215	3.936	-	3.936	3.986	1.065	1.025	1.043	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
The Armament Subsystems Project contains a variety of work: - Bombs/munitions and fuzes. (a) The Joint Programmable Fuze (JPF) was developed primarily for JDAM and funded by the JDAM program. This project funds development activities for the FMU-152 (JPF), including reliability enhancements and producibility improvements. In addition, the project supports other fuze development activity, including characterization of the Hard Target Void Sensing Fuze (HTVSF), and AF participation in the DOD Fuze Integrated Product Team (IPT). Finally, the project supports a DoD-DoE effort to develop a domestic source for the chemical TATB, a key energetic used in the JPF and other fuzes [TATB = 1,3,5-triamino 2, 4,6-trinitrobenzene] (b) Medium Caliber Ammunition project assesses, refines, and develops medium caliber ammunition, to include, but not limited to, conducting PGU-28A/B qualification testing (F-22) and performing a 20mm clean sheet end-to-end assessment. (c) Fixed Wing Advanced Precision Kill Weapon System II (FW APKWS II) Joint Capability Technology Demonstration (JCTD) will integrate the existing APKWS II, a rotary wing (helicopter) system, onto the fixed-wing A-10 platform and provide a precision laser guided, low collateral damage capability against static and moving targets - Insensitive Munitions (IM). IM develops explosive fills and bomb case modifications to make conventional weapons insensitive to unplanned stimuli. The project also supports AF IM strategic planning to achieve IM compliance IAW U.S. Code, Title 10, Subtitle A, Part N, Chapter 141, Section 2389, "Ensuring safety regarding insensitive munitions." - Munitions Materiel Handling Equipment (MMHE) and Container Design Retrieval System (CDRS). Armament Standardization/Control/Munitions Materiel Handling Equipment (MMHE) is a continuing project to develop and improve the standardization and commonality of munitions handling and armament equipment to preclude duplication. Efforts are limited to the study, design, and development of MMHE and armament control systems. Procurement will be performed and funded by the applicable weapons system project. The tri-service Container Design Retrieval System (CDRS) is a database intended to preclude proliferation and duplication of munitions containers. It also supports organic container design, acquisition transportation, prototyping, testing capabilities, as well as the Joint Ordnance Commander's Working Group (JOCG) for Packaging, Handling, and Loading.											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Hard Target Void Sensing Fuze (HTVSF) Joint Capability Technology Demonstration (JCTD)							7.377	-	-	-	-
Description: The Hard Target Void Sensing Fuze (HTVSF) Joint Capability Technology Demonstration (JCTD) is a FY08-10 USSTRATCOM sponsored joint USAF/USN program.											
FY 2010 Accomplishments:											

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604602F: Armament/Ordnance Development	PROJECT 653133: Bombs & Fuzes				
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Completed 27 month source selection/risk reduction effort. Will result in selection of single contractor to continue into EMD and Production based on approved criteria specified in source selection plan. Winning contractor has option on JCTD contract for 20 residual fuzes at the conclusion of JCTD. Residual assets will have limited "qualification" and will be made available to Air Combat Command.  <b>FY 2011 Plans:</b>  <b>FY 2012 Base Plans:</b>  <b>FY 2012 OCO Plans:</b>						
<b>Title:</b> FMU-152, Joint Programmable Fuze (JPF)  <b>Description:</b> Legacy weapons integration, fuze characterization, and qualification of domestic source for TATB, an essential energetic in the JPF  <b>FY 2010 Accomplishments:</b> Conducted Phase 3 characterization sled testing, continued supplier initiative effort with ManTech, and continued TATB qualification effort.  <b>FY 2011 Plans:</b> Continue TATB qualification effort  <b>FY 2012 Base Plans:</b>  <b>FY 2012 OCO Plans:</b>		0.964	0.700	-	-	-
<b>Title:</b> Munitions Materiel Handling Equipment/Container Design Retrieval System  <b>Description:</b> MMHE/CDRS: enhance safety and improve standardization of munitions handling and armament equipment; maintain tri-service database to preclude proliferation/duplication of munitions containers and support organic container design  <b>FY 2010 Accomplishments:</b> Provided container design expertise and technical support to AF munitions/weapons containers developers. Managed and operated the Tri-Service Container Design Retrieval System (CDRS) database. Provided support for new Miniature Air Launch Decoy (MALD) test and development. Designed, prototyped, and tested five variations of Adaptive Cartridge Environment (ACE) containers.		1.317	0.515	0.776	-	0.776

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B. Accomplishments/Planned Programs (\$ in Millions)				FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Developed transportation and delivery container for Viper Strike, Stand Off Precision Guided Munitions (SOPGM). Completed design modification of Joint Air-to-Surface Standoff Missile (JASSM) missile container cover. Completed 17 Munitions Materiel Handling Equipment (MMHE) support equipment projects. Completion of an MMHE project entails solidifying technical requirements from user inputs, developing CAD models of prototype concepts, developing shop drawings for approved prototype concepts, designing and constructing prototype hardware for user test, documenting test and analysis results, developing Technical Data Packages with finalized drawings, and developing procedures to inspect and use the new/modified equipment. Fabricated 27 prototypes for test and evaluation purposes. Completed 9 first article equipment fabrications for drafting verification and delivery to Air Force units for additional test and evaluation. Supported F-22 program with modifications of equipment for loading internal bomb bay. Supported F-35 program with equipment to test and evaluate various pylons and adapters. Developed and tested 5 loading adapters and other specialized equipment for new Small Diameter Bomb (SDB) missions. Provided direct customer support through customer support visits to United States Air Force Europe (USAFE).  <b>FY 2011 Plans:</b> Provide container design expertise and technical support to AF munitions/weapons containers developers. Planned completion of 10 Munitions Materiel Handling Equipment (MMHE) support equipment projects to include engineering, drafting, proof load, technical data and safety coordination authorizing Air Force use. Continue support and sustainment of all previously existing items developed by the MMHE program office. Planned fabrication of 7 prototypes for test and evaluation purposes. Projected to complete 7 first article equipment fabrications for drafting verification and delivery to Air Force units for additional test and evaluation. Continue support to the F-22 and F-35 programs with equipment to test and evaluate various pylons and adapters. Continue Support the Massive Ordnance Penetrator(MOP) and B-2 Program Offices with development of equipment for safe handling, loading, and storage of the MOP and related components. Support Small Diameter Bomb (SDB) office with development and fielding of equipment  <b>FY 2012 Base Plans:</b> Provide container design expertise and technical support to AF munitions/weapons containers developers. Planned completion of 10 Munitions Materiel Handling Equipment (MMHE) support equipment projects to include engineering, drafting, proof load, technical data, and safety authorizations. Planned fabrication of 7 prototypes for test and evaluation purposes. Project to complete 7 first article equipment fabrications for drafting verification and delivery to Air Force units for additional test and evaluation. Provide support to all Specialized Program Office (SPO) with new weapons and container								

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
development. Continue support and sustainment of all previously existing items developed by the MMHE program office. <b>FY 2012 OCO Plans:</b>						
<b>Title:</b> Medium Caliber Ammunition <b>Description:</b> Assess, refine, and develop medium caliber ammunition. The project provides enterprise management of guns, ammunition, and Munitions Materiel Handling Equipment (MMHE) systems integration. <b>FY 2010 Accomplishments:</b> 20mm PGU-28A/B developmental and operational qualification testing to characterize safety, suitability, and lethality (F-15/16) <b>FY 2011 Plans:</b> <b>FY 2012 Base Plans:</b> Conduct PGU-28A/B qualification testing (F-22); perform 20mm clean sheet end-to-end assessment <b>FY 2012 OCO Plans:</b>		0.728	-	2.760	-	2.760
<b>Title:</b> Insensitive Munitions (IM) <b>Description:</b> Strategic IM planning for the AF; support Joint Service IM efforts; provide technical guidance and test expertise to AF IM programs <b>FY 2010 Accomplishments:</b> Produced FY11/12 AF IM Strategic Plan; supported DoD and Joint Service IM efforts; provided IM guidance to the HTVSF, Small Diameter Bomb II (SDB II), and BLU-129 program offices <b>FY 2011 Plans:</b> <b>FY 2012 Base Plans:</b> Produce FY13/14 AF IM Strategic Plan; support DoD and Joint Service IM planning <b>FY 2012 OCO Plans:</b>		0.350	-	0.400	-	0.400
<b>Title:</b> Fixed Wing Advanced Precision Kill Weapon System II (FW APKWS II) Joint Capability Technology Demonstration (JCTD)		4.030	-	-	-	-

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<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>							<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>
<p><b>Description:</b> FW APKWS II JCTD: will integrate the existing APKWS II, a rotary wing (helicopter) system, onto the AV-8B and A-10 platforms and demonstrate its military utility to provide a precision laser guided, low collateral damage capability against static and moving targets, both close support and urban targets; system will leverage existing rocket motor and warhead stockpiles</p> <p><b>FY 2010 Accomplishments:</b> Prepared contract documentation and sent request for proposal to award a sole source contract to BAE Systems to modify the Rotary Wing (RW) APKWS II Guidance Section. Procured FW APKWS LAU-131 Extended Length Launchers from the Navy and conducted various qualification tests on the launcher to include centrifuge, vibe, and fit checks on the A-10 and F-16 aircraft. Funded the Air Force SEEK EAGLE office to start the A-10 and F-16 aircraft flight certification process. Developed and procured FW APKWS Instrumented Measurement Vehicle (IMV) test assets from the Navy. Conduct IMV test flights on the A-10 and F-16 aircraft. Provide that IMV data to BAE and work with them on the modification of the RW APKWS for the fixed wing aircraft.</p> <p><b>FY 2011 Plans:</b></p> <p><b>FY 2012 Base Plans:</b></p> <p><b>FY 2012 OCO Plans:</b></p>											
<b>Accomplishments/Planned Programs Subtotals</b>							14.766	1.215	3.936	-	3.936
<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• PE 0604635F: <i>RDT&amp;E, Ground Attack Weapons Fuze Development</i>	0.087	32.513	24.467	0.000	24.467	5.185	0.000	0.000	0.000	Continuing	Continuing
<b>D. Acquisition Strategy</b>											
<p>Fuzes (including JPF) is a continuing effort with most activities performed in-house or through contracted services (small contracts). HTVSF JCTD is a two-contractor competition leading to down-select for EMD. FW APKWS II is being conducted under the current contract for the rotary wing APKWS II system.</p> <p>MMHE/CDRS and Medium Caliber project activities are performed in-house with limited technical and analysis contract support.</p>											

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**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-3, RDT&E Project Cost Analysis: PB 2012 Air Force** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)	<b>R-1 ITEM NOMENCLATURE</b> PE 0604602F: Armament/Ordnance Development	<b>PROJECT</b> 653133: Bombs & Fuzes
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Fuzes (JPF) -- legacy weapons, characterization	SS/TBD	Kaman Precision Products Inc:Orlando, FL	9.650	-		-		-		-	Continuing	Continuing	8.699
IM	TBD	Air Force Research Lab RWM:Eglin AFB, FL	0.365	-		0.150	Jan 2012	-		0.150	0.000	0.515	0.000
HTVSF JCTD - Competitor 1	C/FFP	Alliant Techsystems:Minneapolis, MN	6.893	-		-		-		-	0.000	6.893	0.000
HTVSF JCTD - Competitor 2	C/FFP	Thales Electronics:Basingstoke, UK	7.018	-		-		-		-	0.000	7.018	0.000
CDRS -- Data Management	MIPR	EDSC:Eglin AFB, FL	0.023	0.006	Oct 2010	0.212	Jan 2012	-		0.212	Continuing	Continuing	TBD
MMHE -- Prototypes	C/CPAF	Prototype Fabrication Shop:Eglin AFB, FL	0.941	0.120	Oct 2010	0.364	Jan 2012	-		0.364	Continuing	Continuing	TBD
TATB Qualification, source 1	MIPR	BAE:Holston, TN	0.669	0.350		-		-		-	0.000	1.019	0.000
TATB Qualification, source 2	MIPR	ATK:Radford, VA	0.126	0.350		-		-		-	0.000	0.476	0.000
FW APKWS II JCTD	SS/CPAF	BAE Systems:Nashua, NH	3.500	-		-		-		-	0.000	3.500	0.000
LAU-131 Extended Length Launcher	MIPR	NSWC:Indian Head, MD	0.040	-		-		-		-	0.000	0.040	0.000
<b>Subtotal</b>			29.225	0.826		0.726		-		0.726			

**Remarks**

Kaman Dayron changed its name to Kaman Precision Products

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
IM	TBD	AAC XR:Eglin AFB, FL	2.835	-		0.250	Jan 2012	-		0.250	0.000	3.085	1.761
A&AS contract support	C/CPAF	TEAS TAMS:Eglin AFB, FL	2.904	0.235	Oct 2010	-		-		-	0.000	3.139	0.000

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**Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force** **DATE:** February 2011

<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604602F: <i>Armament/Ordnance Development</i>	<b>PROJECT</b> 653133: <i>Bombs &amp; Fuzes</i>
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<b>Support (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Fuzes -- Progam Office support	C/CPAF	AAC EBDZ:Eglin AFB, FL	1.010	-		-		-		-	0.000	1.010	0.000
External Support (HTVSF,JPF)	Various	ManTech Stratcom AFOTEC Safety:Various,	2.994	-		-		-		-	0.000	2.994	0.000
MMHE -- Program Office support/analysis	TBD	AAC EBD:Eglin AFB, FL	3.626	0.154	Oct 2010	0.200	Jan 2012	-		0.200	Continuing	Continuing	TBD
Medium Caliber Ammunition - Program Office support	TBD	AAC/EBSN:Eglin AFB, FL	0.006	-		0.900	Jan 2012	-		0.900	Continuing	Continuing	0.000
Medium Caliber Ammunition - requirements generation	C/FFP	Booz Allen Hamilton:Various,	0.250	-		-		-		-	0.000	0.250	0.000
<b>Subtotal</b>			13.625	0.389		1.350		-		1.350			

**Remarks**  
TEAS/TAMS contractors provide support to the System Program Office (SPO) for technical (TEAS) and management/financial (TAMS) services

<b>Test and Evaluation (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
Fuzes -- target build; sled and flight tests	TBD	46th Test Wing:Various,	3.794	-		-		-		-	Continuing	Continuing	TBD
Medium Caliber	TBD	Various:Various,	0.722	-		1.860	Jan 2012	-		1.860	Continuing	Continuing	0.000
FW APKWS II	Various	Various:Various,	0.310	-		-		-		-	0.000	0.310	0.000
<b>Subtotal</b>			4.826	-		1.860		-		1.860			

<b>Management Services (\$ in Millions)</b>				<b>FY 2011</b>		<b>FY 2012 Base</b>		<b>FY 2012 OCO</b>		<b>FY 2012 Total</b>			
<b>Cost Category Item</b>	<b>Contract Method &amp; Type</b>	<b>Performing Activity &amp; Location</b>	<b>Total Prior Years Cost</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Award Date</b>	<b>Cost</b>	<b>Cost To Complete</b>	<b>Total Cost</b>	<b>Target Value of Contract</b>
<b>Subtotal</b>			-	-		-		-		-	0.000	0.000	0.000

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				Total Prior Years Cost		FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals				47.676		1.215		3.936		-		3.936				

**Remarks**

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604602F: <i>Armament/Ordnance Development</i>	PROJECT 653133: <i>Bombs &amp; Fuzes</i>

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0604602F: <i>Armament/Ordnance Development</i>	PROJECT 653133: <i>Bombs &amp; Fuzes</i>

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Air Force			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604602F: <i>Armament/Ordnance Development</i>	<b>PROJECT</b> 653133: <i>Bombs &amp; Fuzes</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
FUZES: JPF Integration on Legacy Weapons & Other Fuze Activity	1	2010	4	2012
HTVSF JCTD	1	2010	3	2010
HTVSF JCTD - Downselect (Contract Award)	2	2011	2	2011
Munitions Materiel Handling Equipment (MMHE): design, prototype, test priority MMHE projects	1	2010	4	2012
Container Design Retrieval System (CDRS): support tri-service data base	1	2010	4	2012
TATB source qualification effort (JPF)	1	2010	4	2012
Medium Caliber Ammunition: F-22 qualification + 20mm assessment	1	2011	4	2012
Submit AF FY11/12 Insensitive Munitions (IM) Strategic Plan	2	2010	2	2010
Submit AF FY13/14 Insensitive Munitions (IM) Strategic Plan	2	2012	2	2012
FW APKWS II JCTD	3	2010	4	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604602F: Armament/Ordnance Development				PROJECT 655361: Stores-Aircraft Interface			
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
655361: Stores-Aircraft Interface	6.657	5.478	6.119	-	6.119	5.947	6.013	4.661	4.743	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
Universal Armament Interface (UAI) is an Air Force program to develop, enhance, and implement standardized interfaces in current and future aircraft (manned or unmanned), weapons and mission planning to support integration of weapons independent of aircraft Operational Flight Program (OFP) cycles. UAI is currently being implemented on the F-15E, F-16 Block 40/50, and EPAF(European Participating Air Forces) F-16 aircraft, Small Diameter Bomb (SDB) I and II, Joint Direct Attack Munition (JDAM), Laser JDAM, Joint Air-to-Surface Stand-off Missile (JASSM) and Precision Guided Munitions Planning Software (PGMPS). Additional aircraft and weapons, including but not limited to, Joint Strike Fighter (JSF/F-35), MQ-9, as well as Army and Navy systems, have program plans to implement UAI. The UAI program office is responsible for development and enhancement of the standard (U.S. and allied), support to coalition/allied/joint interoperability efforts for weapons-platform interface efforts, provision of certification tools (test assets) and implementation support to aircraft and weapons.											
B. Accomplishments/Planned Programs (\$ in Millions)							FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: UAI Development							6.657	5.478	6.119	-	6.119
Description: Conduct stores-aircraft interface upgrades and standards development to include the Universal Armament Interface (UAI).											
FY 2010 Accomplishments: In FY2010: development and configuration management of UAI standards in response to user needs, working group management, technical meetings and workshops, risk reduction studies, common mission planning, integration support and procurement of two certification tools to complete Configuration Version (CV) 01 and continue CV02.											
FY 2011 Plans: In FY 2011: continued development and configuration management of UAI standards in response to user needs, working group management, technical meetings and workshops, risk reduction studies, common mission planning, integration support, updates to test tools and procurement of one certification tool to continue CV02.											
FY 2012 Base Plans:											

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2012 Air Force				<b>DATE:</b> February 2011	
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>		<b>R-1 ITEM NOMENCLATURE</b> PE 0604602F: <i>Armament/Ordnance Development</i>		<b>PROJECT</b> 655361: <i>Stores-Aircraft Interface</i>	

  

<b>B. Accomplishments/Planned Programs (\$ in Millions)</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>
<p>In FY 2012: Continued development and configuration management of UAI standards in response to user needs, working group management, technical meetings and workshops, risk reduction studies, common mission planning, integration support and updates to test tools to continue CV02.</p> <p><b><i>FY 2012 OCO Plans:</i></b> Not applicable to UAI</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	6.657	5.478	6.119	-	6.119

  

<b>C. Other Program Funding Summary (\$ in Millions)</b>											
<b>Line Item</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012 Base</b>	<b>FY 2012 OCO</b>	<b>FY 2012 Total</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
• N/A: <i>None</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

  

**D. Acquisition Strategy**

In December 2004, under the authority of a class Justification and Approval (J&A), the UAI program office awarded individual Cost Plus Fixed Fee (CPFF) contracts to Boeing, Lockheed Martin, Northrop Grumman and Raytheon. Each OEM is responsible for a different piece of the total UAI requirement based on its product-specific (platform/weapon) expertise. During FY10 these contracts expired. Under the authority of a new class J&A, Cost Plus Incentive Fee (CPIF) contracts were awarded to the four UAI vendors in August 2010.

  

**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-3, RDT&E Project Cost Analysis: PB 2012 Air Force											DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0604602F: Armament/Ordnance Development				PROJECT 655361: Stores-Aircraft Interface						
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Interface Control Document (ICD) Development/Updates	SS/CPFF	Boeing Northrop Grumman Lockheed Martin Raytheon:Various,	42.775	4.271	Jan 2011	5.280	Jan 2012	-		5.280	Continuing	Continuing	TBD	
UAI Common Component	SS/CPFF	Northrop Grumman:Hollywood, MD	4.553	0.532	Jan 2011	0.479	Jan 2012	-		0.479	Continuing	Continuing	TBD	
Certification Tool	SS/CPFF	Boeing Northrop Grumman Lockheed Martin Raytheon:Various,	12.452	0.200	Jan 2011	-		-		-	Continuing	Continuing	TBD	
Subtotal			59.780	5.003		5.759		-		5.759				
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	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	
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	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	
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Program Management Administration/Program Support	Various	Various:Various,	3.477	0.475	Oct 2010	0.360	Oct 2011	-		0.360	Continuing	Continuing	TBD	

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<b>Exhibit R-3, RDT&amp;E Project Cost Analysis:</b> PB 2012 Air Force	<b>DATE:</b> February 2011
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<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604602F: <i>Armament/Ordnance Development</i>	<b>PROJECT</b> 655361: <i>Stores-Aircraft Interface</i>
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Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
<b>Subtotal</b>			3.477	0.475		0.360		-		0.360			

**Remarks**  
Prior to FY10 program was funded in Aging Aircraft PE 65011F.

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
<b>Project Cost Totals</b>	63.257	5.478		6.119		-		6.119			

**Remarks**  
Prior to FY10 program was funded in Aging Aircraft PE 0605011F.

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<b>Exhibit R-4A, RDT&amp;E Schedule Details:</b> PB 2012 Air Force			<b>DATE:</b> February 2011
<b>APPROPRIATION/BUDGET ACTIVITY</b> 3600: <i>Research, Development, Test &amp; Evaluation, Air Force</i> BA 5: <i>Development &amp; Demonstration (SDD)</i>	<b>R-1 ITEM NOMENCLATURE</b> PE 0604602F: <i>Armament/Ordnance Development</i>	<b>PROJECT</b> 655361: <i>Stores-Aircraft Interface</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
CV01 - Configuration Version 1	1	2010	4	2011
F-15E Suite 6, CV01 Fielded	3	2010	3	2010
F-15E Suite 7, CV01 Fielded	1	2012	1	2012
JDAM, CV01 Fielded	4	2010	4	2010
JASSM, CV01 Fielded	2	2011	2	2011
CV02 - Configuration Version 2	4	2010	4	2015

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